



Full Technical Program

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Overview - Monday, 26th September

08:15-10:15 Monday Plenary Session				
08:15-08:45	Welcome ceremony	Gun-Sik Park, Peter Uhd Jepsen, Anders Bjarklev, Peter H. Siegel		
08:45-10:15	M1.1 M1.2	Alfred Leitenstorfer, University of Konstanz, Germany René Beigang, University of Kaiserslautern, Germany		
Plenary Auditorium 10/11/12				
10:15-11:00 Coffee break and Exhibition (Congress Hall A)				
11:00-12:30 Monday Session 2				
M2A	M2B	M2C	M2D	M2E
Applications in Industry, Security and Defense I	Spectroscopy and Material Properties I	Metrology I	Devices, Components, and Systems I	Quantum Cascade Lasers I
Auditorium 12	Auditorium 10	Room 20	Auditorium 11	Room 19
12:30-14:00 Lunch for all participants and exhibition (Congress Hall A)				
14:00-15:30 Monday Session 3				
M3A	M3B	M3C	M3D	M3E
Applications in Industry, Security and Defense II	Spectroscopy and Material Properties II	Modeling and Analysis Techniques I	Devices, Components, and Systems II	Quantum Cascade Lasers II
Auditorium 12	Auditorium 10	Room 20	Auditorium 11	Room 19
15:30-16:00 Coffee break and exhibition (Congress Hall A)				
16:00-17:00 Monday Session 4				
M4A	M4B	M4C	M4D	M4E
Applications in Industry, Security and Defense III	Ultrafast Measurements I	Modeling and Analysis Techniques II	Devices, Components, and Systems III	Laser-Driven THz and mid-IR Sources I
Auditorium 12	Auditorium 10	Room 20	Auditorium 11	Room 19
17:00-18:30 Monday Poster Session (M5P)				
Topics:	Quantum Cascade Lasers, Devices - Components, and Systems - Modeling and Analysis Techniques - Applications in Industry, Security and defense			
Congress Hall A				
18:30	Departure for welcome reception, City Hall of Copenhagen			

Overview - Tuesday, 27th September

08:30-10:00 Tuesday Plenary Session				
T1.1 T1.2	David Shoemaker, MIT, USA Carlo Sirtori, University Paris Diderot, France			
Plenary Auditorium 10/11/12				
10:00-11:00 Coffee break and exhibition (Congress Hall A)				
11:00-12:30 Tuesday Session 2				
T2A	T2B	T2C	T2D	T2E
Ultrafast Measurements II	Spectroscopy and Material Properties III	Metamaterial Structures and Applications I	Devices, Components, and Systems IV	Laser-Driven THz and mid-IR Sources II
Room 20	Auditorium 10	Auditorium 12	Auditorium 11	Room 19
12:30-14:00 Lunch for all participants and exhibition (Congress Hall A)				
14:00-15:30 Tuesday Session 3				
T3A	T3B	T3C	T3D	T3E
Imaging, inspection and remote sensing I	Spectroscopy and Material Properties IV	Sources, Detectors, and Receivers I	Ultrafast Measurements III	Laser-Driven THz and mid-IR Sources III
Auditorium 11	Auditorium 10	Auditorium 12	Room 20	Room 19
15:30-16:00 Coffee break and exhibition (Congress Hall A)				
16:00-17:30 Tuesday Session 4				
T4A	T4B	T4C	T4D	T4E
Imaging, inspection and remote sensing II	Spectroscopy and Material Properties V	Sources, Detectors, and Receivers II	Metamaterial Structures and Applications II	Metrology II
Auditorium 11	Auditorium 10	Auditorium 12	Room 19	Room 20
17:30-19:00 Tuesday Poster Session (T5P)				
Topics:	Laser Driven THz and mid-IR Sources - Ultrafast Measurements - Imaging, inspection and remote sensing - Spectroscopy and Material Properties - Metrology			
Congress Hall A				
19:00-	Dinner and networking (on your own)			

Overview - Wednesday, 28th September

08:30-10:00		Wednesday Plenary Session		
W1.1 W1.2	Villy Sundström, Lund University, Sweden Søren Rud Keiding, Aarhus University, Denmark			
Plenary Auditorium 10/11/12				
10:00-11:00		Coffee break and exhibition (Congress Hall A)		
11:00-12:30		Wednesday Session 2		
W2A	W2B	W2C	W2D	W2E
Imaging, inspection and remote sensing III	Spectroscopy and Material Properties VI	Sources, Detectors, and Receivers III	Metamaterial Structures and Applications III	High-Field THz Wave Generation and Nonlinear THz Physics I
Room 20	Auditorium 10	Auditorium 11	Auditorium 12	Room 19
12:30-14:00		Lunch for all participants and exhibition (Congress Hall A)		
14:00-15:30		Wednesday Session 3		
W3A	W3B	W3C	W3D	W3E
Applications in Biology and Medicine I	Spectroscopy and Material Properties VII	Sources, Detectors, and Receivers IV	Metamaterial Structures and Applications IV	High-Field THz Wave Generation and Nonlinear THz Physics II
Room 20	Auditorium 10	Auditorium 11	Auditorium 12	Room 19
15:30-16:00		Coffee break and exhibition (Congress Hall A)		
16:00-17:00		Wednesday Session 4		
W4A	W4B	W4C	W4D	W4E
Applications in Biology and Medicine II	Spectroscopy and Material Properties VIII	Gyro-Oscillators and Amplifiers I	Metamaterial Structures and Applications V	High-Field THz Wave Generation and Nonlinear THz Physics III
Room 20	Auditorium 10	Auditorium 11	Auditorium 12	Room 19
17:00-18:30		Wednesday Poster Session (W5P)		
Topics:	Sources, Detectors, and Receivers - High-Field THz Wave Generation and Nonlinear THz Physics - Metamaterial Structures and Applications - Frequency and Time Domain Instruments			
Congress Hall A				
19:00	Departure for Channel boat tour to Conference Banquet (Langelinie, Copenhagen)			

Overview - Thursday, 29th September

08:30-10:00		Thursday Plenary Session		
H1.1 H1.2	Toshitaka Idehara, Fukui University, Japan (K. J. Button Prize Winner) David Smith, Duke University, USA			
Plenary Auditorium 10/11/12				
10:00-11:00		Coffee break and exhibition (Congress Hall A)		
11:00-12:30		Thursday Session 2		
H2A	H2B	H2C	H2D	H2E
Applications in Biology and Medicine III	Spectroscopy and Material Properties IX	Sources, Detectors, and Receivers V	Gyro-Oscillators and Amplifiers II	High-Field THz Wave Generation and Nonlinear THz Physics IV
Room 20	Auditorium 10	Auditorium 12	Auditorium 11	Room 19
12:30-14:00		Lunch for all participants and exhibition (Congress Hall A)		
14:00-15:30		Thursday Session 3		
H3A	H3B	H3C	H3D	H3E
Astronomy, Planetary and Environmental Science	Gyro-Oscillators and Amplifiers III	Sources, Detectors, and Receivers VI	MMW and Submillimeter Wave Systems I	High-Field THz Wave Generation and Nonlinear THz Physics V
Auditorium 10	Auditorium 11	Auditorium 12	Room 20	Room 19
15:30-16:00		Coffee break and exhibition (Congress Hall A)		
16:00-17:30		Thursday Session 4		
H4A	H4B	H4C	H4D	H4E
Spectroscopy of Gases, Liquids, and Solids I	Gyro-Oscillators and Amplifiers IV	Sources, Detectors, and Receivers VII	MMW and Submillimeter Wave Systems II	Free Electron Lasers and Synchrotron Radiation I
Auditorium 10	Auditorium 11	Auditorium 12	Room 20	Room 19
17:30-19:00		Thursday Poster Session (H5P)		
Topics:	Gyro-Oscillators and Amplifiers - Spectroscopy of Gases, Liquids, and Solids - MMW and Submillimeter Wave Systems - Free Electron Lasers and Synchrotron Radiation - Astronomy, Planetary and Environmental science - Protein Dynamics and Molecular Spectroscopy - Applications in Biology and Medicine - Plasma Diagnostics			
Congress Hall A				
19:00-	Dinner and networking (on your own)			

Overview - Friday, 30th September

08:15-10:00 Friday Plenary Session				
08:15-08:30	Closing Ceremony			
F1.1	Songlin Zhuang/Yiming Liu, University of Shanghai for Science and Technology, China			
F1.2	Franz X. Kärtner, DESY and University of Hamburg, Germany			
Plenary Auditorium 10/11/12				
10:00-11:00 Coffee break (Congress Hall A)				
11:00-12:30 Friday Session 2				
F2A	F2B	F2C	F2D	F2E
Spectroscopy of Gases, Liquids and Solids II	Protein Dynamics and Molecular Spectroscopy	Sources, Detectors, and Receivers VIII	MMW and Submillimeter Wave Systems III	Free Electron Lasers and Synchrotron Radiation II
Auditorium 10	Auditorium 11	Auditorium 12	Room 20	Room 19
12:30-14:00		Lunch for all participants (Congress Hall A)		
14:00		END OF CONFERENCE		

Full Technical Program – Session by Session

Monday, 26. September 2016

08:15 - 08:45	Conference Welcome Ceremony	Plenary Auditorium 10/11/12
08:45 - 10:15	Monday Plenary Session Session Chair: Daniel Mittleman, Rice University, USA	Plenary Auditorium 10/11/12
08:45	Subcycle Quantum Physics <u>Alfred Leitenstorfer</u> University of Konstanz, Germany	M1.1
09:30	The Route From Fundamental Physics To Real World Applications Of THz Technology <u>René Beigang</u> Technical University of Kaiserslautern, Germany	M1.2
11:00 - 12:30	Applications in Industry, Security and Defense I (M2A) Session Chair: Ronald Holzwarth, Menlo Systems, Germany	Auditorium 12
11:00	Concept For A Fast Tracking 60 GHz 3D-Radar Using Frequency Scanning Antennas (Keynote Talk) <u>Alex Shoykhetbrod</u> ; Thomas Geibig; Alexander Hommes; Reinhold Herschel; Nils Pohl Fraunhofer FHR, Germany	M2A.1
11:30	Critical Study On The Identification Of Concealed Substances By THz Spectroscopy Emilie Heralut; Frédéric Garet; <u>Jean-Louis Coutaz</u> Universite Savoie Mont Blanc, France	M2A.2
11:45	Extending Terahertz Paint Thickness Measurements To Advanced Industry-Standard Automotive Paint Structures <u>Ian Gregory</u> ¹ ; Robert May ¹ ; Philip Taday ¹ ; Patrick Mounaix ² ¹ TeraView Ltd, United Kingdom; ² Université Bordeaux, France	M2A.3
12:00	Paper Sheet Parameter Determination Using Terahertz Spectroscopy <u>Dook van Mechelen</u> ; Deran Maas; Hannes Merbold ABB Corporate Research, Switzerland	M2A.4
12:15	Self-Calibrating Approach For Terahertz Thickness Measurements Of Ceramic Coatings <u>Soufiene Krimi</u> ¹ ; Jens Klier ² ; Joachim Jonuscheit ² ; Georg von Freymann ² ; Ralph Urbansky ³ ; René Beigang ¹ ¹ Department of Physics and Research Center OPTIMAS, University of Kaiserslautern, Germany; ² Fraunhofer Institute for Physical Measurement Techniques IPM, Germany; ³ Department of Communications Engineering, University of Kaiserslautern, Germany	M2A.5
11:00 - 12:30	Spectroscopy and Material Properties I (M2B) Session Chair: Junichiro Kono, Rice University, USA	Auditorium 10
11:00	Thermodynamic Picture Of Terahertz Conduction In Graphene (Keynote Talk) <u>Zoltán Mics</u> ¹ ; Klaas-Jan Tielrooij ² ; Ivan Ivanov ¹ ; Xinliang Feng ¹ ; Klaus Müllen ¹ ; Mischa Bonn ¹ ; Dmitry Turchinovich ¹ ¹ Max Planck Institute for Polymer Research, Germany; ² ICFO - The Institute of Photonic Sciences, Spain	M2B.1
11:30	Contact-free High-resolution Conductivity Mapping Of Large-area Graphene Covered With An Ion Gel Top-gate <u>Simon Sawallich</u> ¹ ; Muhammad Mohsin ² ; Christopher Matheisen ¹ ; Daniel Neumaier ² ; Michael Nagel ¹ ¹ Protemics GmbH, Germany; ² AMO GmbH, Germany	M2B.2
11:45	Timing Jitter Correction For THz-TDS Measurements Of Graphene <u>Patrick Rebsdorf Whelan</u> ¹ ; Krzysztof Iwaszczuk ² ; Peter Bøggild ¹ ; Peter Uhd Jepsen ² ¹ DTU Nanotech, Denmark; ² DTU Photonics, Denmark	M2B.3
12:00	Temperature-dependent THz Conductivity Of Graphene <u>Juliette Mangeney</u> ¹ ; Sylvain Massabeau ¹ ; Matthieu Baillergeau ¹ ; Claire Berger ² ; Walter de Heer ² ; Sukhdeep Dhillon ¹ ; Jérôme Tignon ¹ ; Louis-Anne de Vaultier ¹ ; Robson Ferreira ¹ ¹ LPA/CNRS, France; ² School of Physics, Georgia Institute of Technology, Atlanta, Georgia, United States	M2B.4
12:15	Optical-pump/intense-THz-probe Spectroscopy Of Gated Graphene <u>H.A. Hafez</u> ¹ ; Pierre Lévesque ² ; Ibraheem Al-Naib ³ ; M.M. Dignam ⁴ ; Xin Chai ⁵ ; Saman Choubak ⁶ ; Patrick Desjardins ⁶ ; Richard Martel ² ; Tsuneyuki Ozaki ⁵ ¹ Helwan University, Egypt; ² Université de Montréal, Canada; ³ University of Dammam, Saudi Arabia; ⁴ Queen's University, Canada; ⁵ INRS-EMT, Canada; ⁶ Polytechnique Montréal, Canada	M2B.5

Metrology I (M2C)		Room 20
Session Chair: Mira Naftaly, National Physical Laboratory, United Kingdom		
11:00	Improved Signal-to-noise Ratio In A Passive THz Near-field Microscope Equipped With A Helium-free Cryostat <u>Kuan-Ting Lin</u> ¹ ; Susumu Komiyama ¹ ; Sunmi Kim ² ; Ken-ichi Kawamura ³ ; Yusuke Kajihara ² ¹ The University of Tokyo, Japan; ² University of Tokyo, Japan; ³ Tokyo Instruments, Inc., Japan	M2C.1
11:15	Comparison Of Two Methods For Wavefront Measurement Of Terahertz Pulses Combined With 2D Electro-Optic Imaging <u>Mathilde Brossard</u> ¹ ; Harsono Cahyadi ² ; Sabri Ben Khemis ¹ ; Jérôme Degert ³ ; Eric Freysz ³ ; Takeshi Yasui ² ; Emmanuel Abraham ³ ¹ Nethis, France; ² Tokushima University, Japan; ³ Université Bordeaux LOMA, France	M2C.2
11:30	Phase-Aligned Reference-Acquisition Method For Terahertz Imaging <u>Xuequan Chen</u> ; Edward Parrott; Benjamin S.-Y. Ung; Emma Pickwell-MacPherson The Chinese University of Hong Kong, Hong Kong	M2C.3
11:45	Traceability Of Ultrafast Electrical Pulse Waveforms At BIRMM <u>Pengwei Gong</u> ¹ ; Wen Xie ¹ ; Bei Chen ¹ ; He Jiang ¹ ; Hongmei Ma ¹ ; Chuntao Yang ¹ ; Shuliang Wen ² ¹ Beijing Institute of Radio Metrology and Measurement, China; ² Beijing Institute of Radio Measurement, China	M2C.4
12:00	Gapless Dual THz Comb Spectroscopy (Keynote Talk) <u>Takeshi Yasui</u> Tokushima University, Japan	M2C.5
Devices, Components, and Systems I (M2D)		
Session Chair: Monica Blank, CPI, Palo Alto, USA		
11:00	Compact Mid-IR Isolator Using Nonreciprocal Magnetoplasmonic InSb Mirror <u>Oleksandr Stepanenko</u> ¹ ; Tomás Horák ¹ ; Jan Chochol ² ; Kamil Postava ³ ; Jean-François Lampin ¹ ; Mathias Vanwolleghem ¹ ¹ IEMN CNRS, University Lille 1, France; ² Nanotechnology Center, VSB, Czech Republic; ³ Department of Physics, VSB, Czech Republic	M2D.1
11:15	Model For Ultrafast Extrinsic Photoconductivity In Er-Doped GaAs <u>Elliott Brown</u> ¹ ; W-D. Zhang ¹ ; A Feldman ² ; H. Harvey ² ; R. Mirin ² ¹ Wright State University, United States; ² National Institute of Standards and Tech., United States	M2D.2
11:30	Broadband Terahertz Modulation Using SiO₂/Si Gated Monolayer Graphene (Keynote Talk) <u>Xudong Liu</u> ; Edward Parrott; Zefeng Chen; Benjamin S.-Y. Ung; Jianbin Xu; Emma Pickwell-MacPherson The Chinese University of Hong Kong, China	M2D.3
12:00	Tunable Polarization Rotation Using Black Phosphorous Monolayers <u>Arya Fallahi</u> ¹ ; Kaveh Khaliji ² ; Tony Low ² ¹ DESY-Center for Free Electron Laser Science, Germany; ² University of Minnesota, Germany	M2D.4
12:15	Liquid-crystal-enabled Electrically Tunable Terahertz Achromatic-wave Plate <u>Chan-Shan Yang</u> ¹ ; Fang-Cih Shih ¹ ; Ru-Pin Pan ² ; Peichen Yu ² ; Ci-Ling Pan ¹ ¹ National Tsing Hua University, Taiwan; ² National Chiao Tung University, Taiwan	M2D.5
Quantum Cascade Lasers I (M2E)		
Session Chair: Seongsin Margaret Kim, University of Alabama, USA		
11:00	Pulse Generation And Spectral Optimization Of Broadband Terahertz Quantum Cascade Lasers Dominic Bachmann ¹ ; Markus Rösch ² ; Martin J. Süess ² ; Giacomo Scari ² ; Matthias Beck ² ; Karl Unterrainer ¹ ; Jérôme Faist ² ; <u>Juraj Darmo</u> ¹ ¹ TU Wien, Austria; ² ETH Zürich, Switzerland	M2E.1
11:15	Pump-Probe Measurements Of Gain In A Terahertz Quantum Cascade Laser <u>David R. Bacon</u> ; Joshua R. Freeman; Reshma A. Mohandas; Lianhe Li; Edmund H. Linfield; A. Giles Davies; Paul Dean University of Leeds, United Kingdom	M2E.2
11:30	Short Pulse Generation And Dispersion In THz Quantum Cascade Lasers <u>Hanond Nong</u> ¹ ; Feihu Wang ¹ ; Kenneth Maussang ¹ ; Souad Moumdji ² ; Raffaele Colombelli ² ; Joshua R. Freeman ³ ; Iman Kundu ³ ; Lianhe Li ³ ; Edmund H. Linfield ³ ; A. Giles Davies ³ ; Juliette Mangeney ¹ ; Jérôme Tignon ¹ ; Sukhdeep Dhillon ¹ ¹ Laboratoire Pierre Aigrain, France; ² Institut d'Electronique Fondamentale, France; ³ School of Electronic and Electrical Engineering, United Kingdom	M2E.3
11:45	Integrating THz Quantum Cascade Lasers With Flexible Dielectric-lined Hollow Metallic Waveguides: Moving Beyond Free Space Optics <u>Harvey Beere</u> ¹ ; Robert Wallis ¹ ; Riccardo Degl'Innocenti ¹ ; David Jessop ¹ ; Yuan Ren ¹ ; Oleg Mitrofanov ² ; Carlos Bledt ³ ; Jeffrey Melzer ³ ; James Harrington ³ ; David Ritchie ¹ ¹ University of Cambridge, United Kingdom; ² University College London, United Kingdom; ³ Rutgers University, United States	M2E.4
12:00	Room-temperature THz Sources Based On Intra-cavity Difference-frequency Mixing In Mid-infrared Quantum Cascade Lasers (Keynote Talk) <u>Mikhail Belkin</u> The University of Texas at Austin, United States	M2E.5
Applications in Industry, Security and Defense II (M3A)		
Session Chair: Enrique Castro Camus, CPI, Mexico		
14:00	Terahertz Reflective Imaging Of Damage Mechanisms In The Coating On Metal Substrate <u>Junliang Dong</u> ¹ ; Alexandre Locquet ² ; David S. Citrin ³ ¹ Georgia Institute of Technology, France; ² UMI 2958 Georgia Tech-CNRS, France; ³ Georgia Institute of Technology, United States	M3A.1
14:15	Very High Speed THz Imaging Of Foam Density And Other Defects <u>Jeffrey White</u> ; David Zimdars; Irl Duling Picometrix LLC, United States	M3A.2
14:30	Demonstration Of An Ultracompact THz-driven Electron Gun (Keynote Talk) Wenqian Huang ¹ ; <u>Arya Fallahi</u> ¹ ; Xiaojun Wu ¹ ; Huseyin Cankaya ¹ ; Anne-Laure Calendron ¹ ; Koustuban Ravi ¹ ; Dongfang Zhang ¹ ; Emilio Nanni ² ; Kyung-Han Hong ² ; Franz X. Kärtner ¹	M3A.3

	¹ DESY-Center for Free Electron Laser Science, Germany; ² Massachusetts Institute of Technology, United States	
15:00	Non-destructive Measurement Of Thickness And Refractive Index Of Multilayer Coating On Metal Substrate <u>Dinh Nguyen</u> ¹ ; Katharina Weber ² ; Wegmann Volker ² ; Yves Hernandez ³ ¹ Multitel ASBL, Belgium; ² Fraunhofer-Institut für Produktionstechnik und Automatisierung IPA, Germany; ³ Multitel ASBL, Belgium	M3A.4
15:15	Towards Quality Control In Pharmaceutical Packaging: Screening Folded Boxes For Package Inserts Simeon Brinkmann ¹ ; Nico Vieweg ² ; Gerhard Gärtner ³ ; Patrick Plew ³ ; <u>Anselm Deninger</u> ² ¹ Munich University of Applied Sciences, Germany; ² TOPTICA Photonics AG, Germany; ³ Papiertechnische Stiftung, Germany	M3A.5
14:00 - 15:30	Spectroscopy and Material Properties II (M3B) Session Chair: Michael Johnston, University of Oxford, United Kingdom	Auditorium 10
14:00	Contactless Probing Of Thin Film Si Solar Cells By Time-resolving THz Spectroscopy <u>Volodymyr Skoromets</u> ¹ ; Peter Pikna ¹ ; Christiane Becker ² ; Antonín Fejfar ¹ ; Petr Kuzel ¹ ¹ Institute of Physics, Academy of Sciences of the Czech Republic, Czech Republic; ² Helmholtz-Zentrum für Materialien und Energie GmbH, Germany	M3B.1
14:15	Optical Pump -- THz Probe Studies Of Size-Dependent Ultrafast Charge Carrier Dynamics In WO₃ Particles For Photoelectrochemical Cells <u>Charles Schmuttenmaer</u> ¹ ; Kevin Regan ¹ ; Christopher Koenigsmann ² ¹ Yale University, United States; ² Fordham University, United States	M3B.2
14:30	Frequency Up-shift Of THz Light Via Relativistic Doppler Reflection: As New Probe For Investigating Carrier Dynamics <u>Nanase Kohno</u> ; Ryuji Itakura; Masaaki Tsubouchi National Institutes for Quantum and Radiological Science and Technology, Japan	M3B.3
14:45	Increased Photoconductivity Lifetimes In GaAs Nanowires Via N-Type And P-Type Doping <u>Jessica Boland</u> ¹ ; Alberto Casadei ² ; Gözde Tütüncouglu ² ; Federico Matteini ² ; Chris Davies ¹ ; Fozia Gaveen ² ; Francesca Amaduzzi ² ; Hannah Joyce ² ; Laura Herz ¹ ; Anna Fontcuberta i Morral ² ; Michael Johnston ¹ ¹ University of Oxford, United Kingdom; ² Ecole Polytechnique Federale de Lausanne, Switzerland; ³ University of Cambridge, United Kingdom	M3B.4
15:00	Broadband Terahertz Spectroscopy Of Chalcogenide Glass As₃₀Se₃₀Te₄₀ <u>Tianwu Wang</u> ¹ ; Elena Romanova ² ; Nabil Abdel-Moneim ³ ; David Furniss ³ ; Anna Loth ³ ; Zhuoqi Tang ³ ; Angela Seddon ³ ; Trevor Benson ³ ; Andrei V. Lavrinenko ⁴ ; Peter Uhd Jepsen ⁴ ¹ National University of Defense Technology, China; ² Saratov State University, Russian Federation; ³ University of Nottingham, United Kingdom; ⁴ Technical University of Denmark, Denmark	M3B.5
15:15	Effects Of Environmental Changes On The Carrier Dynamics In Graphene Revealed By Terahertz Spectroscopy <u>Xin Chai</u> ¹ ; H.A. Hafez ² ; Ibraheem Al-Naib ³ ; Yoshiaki Sekine ⁴ ; Makoto Takamura ⁴ ; Katsuya Oguri ⁴ ; M.M. Dignam ⁵ ; Hiroki Hibino ⁴ ; Tsuneyuki Ozaki ¹ ¹ INRS-EMT, Canada; ² Helwan University, Egypt; ³ University of Dammam, Saudi Arabia; ⁴ NTT Basic Research laboratories, Japan; ⁵ Queen's University, Canada	M3B.6
14:00 - 15:30	Modeling and Analysis Techniques I (M3C) Session Chair: Taiichi Otsuji, Tohoku University, Japan	Room 20
14:00	Tracing The Gouy Phase Shift Of Focused, Radially Polarized THz Pulses (Keynote Talk) <u>Korbinian J. Kaltenecker</u> ¹ ; Jacob C. König-Otto ² ; Martin Mittendorf ³ ; Stephan Winnerl ² ; Harald Schneider ² ; Manfred Helm ² ; Hanspeter Helm ⁴ ; Markus Walther ⁴ ; Bernd M. Fischer ¹ ¹ French-German Research Institute of Saint-Louis, France; ² Institute of Ion Beam Physics and Materials Research, Helmholtz-Zentrum Dresden Rossendorf, Germany; ³ Institute for Research in Electronics and Applied Physics, University of Maryland, United States; ⁴ Institute of Physics, University of Freiburg, Germany	M3C.1
14:30	Temperature Programmed Desorption Measurements Of Oxygen Molecules In 2D Materials Using Laser Terahertz Emission Microscopy Filchito Renee Bagsican ¹ ; Iwao Kawayama ¹ ; Andrew Winchester ² ; Sujoy Ghosh ² ; Xiang Zhang ³ ; Lulu Ma ³ ; Minjie Wang ³ ; Hironaru Murakami ¹ ; Saikat Talapatra ² ; Robert Vajtai ³ ; Pulickel M. Ajayan ³ ; Junichiro Kono ³ ; <u>Masayoshi Tonouchi</u> ¹ ¹ Osaka University, Japan; ² Southern Illinois University-Carbondale, United States; ³ Rice University, United States	M3C.2
14:45	Modeling Terahertz Plasmons In Coupled Semiconductor Resonators <u>Oleksiy Sydoruk</u> ¹ ; Serhii Siaber ¹ ; Daniel Pouzada ¹ ; John Cunningham ² ¹ Imperial College London, United Kingdom; ² University of Leeds, United Kingdom	M3C.3
15:00	Accurate Determination Of Material Parameters In Ambient Atmosphere Using Broadband Terahertz Radiation Jindoo Choi ¹ ; Dae-Su Yee ² ; Ji Sang Yahng ² ; <u>Jinwoo Lee</u> ¹ ; Kyung-Soo Kim ¹ ; Soohyun Kim ¹ ¹ Korea Advanced Institute of Science and Technology, Korea, Republic of; ² Korea Research Institute of Standards and Science, Korea, Republic of	M3C.4
15:15	Time-Frequency Filtering Applied To Terahertz Time-Domain Spectroscopy <u>Mahfoud Drouaz</u> ¹ ; Sebastian Engelbrecht ² ; Lionel Merlat ² ; Bernd M. Fischer ² ; Bruno Colicchio ¹ ; Alain Dieterlen ¹ ¹ University of Haute Alsace, France; ² French-German Research Institute of Saint-Louis, France	M3C.5
14:00 - 15:30	Devices, Components, and Systems II (M3D) Session Chair: Jean-Louis Coutaz, University of Savoie, France	Auditorium 11
14:00	A 640 GHz MMIC-based Sideband-Separating Receiver For Atmospheric Science (Keynote Talk) <u>Theodore Reck</u> ¹ ; Erich Schlecht ¹ ; William Deal ² ; Goutam Chattopadhyay ¹ ¹ Jet Propulsion Laboratory, United States; ² Northrop Grumman Aerospace Systems, United States	M3D.1
14:30	A Water-Based Conical Blackbody Concept For Millimeter-Wave Remote Sensing <u>Arne Schröder</u> ¹ ; Axel Murk ¹ ; Leandro von Werra ² ; Florian Reinhard ² ; Philippe Raisin ² ; Karl Jacob ¹ ¹ University of Bern, Institute of Applied Physics, Switzerland; ² AME GmbH, Switzerland	M3D.2
14:45	Interferometry-Aided Delay Lines For High-Precision Terahertz Time-Domain Spectroscopy Daniel Molter; Manuel Trierweiler; <u>Frank Ellrich</u> ; Joachim Jonuscheit; Georg von Freymann Fraunhofer IPM, Germany	M3D.3
15:00	Development Of Mueller Stokes Polarimeter Toward Detailed Analysis Of Complicate Polarizing Devices In Terahertz	M3D.4

Frequency Region

Takashi Notake; Kouji Nawata; Yu Tokizane; Yuma Takida; Zhengli Han; Mio Koyama; Hiroaki Minamide
RIKEN, Japan

15:15 **Branchline And Directional THz Coupler Based On PECVD SiNx-technology** **M3D.5**

Matvey Finkel¹; Holger Thierschmann¹; Luca Galatro¹; Alard Katan¹; David Thoen¹; Pieter de Visser²; Marco Spirito¹; Teun Klapwijk¹

¹Delft University of Technology, Netherlands; ²SRON, Netherlands

Quantum Cascade Lasers II (M3E)

14:00 - 15:30

Session Chair: Jean Leotin, Laboratoire National des Champs Magnétiques Intenses, France

Room 19

14:00 **On-chip Terahertz Dual-comb Source Based On Quantum Cascade Lasers** **M3E.1**

Markus Rösch; Giacomo Scaliari; Gustavo Villares; Martin J. Süess; Lorenzo Bosco; Matthias Beck; Jérôme Faist
ETH Zurich, Switzerland

14:15 **Broadband Monolithic Extractor For Terahertz Quantum Cascade Laser Based Frequency Combs** **M3E.2**

Markus Rösch; Ileana-Cristina Benea-Chelmus; Giacomo Scaliari; Christopher Bonzon; Martin J. Süess; Matthias Beck; Jérôme Faist
ETH Zurich, Switzerland

14:30 **Metasurface Quantum-cascade VECSELS From 2.5-3.5 THz** **M3E.3**

Luyao Xu¹; Christopher Curwen¹; Qisheng Chen²; John Reno³; Tatsuo Itoh¹; Benjamin Williams¹

¹University of California Los Angeles, United States; ²Northrop Grumman Aerospace Systems, United States; ³Sandia National Laboratories, Center of Integrated Nanotechnologies, United States

14:45 **Terahertz Near-field Microscopy Using The Self-mixing Effect In A Quantum Cascade Laser** **M3E.4**

Paul Dean¹; Oleg Mitrofanov²; James Keeley¹; Iman Kundu¹; Lianhe Li¹; Edmund H. Linfield¹; A. Giles Davies¹

¹University of Leeds, United Kingdom; ²UCL, United Kingdom

15:00 **Low Divergent, High-power, Single-mode Terahertz Wire Lasers (Keynote Talk)** **M3E.5**

Miriam Serena Vitiello

Consiglio Nazionale delle Ricerche, Italy

Applications in Industry, Security and Defense III (M4A)

16:00 - 17:00

Session Chair: Bernd Fischer, French-German Research Institute of Saint-Louis, France

Auditorium 12

16:00 **Wide Field Of View Lens-Based Focusing System For Security Imagers At THz Frequencies** **M4A.1**

Nuria Llombart¹; Erio Gandini¹; Aleks Tamminen²; Artuu Luukanen²

¹TU Delft, Netherlands; ²Asqella, Finland

16:15 **Novel Applications Of Terahertz Technology For Plastic Industry** **M4A.2**

Daniel M. Hailu; Daryoosh Saeedkia

TeTechS Inc, Canada

16:30 **Fast Thickness Measurements With Frequency Modulated Continuous Wave Terahertz Radiation** **M4A.3**

Nina Schreiner¹; Bessem Baccouche¹; Wolfgang Sauer-Greff²; Ralph Urbansky²; Fabian Friederich¹

¹Fraunhofer IPM, Germany; ²TU Kaiserslautern, Germany

16:45 **Studying The Pharmaceutical Film Coating Process With Terahertz Sensing, Optical Coherence Tomography And Numerical Modelling** **M4A.4**

Hungyen Lin¹; Yue Dong²; Chunlei Pei³; Bryan Williams²; Daniel Markl³; Yalin Zheng²; James Elliott³; Yaochun Shen²; J. Axel Zeitler³

¹Lancaster University, United Kingdom; ²University of Liverpool, United Kingdom; ³University of Cambridge, United Kingdom

Ultrafast Measurements I (M4B)

16:00 - 17:00

Session Chair: Masahiko Tani, Fukui University, Japan

Auditorium 10

16:00 **Single-Shot, Femtosecond Resolution, Terahertz Pulse Measurement Without A Femtosecond Probe Via Electro-Optic Transposition** **M4B.1**

David Walsh; Edward Snedden; Steven Jamison

ASTeC, STFC Daresbury Lab, United Kingdom

16:15 **Extension Of The High Frequency Limit Of Time Domain Spectroscopy Up To 200 THz Using Two-color Pumped Air Plasma** **M4B.2**

Eiichi Matsubara¹; Masaya Nagai²; Masaaki Ashida²

¹Osaka Dental University, Japan; ²Osaka University, Japan

16:30 **THz Pulse Applied To Characterize The Group Delay Dispersion Of An Ultrashort Optical Pulse** **M4B.3**

Jérôme Degert; Marion Cornet; Emmanuel Abraham; Eric Freysz

Université de Bordeaux - LOMA, France

16:45 **Single-shot Terahertz Detection Using A GHz Bandwidth Oscilloscope** **M4B.4**

Ikufumi Katayama¹; Masataka Kobayashi¹; Yasuo Minami¹; Jun Takeda¹; Courtney L. Johnson²; Parker D. Salmans²; Nicholas R. Ellsworth²; Jeremy A. Johnson²

¹Yokohama National University, Japan; ²Brigham Young University, United States

Modeling and Analysis Techniques II (M4C)

16:00 - 17:00

Session Chair: Chao Zhang, University of Wollongong, Australia

Room 20

16:00 **Precise Determination Of The Complex Refractive Index Of Scattering And Absorbing Samples By Combining THz-TDS And A Kramers-Kronig Analysis** **M4C.1**

Maxime Bernier; Frédéric Garet; Jean-Louis Coutaz

IMEP-LAHC laboratory, France

16:15 **Precise Determination Of Optical Parameter Of Highly Absorptive Liquid In THz Region Using Kramers-Kronig Relations** **M4C.2**

Heviin Son; Da-Hye Choi; Jin-Young Jeong; Jung-Min Jang; Gun-Sik Park

Seoul National University, Korea, Republic of

16:30 **Periodic Sampling Errors In THz Measurements** **M4C.3**

Arno Rehn; David Jahn; Jan Balzer; Martin Koch

Philipps-Universität Marburg, Germany

16:45 **Accurate Modelling And Measurement Of The Impedance Match Between UTC Photodiodes And THz Antennas** **M4C.4**

Michele Natrella¹; Chin-Pang Liu¹; Chris Graham¹; Frédéric van Dijk²; Huiyun Liu¹; Cyril Renaud¹; Alwyn Seeds¹
¹University College London, United Kingdom; ²III-V Laboratory, France

Devices, Components, and Systems III (M4D)		Auditorium 11
Session Chair: Peiheng Wu, Nanjing University, China		
16:00 - 17:00		
16:00	Waveguide T-Junction As A Broadband Terahertz Variable Power Splitter <u>Kimberly Reichel</u> ; Rajind Mendis; Daniel Mittleman Brown University, United States	M4D.1
16:15	Biased THz Emission From InGaAs Nanowires Fabricated Using Electron Beam Lithography <u>Soner Balci</u> ¹ ; David A. Czapski ² ; Il Woong Jung ² ; Fariba Hatami ³ ; Patrick Kung ¹ ; Seongsin Margaret Kim ¹ ¹ University of Alabama, United States; ² Argonne National Laboratory, United States; ³ Humboldt University, Germany	M4D.2
16:30	On-chip Characterization Of THz Schottky Diodes Using Non-Contact Probes <u>Talha Masood Khan</u> ¹ ; Amir Ghobadi ¹ ; Ozan Celik ¹ ; Cosan Caglayan ² ; Necmi Biyikli ¹ ; Ali Kemal Okyay ¹ ; Kagan Topalli ¹ ; Kubilay Sertel ² ¹ National Nanotechnology Research Center, Bilkent University, Ankara, Turkey; ² ElectroScience Laboratory, Department of ECE, The Ohio State University, Columbus, United States	M4D.3
16:45	Smith-Purcell Terahertz Sources <u>Jacques Gardelle</u> ¹ ; Patrick Modin ¹ ; Hans P. Bluem ² ; Robert H. Jackson ² ; Alan M. M. Todd ² ; John T. Donohue ³ ¹ CEA/CESTA, France; ² AES, United States; ³ CENBG, France	M4D.4
Laser-Driven THz and mid-IR Sources I (M4E)		Room 19
Session Chair: Masayoshi Tonouchi, Osaka University, Japan		
16:00	A Compact And Broadly Tunable Terahertz Source Based On A Bimodal Laser And Plasmonic Photomixer <u>Shang-Hua Yang</u> ¹ ; Regan Watts ² ; Xiao Li ³ ; Ning Wang ¹ ; Vivi Cojocar ² ; James Gorman ⁴ ; Liam Barry ² ; Mona Jarrahi ⁵ ¹ University of Michigan, United States; ² Dublin City University, Ireland; ³ University of California Los Angeles, United States; ⁴ Xylophone Optics Ltd, Ireland; ⁵ University of California, Los Angeles, United States	M4E.1
16:15	Two-wavelength Generation From Injection-seeded Terahertz-wave Parametric Generator <u>Kosuke Murate</u> ¹ ; Shin'ichiro Hayashi ² ; Kodo Kawase ¹ ¹ Nagoya University, Japan; ² RIKEN, Japan	M4E.2
16:30	Coherent THz Generation Based On A Novel Dual-frequency III-V Semiconductor Laser <u>Romain Paquet</u> ; Stéphane Blin; Mikhael Myara; Arnaud Garnache Institut d'Electronique et des Systemes, France	M4E.3
16:45	Fiber Coupled THz QTDS At 1550 nm <u>Jan C. Balzer</u> ¹ ; Robert Kohlhaas ² ; Arno Rehn ¹ ; Martin Koch ¹ ; Martin Schell ² ; Thorsten Göbel ² ; Roman Dietz ² ¹ Faculty of Physics and Material Sciences Center, Germany; ² Fraunhofer Institute for Telecommunications, Germany	M4E.4
Monday Poster Session (M5P)		Congress Hall A
Session Chairs: Peter Uhd Jepsen, Krzysztof Iwaszczuk, Morten Bache		
	New Terahertz Imaging System For Industrial Applications <u>Viacheslav Muravev</u> ; Gombo Tsydynzhapov; Alexey Dremmin; Igor Kukushkin Terasense Group, Inc., United States	M5P.04.01
	Scanning Of Punctures In UHMWPE Composites Using THz And X-ray Radiation – Comparison Norbert Palka ¹ ; Robert Panowicz ¹ ; Marek Chilimoniuk ¹ ; René Beigang ² ; <u>Marcin Kowalski</u> ¹ ; Mieczyslaw Szustakowski ¹ ¹ Military University of Technology, Poland; ² University of Kaiserslautern, Department of Physics and Research Center OPTIMAS, Poland	M5P.04.02
	Gas Breakdown By A Focused CW 263 GHz Beam <u>Alexander Vodopyanov</u> ; Alexander Sidorov; Sergey Razin; Alexander Tsvetkov; Andrey Fokin; Alexey Veselov; Sergey Golubev; Mikhail Glyavin Institute of Applied Physics of Russian Academy of Sciences, Russian Federation	M5P.04.03
	Terahertz Time-Domain Technology For Thickness Determination Of Industrial Relevant Multi-Layer Coatings <u>Frank Ellrich</u> ; Jens Klier; Stefan Weber; Jonuscheit Joachim; Georg von Freymann Fraunhofer IPM, Germany	M5P.04.04
	Non-destructive Density Measurements Of Pharmaceutical Products By THz Imaging Joakim Garcia-Wernersson ¹ ; <u>Helena Rodilla</u> ² ; Alvaro Diaz-Bolado ³ ; Robin Dahlbäck ² ; Lubomir Gradinarsky ³ ; Mats Josefson ³ ; Jan Stake ² ¹ Calmers University of Technology / AstraZeneca, Sweden; ² Chalmers University of Technology, Sweden; ³ AstraZeneca, Sweden	M5P.04.05
	Terahertz Characterization Of An Asphaltene Sample And Its Polarity-Based Sub-fractions <u>Shuting Fan</u> ; Ce Zheng; Mingming Zhu; Dongke Zhang; Vincent Wallace University of Western Australia, Australia	M5P.04.06
	Radar Technology In Hot Rolling Mills <u>Sabine Gütgemann</u> ¹ ; Christian Krebs ¹ ; Dirk Nüßler ¹ ; Bettina Fischer ² ; Horst Krauthäuser ² ¹ Fraunhofer FHR, Germany; ² IMS Messsysteme GmbH, Germany	M5P.04.07
	Pharmaceutical Tablet Inspection With Injection-seeded Terahertz Parametric Generation Technique <u>Mizuki Mohara</u> ¹ ; Kei Shimura ¹ ; Kenji Aiko ¹ ; Nobuhiro Shiramizu ² ; Kosuke Murate ³ ; Kodo Kawase ³ ¹ Hitachi high-technologies corp., Japan; ² Hitachi Ltd., Japan; ³ Nagoya University, Japan	M5P.04.08
	Quasi-optical Mm-wave Sensor System For Contactless Monitoring Of Small Samples With Enhanced Performance <u>Gokarna Pandey</u> ¹ ; Steven Brebels ² ; Luca Dimiccoli ¹ ; Werner Vandermeiren ¹ ; Michael Libois ² ; Charlotte Soens ² ; Johan Stiens ¹ ¹ Department of Electronics and Informatics, Vrije Universiteit Brussel, Belgium; ² Perceptive Systems for the Internet of Things group, IMEC, Belgium	M5P.04.09
	Research On Characteristics Of Rough And Smooth Pedestrian In Terahertz Band <u>Shuo Chen</u> ; Chenggao Luo; Bin Deng; Yuliang Qin; Hongqiang Wang; Zhaowen Zhuang National University of Defense Technology, China	M5P.10.01

Analysis Of THz Detection Saturation Processes In InGaAs-based HEMTs	M5P.10.02
Abdelhamid Mahi ¹ ; Christophe Palermo ² ; Hugues Marinchio ² ; Abderrahmane Belgachi ¹ ; <u>Stéphane Blin</u> ² ; Luca Varani ² ¹ University of Bechar, Algeria; ² Univ. Montpellier, IES, UMR 5214, France	
Contrast Of Near-field Scanning Millimeter-wave Microscopy Using A Metal Slit Probe	M5P.10.03
<u>Tatsuo Nozokido</u> ¹ ; Manabu Ishino ¹ ; Jongsuck Bae ² ¹ University of Toyama, Japan; ² Nagoya Institute of Technology, Japan	
Error Analysis Of Model-Based Frequency- And Time-Domain Methods For THz Material Parameter Extraction	M5P.10.04
<u>Daniel Stock</u> ; Peter Haring Bolivar University of Siegen - High Frequency and Quantum Electronics, Germany	
Estimation Of THz Waveforms For Material Characterization Of Stratified Objects	M5P.10.05
<u>Ulrich Schade</u> ¹ ; Eglof Ritter ² ; Ljiljana Puskar ¹ ; Emad F. Aziz ³ ; Jörg Beckmann ⁴ ¹ Helmholtz Zentrum Berlin, Germany; ² Humboldt Universität zu Berlin, Germany; ³ Helmholtz Zentrum Berlin and Freie Universität Berlin, Germany; ⁴ Bundesanstalt für Materialforschung und -prüfung, Germany	
Theoretical Analysis Of Microstructured Gradient-index Lens For THz Photonics Using Greens Function Integral Equation Methods	M5P.10.06
<u>Thomas Søndergaard</u> ; Mads Brincker; Esben Skovsen Department of Physics and Nanotechnology, Aalborg University, Denmark	
Optical Properties Extraction Of Breast Tissue Using An Intraoperative Terahertz Probe	M5P.10.07
<u>Bao Truong</u> ; Vincent Wallace; Anthony Fitzgerald; Shuting Fan University of Western Australia, Australia	
Dispersion-Independent Classification Based On Geometric Algebra For Substance Detection	M5P.10.08
<u>Shengling Zhou</u> ¹ ; Dimitar G. Valchev ² ; Alex Dinovtser ³ ; James M. Chappell ³ ; Azhar Iqbal ³ ; Brian Wai-Him Ng ³ ; Tak W. Kee ⁴ ; Derek Abbott ⁵ ¹ School of Engineering and Technology, Southwest University, China; ² Department of Computer Systems and Technologies, Food Technologies University, Bulgaria; ³ School of Electrical and Electronic Engineering, The University of Adelaide, Australia; ⁴ School of Chemistry, The University of Adelaide, Australia; ⁵ School of Physical Sciences, The University of Adelaide, Australia	
Plasmonic Superfocusing Modes Of THz Waves In Metallic V-groove Tapered Waveguide Considered By Quasi-separation Of Variables	M5P.10.09
<u>Kazuyoshi Kurihara</u> ¹ ; Fumiyoshi Kuwashima ² ; Osamu Morikawa ³ ; Kohji Yamamoto ⁴ ; Masahiko Tani ⁴ ¹ The university of Fukui, Japan; ² Fukui University of Technology, Japan; ³ Japan Coast Guard Academy, Japan; ⁴ University of Fukui, Japan	
Benchmarking The Use Of Heavily-Doped Ge Against Noble Metals For Plasmonics And Sensing In The Mid-Infrared	M5P.10.10
<u>Giovanni Pellegrini</u> ¹ ; Leonetta Baldassarre ² ; Valeria Giliberti ² ; Jacopo Frigerio ³ ; Kevin Gallacher ⁴ ; Douglas J. Paul ⁴ ; Giovanni Isella ³ ; Michele Ortolani ² ; Paolo Biagioni ¹ ¹ Dipartimento di Fisica, Politecnico di Milano, Italy; ² Dipartimento di Fisica, Sapienza Università di Roma, Italy; ³ L-NESS, Dipartimento di Fisica, Politecnico di Milano, Italy; ⁴ School of Engineering, University of Glasgow, United Kingdom	
Accurate Modeling Of Silicon-Based Substrates For Sub-THz Antennas	M5P.10.11
Pawel Kopyt ¹ ; Barłomiej Salski ¹ ; Przemysław Zagrajek ² ; Dariusz Obrebski ³ ; <u>Jacek Marczewski</u> ⁴ ¹ Warsaw Univ. of Technology, Poland; ² Military Univ. of Technology, Poland; ³ Institute of Electron Technology, Poland; ⁴ Institute of Electron Technology, Poland	
Complete Multichannel Readout Device For THz Measurements Without Lock-in Technique	M5P.12.01
Cezary Kolarcinski ¹ ; Dariusz Obrebski ¹ ; Michal Zbiec ¹ ; <u>Jacek Marczewski</u> ¹ ; Przemysław Zagrajek ² ¹ Institute of Electron Technology, Poland; ² Military University of Technology, Poland	
FET Based THz Detector With Integrated Antenna And Source Follower.	M5P.12.02
Przemysław Zagrajek ¹ ; <u>Jacek Marczewski</u> ² ; Daniel Tomaszewski ² ; Dariusz Obrebski ² ; Krzysztof Kucharski ² ¹ Military University of Technology, Poland; ² Institute of Electron Technology, Poland	
Reflective Terahertz Optics Using 3D-printed Metals	M5P.12.03
<u>Daniel Headland</u> ; Withawat Withayachumnankul; Michael Webb; Heike Ebendorff-Heidepriem; Andre Luiten; Derek Abbott The University of Adelaide, Australia	
Large-area Graphene FET Based Broadband Terahertz Modulator	M5P.12.04
<u>Qi-Ye Wen</u> ¹ ; Yang Liu ¹ ; Jing-Bo Liu ¹ ; Tian-Long Wen ¹ ; Qing-Hui Yang ¹ ; Zhi Chen ¹ ; Yu-Lan Jing ² ; Huai-Wu Zhang ¹ ¹ University of Electronic Science and Technology of China, China; ² University of Electronic Science and Technology, China	
RF Characteristics Uniformity Of GaAs/AlAs Tunnel Diodes	M5P.12.05
Menglin Cao ¹ ; James Sexton ² ; Mohamed Missous ² ; <u>Michael Kelly</u> ¹ ¹ University of Cambridge, United Kingdom; ² University of Manchester, United Kingdom	
Evaluation Of A Rapid Manufacturing Approach For Rectangular Waveguide Filters Up To 1.1 THz	M5P.12.06
Viktor Doychinov ¹ ; <u>David Paul Steenson</u> ¹ ; Claudio Paoloni ² ¹ University of Leeds, United Kingdom; ² Lancaster University, United Kingdom	
H-Band SiGe Frequency Multiplier Chain With 4dBm Output Power	M5P.12.07
<u>Roe Ben Yishay</u> ; Danny Elad IBM, Israel	
Widely Tunable Electron-beam-driven Plasmonic Device For Terahertz Technology	M5P.12.08
<u>Yong-Qiang Liu</u> ; Ling-Bao Kong; Pu-Kun Liu School of Electronics Engineering and Computer Science, Peking University, China	
Parallel-Plate Waveguide Integrated Filters and Lenses Realized by Metallic Posts for Terahertz Applications	M5P.12.09
<u>Mehdi Ahmadi-Boroujeni</u> Sharif University of Technology, Iran	
Two-Frequency THz Spectrometer	M5P.12.10
<u>Vladimir Vaks</u> ; Elena Domracheva; Mariya Chernyaeva; Sergey Pripolzin Institute for Physics of Microstructures, Russian Federation	

Fast Multi-Layer Thickness Measurement System Using Terahertz Pulses	M5P.12.11
<u>Daniel M. Hailu</u> ; Ayesheshim K. Ayesheshim; Daryoosh Saeedkia TeTechS Inc, Canada	
Investigation Of The Instabilities In Relativistic Electron Beam For The Significant Increasing Of Vircator Generation Frequency	M5P.12.13
Semen Kurkin ¹ ; Artem Badarin ¹ ; Alexey Koronovskii ² ; <u>Alexander Hramov</u> ¹ ¹ Saratov State Technical University, Russian Federation; ² Saratov State University, Russian Federation	
Effect Of Quality Resonator On Sub-THz/THz Amplification In Superlattice	M5P.12.14
Vladimir Makarov ¹ ; <u>Alexander Hramov</u> ¹ ; Alexey Koronovskii ¹ ; Kiril Alexeef ¹ ; Vladimir Maksimenko ¹ ; Olga Moskalenko ² ¹ Saratov State Technical University, Russian Federation; ² Saratov State University, Russian Federation	
Broadband Antenna-Coupled High-Temperature Superconducting Josephson-Junction Mixer For Terahertz Communication Applications	M5P.12.15
<u>Xiang Gao</u> ¹ ; Jia Du ¹ ; Andrew Weily ¹ ; Ting Zhang ¹ ; Cathy Foley ¹ ; Yingjie Guo ² ¹ Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia; ² University of Technology, Sydney, Australia	
Versatility Of Y-Ba-Cu-O Oxides: Cooled Superconducting And Uncooled Semiconducting IR / THz Detectors	M5P.12.16
<u>Alain Kreisler</u> ¹ ; Romain Ladret ² ; Xavier Galiano ² ; Annick Dégardin ² ¹ CentraleSupélec - GeePs, France; ² UPMC Univ Paris 06, France	
Ultra-wide Band-pass Terahertz Plasmonic Filter With Planar Corrugated Metallic Structure	M5P.12.17
<u>Renbin Zhong</u> ; Yan Liu; Hong Ding; Zhen Lian; Chen Bu; Shenggang Liu Terahertz Research Center, School of Physical Electronics, University of Electronic Science and Tech, China	
Birefringent Properties Of Poly-lactic Acid At Terahertz Range	M5P.12.18
<u>Hotsumi Iwasaki</u> ¹ ; Makoto Okano ¹ ; Nozomu Komatsubara ¹ ; Madoka Nakamura ¹ ; Atsuto Moriwaki ¹ ; Harumi Sato ² ; Shinichi Watanabe ¹ ¹ Keio University, Japan; ² Kobe University, Japan	
Metal-Insulator-Metal Diodes Fabricated On Flexible Substrates	M5P.12.19
<u>David Etor</u> ; Linzi E. Dodd; David Wood; Claudio Balocco Durham University, United Kingdom	
Enhanced Narrow-Band Operation Of Ultra-Fast Rectennas	M5P.12.20
<u>David Etor</u> ; Linzi E. Dodd; David Wood; Claudio Balocco Durham University, United Kingdom	
Fully-integrated THz Transceiver With 4.5 THz Bandwidth And 70 dB Dynamic Range	M5P.12.21
<u>Björn Globisch</u> ; Roman Dietz; Robert Kohlhaas; Moritz Kleinert; Helmut Roehle; Thorsten Göbel; Martin Schell Fraunhofer Heinrich Hertz Institute, Germany	
An Ultrathin Terahertz Quarter Wave Plate With High Transmittance By Flexible Metamaterial	M5P.12.22
<u>Zhengli Han</u> ; Yu Tokizane; Kouji Nawata; Mio Koyama; Takashi Notake; Yuma Takida; Yoichi Ogata; Hiroaki Minamide Riken, Japan	
Tri-reflector CATR System For The THz Range And Its Extension To The V-band	M5P.12.23
<u>Junsheng Yu</u> ¹ ; Xiaoming Liu ¹ ; Yuan Yao ¹ ; Xiaodong Chen ² ¹ School of Electronic Engineering, Beijing University of Posts and Telecommunications, China; ² School of Electronic Engineering and Computer Science, Queen Mary University of London, United Kingdom	
A Proposal Of A Semiconductor-integrated Self-complementary Bow-tie Antenna Towards A Terahertz Transmitter	M5P.12.24
<u>Hirokazu Yamakura</u> ; Yuuya Ishiguro; Yuto Kato; Michihiko Suhara Tokyo Metropolitan University, Japan	
A 340GHz Sine Waveguide Backward-Wave Oscillator	M5P.12.25
Luqi Zhang ¹ ; <u>Yanyu Wei</u> ¹ ; Chong Ding ¹ ; Xuebing Jiang ¹ ; Yuanyuan Wang ¹ ; Qian Li ¹ ; Xia Lei ¹ ; Jin Xu ¹ ; Lingna Yue ¹ ; Hairong Yin ¹ ; Zhigang Lu ¹ ; Guoqing Zhao ¹ ; Tao Tang ¹ ; Yubin Gong ¹ ; Jinjun Feng ² ¹ National Key Laboratory of Science and Technology on Vacuum Electronics, University of Electronic Sc, China; ² Beijing Vacuum Electronics Research Institute, China	
Thickness Dependence Of Terahertz Plasmonic Antenna	M5P.12.26
<u>Takashi Iguchi</u> ¹ ; Satoshi Ihara ¹ ; Shunri Oda ² ; Yukio Kawano ² ¹ Tokyo Institute of Technology, Japan; ² Laboratory for Future Interdisciplinary Research of Science and Technology, Japan	
Split-joint Bull's Eye Structure With Aperture Optimization For Multi-frequency Terahertz Plasmonic Antennas	M5P.12.27
<u>Xiangying Deng</u> ; Shunri Oda; Yukio Kawano Tokyo Institute of Technology, Japan	
Multi-Frequency THz Reference Source By Spectral Synthesis Of Optical Combs For Simultaneous Phase-Locking Of THz Sources	M5P.12.28
<u>Isao Morohashi</u> ; Yoshihisa Irimajiri; Takahide Sakamoto; Norihiko Sekine; Akifumi Kasamatsu; Iwao Hosako National Institute of Information and Communications Technology, Japan	
3D Isotropic TO Via Parametrization	M5P.12.29
Mateus Junqueira ¹ ; Lucas Gabrielli ² ; Felipe Mejia ³ ; <u>Danilo Spadoti</u> ¹ ¹ Federal University of Itajuba, Brazil; ² University of Campinas, Brazil; ³ National Institute of Telecommunications, Brazil	
Investigation Of Terahertz Coherent Smith-Purcell Radiation In Three-Section Periodical Grating	M5P.12.30
Miaomiao Cao; <u>Wenxin Liu</u> ; Yong Wang; Ke Li Key Laboratory of High Power Microwave Sources and Technologies, Institute of Electronics, Chinese, China	
Fabrication Of Micro-scale Single-crystal Silicon Structures For Efficient Terahertz Magnetic Mirror	M5P.12.31
<u>Daniel Headland</u> ¹ ; Shruti Nirantar ² ; Philipp Gutruf ² ; Derek Abbott ¹ ; Madhu Bhaskaran ² ; Christophe Fumeaux ¹ ; Sharath Sriram ² ; Withawat Withayachumnankul ¹ ¹ The University of Adelaide, Australia; ² RMIT University, Australia	
Proof Of Concept For A WR-2.2 MEMS Waveguide Switch	M5P.12.32
<u>David Laemmlé</u> ¹ ; Christian Weickhmann ² ; Rolf Jakob ² ; Helmut F. Schlaak ¹ ¹ Technische Universität Darmstadt, Institute of Electromechanical Design, Germany; ² Technische Universität Darmstadt, Institute	

for Microwave Engineering and Photonics, Germany	
3D Printed Chirped Dielectric Waveguide For Focusing Applications	M5P.12.33
<u>David Jahn</u> ¹ ; Marcel Weidenbach ¹ ; Leonard Becker ¹ ; Jannik Lehr ¹ ; Stefan F. Busch ¹ ; Yasuaki Monnai ² ; Jan Balzer ¹ ; Martin Koch ¹ ¹ Philipps-Universität Marburg, Germany; ² Keio University, Japan	
Measurement Of A Broadband Millimeter Wave Window For Application In Vacuum Tubes	M5P.12.34
<u>Craig Donaldson</u> ; Paul McElhinney; Liang Zhang; Wenlong He university of strathclyde, United Kingdom	
Active Terahertz Device Based On Optically-controlled Organometal Halide Perovskite	M5P.12.35
<u>Bo Zhang</u> ¹ ; Longfeng Lv ² ; Jingling Shen ¹ ¹ Department of Physics, Capital Normal University, China; ² Beijing Jiaotong University, China	
Electrode Width Dependent Performance Of THz Photoconductive Emitters	M5P.12.36
<u>Abhishek Singh</u> ; Stephan Winnerl; Jacob C. König-Otto; Daniel Stephan; Manfred Helm; Harald Schneider Helmholtz Zentrum Dresden Rossendorf, Dresden, Germany, Germany	
Conjugated Polymer Based Active Electric-controlled Terahertz Device	M5P.12.37
<u>Liang Zhong</u> ; Bo Zhang; Jingling Shen Department of Physics, Capital Normal University, China	
Terahertz Polarizer On Flexible And Conformal Substrate	M5P.12.38
<u>Antonio Ferraro</u> ¹ ; Dimitrios Zografopoulos ² ; Mauro Missori ³ ; Marco Peccianti ⁴ ; Roberto Caputo ¹ ; Romeo Beccherelli ² ¹ Department of Physics, University of Calabria, I-87036 Rende (CS), Italy; ² Consiglio Nazionale delle Ricerche, Istituto per la Microelettronica e Microsistemi (CNR-IMM), Roma, Italy; ³ Consiglio Nazionale delle Ricerche, Istituto dei Sistemi Complessi (CNR-ISC), Roma 00185, Italy; ⁴ Department of Physics and Astronomy, University of Sussex, Falmer, Brighton BN1 9RH, United Kingdom	
Mechanically Tunable Bragg Filters For Terahertz Applications	M5P.12.39
<u>Antonio Ferraro</u> ¹ ; Dimitrios Zografopoulos ² ; Roberto Caputo ¹ ; Romeo Beccherelli ² ¹ Department of Physics, University of Calabria, I-87036 Rende (CS), Italy; ² Consiglio Nazionale delle Ricerche, Istituto per la Microelettronica e Microsistemi (CNR-IMM), Roma, Italy	
Laser Driven THz Accelerators	M5P.12.40
<u>Moein Fakhari</u> ; Arya Fallahi; Alireza Yahaghi; Franz X. Kärtner Center for Free Electron Laser CFEL, Germany	
Polymeric Zone Plates For THz Focusing	M5P.12.41
Silvia Tofani ¹ ; Dimitrios Zografopoulos ² ; <u>Romeo Beccherelli</u> ² ; Mauro Missori ² ¹ Sapienza University of Rome, Italy; ² Consiglio Nazionale delle Ricerche, Italy	
High Resistivity Silicon Waveguides For The Terahertz Spectral Region	M5P.12.42
<u>Bart Kuyken</u> ¹ ; Mathias Vanwolleghem ² ; Gunther Roelkens ¹ ; Dmitri Yarekha ² ; Jean-François Lampin ³ ¹ Universiteit Gent, Belgium; ² IEMN, France; ³ IENM, France	
Cut-off Wavelength Extension Of QWIP By MIM Plasmonic Cavity	M5P.12.43
<u>ZhiFeng Li</u> ¹ ; Qian Li ² ; YouLiang Jing ³ ; Ning Li ³ ; XiaoShuang Chen ³ ; Wei Lu ³ ; YuWei Zhou ¹ ¹ Shanghai Institute of Technical Physics, China; ² Microsystem and Terahertz Research Center, China Academy of Engineering Physics, China; ³ National Laboratory for Infrared Physics, Shanghai Institute of Technical Physics, China	
Coherent Photonic 70 GHz Band Mixer Module With WR-12 Output	M5P.12.44
Besher Khani ¹ ; Vitaly Rymanov ¹ ; Jörg Honecker ² ; <u>Matthias Steeg</u> ¹ ; Andreas Steffan ² ; Andreas Stöhr ¹ ¹ University of Duisburg-Essen, Germany; ² Finisar, Germany	
Design And Development Of Ground Calibration Targets For The MetOP-SG Microwave Sounder Payload	M5P.12.45
<u>Manju Henry</u> RALSpace, Science and Technology Facilities Council, United Kingdom	
Terahertz GRIN Lenses Fabricated By 3D-printing	M5P.12.46
<u>Enrique Castro-Camus</u> ¹ ; Arturo Hernandez-Serrano ¹ ; Marcel Weidenbach ² ; Stefan F. Busch ² ; Martin Koch ² ¹ Centro de Investigaciones en Optica A.C., Mexico; ² Philipps Universität Marburg, Germany	
Additive Manufacturing Techniques For Millimeter-Wave Components	M5P.12.47
<u>James Anderson</u> ; John Doane; Alex Haid; Neil Alexander General Atomics, United States	
Broadband THz Modulators Based On Multilayer Graphene On PVC	M5P.12.48
<u>Emine Kaya</u> ¹ ; Nurbek Kakenov ² ; Coşkun Kocabaş ² ; Hakan Altan ¹ ; Okan Esentürk ¹ ¹ Middle East Technical University, Turkey; ² Bilkent University, Turkey	
Silicon Micromachined Components At 1THz And Beyond	M5P.12.49
<u>Cecile Jung-Kubiak</u> ; Theodore Reck; Maria Alonso-DelPino; Goutam Chattopadhyay Jet Propulsion Laboratory - California Institute of Technology, United States	
Micromachined Terahertz Rectangular Waveguide Bandpass Filters With Circular Resonant Cavities	M5P.12.50
<u>Li Li</u> ; Xianjin Deng; Binbin Cheng; Fengjun Chen Microsystem and Terahertz Research Center, China Academy of Engineering Physics, China	
Photothermoelectric Response Of Graphene-Metal Contacts In The Terahertz Range	M5P.12.51
Yingxin Wang; <u>Xiangquan Deng</u> ; Ziran Zhao; Jia-Lin Sun Tsinghua University, China	
Change Of Frequency Separation For Two-mode Quantum Dot Lasers By Using A Birefringent Etalon Filter	M5P.12.52
<u>Kouichi Akahane</u> ¹ ; Masaki Inui ² ; Toshimasa Umezawa ¹ ; Atsushi Kanno ¹ ; Naokatsu Yamamoto ¹ ; Tetsuya Kawanishi ³ ; Hideyuki Sotobayashi ² ¹ National Institute of Information and Communications Technology, Japan; ² Aoyama Gakuin University, Japan; ³ Waseda University, Japan	
Pyroelectric Detectors For IR / THz Waves Based On Amorphous Y-Ba-Cu-O: Analytical Modeling Of The Observed Fast Response	M5P.12.53

Xavier Galiano ¹ ; Vishal Jagtap ² ; Annick Dégardin ¹ ; Alain Kreisler ³ ¹ UPMC Univ Paris 06, France; ² CentraleSupélec, France; ³ GeePs - CentraleSupélec, France	
Hollow-Core Terahertz Optical Waveguides With Hyperuniform Disordered Dielectric Reflectors	M5P.12.54
<u>Tian Ma</u> ¹ ; Maksim Skorobogatiy ² ¹ Department of Physics Engineering, Canada; ² Polytechnique de Montréal, Canada	
Low Loss Mid-IR Transmission Bands Using Silica Hollow-core Anisotropic Anti-resonant Fibers	M5P.12.55
<u>Md. Selim Habib</u> ; Ole Bang; Morten Bache Technical University of Denmark, Denmark	
A 410-450GHz Local Oscillation Source For SIS Mixers	M5P.12.56
<u>Peng Chen</u> ¹ ; Kun Zhang ² ¹ Institute of Electronic Engineering, Microsystem and Terahertz Research Center, China; ² Purple Mountain Observatory, China	
A 220 V/W, 25 pW/sqrt(Hz) NEP Bow-Tie Antenna-Coupled PHEMT Detector At 250 GHz	M5P.12.57
Shamsun Nahar ¹ ; Andrey Muraviev ² ; Mona M. Hella ³ ; Dmytro But ⁴ ¹ Anokiwave, Inc, United States; ² Terahertz Electronic Technologies, United States; ³ Rensselaer Polytechnic Institute, United States; ⁴ Laboratoire Charles Coulomb, University of Montpellier & CNRS, France	
Design Of The Calibration Target For SWI On JUICE	M5P.12.58
<u>Karl Jacob</u> ; Arne Schröder; Axel Murk; Mikko Kotiranta Institute of Applied Physics University of Bern, Switzerland	
Measurement Of Plasma Density In The Discharge Maintained In A Nonuniform Gas Flow By A Powerful Radiation Of Terahertz-band Gyrotron	M5P.13.01
<u>Alexander Sidorov</u> ; Sergey Razin; Sergey Golubev; Maria Safronova; Andrey Fokin; Alexey Luchinin; Alexander Vodopyanov; Mikhail Glyavin Institute of Applied Physics, Russian Federation	
Compressed Sensing And Defect-Based Dictionaries For Characteristics Extraction In Mm-Wave Non-Destructive Testing	M5P.13.02
<u>Edison Cristofani</u> ¹ ; Mathias Becquaert ¹ ; Gokarna Pandey ² ; Marijke Vandewal ¹ ; Nikos Deligiannis ² ; Johan Stiens ² ¹ Royal Military Academy, Belgium; ² Vrije Universiteit Brussel, Belgium	
In THz Band Josephson Junction Can Work As The Super Wide Receiver, The Frequency-meter And The Tuner Of Generators	M5P.17.01
<u>Oleksandr Denisov</u> Harbin Institute of Technology, China	
Dynamical Simulation For THz-QCLs With Optical Mutual Injection	M5P.20.01
<u>Ning Yang</u> ¹ ; Yan Xie ¹ ; Weidong Chu ¹ ; Jian Wang ² ; Suqing Duan ¹ ¹ Institute of Applied Physics and Computational Mathematics, China; ² Beijing Jiaotong University, China	
High-performance, Ultra-broadband Room-temperature Terahertz Quantum Cascade Laser Sources	M5P.20.02
<u>Kazuue Fujita</u> ; Masahiro Hitaka; Akio Ito; Masamichi Yamanishi; Tatsuo Dougakiuchi; Tadataka Edamura Hamamatsu Photonics K.K., Japan	
THz Quantum Cascade Lasers Toward High Output Power Near Liquid Nitrogen Temperature Operation With Dewar Condenser	M5P.20.03
<u>Tsung-Tse Lin</u> ; Wataru Terashima; Hideki Hirayama RIKEN, Japan	
Improvement Of Terahertz Quantum Cascade Laser For High Power In Continuous Wave Mode	M5P.20.04
<u>Xuemin Wang</u> Research Center of Laser Fusion, China Academy of Engineering Physics, China	
Density Matrix Model Applied To GaN-based Two-well THz-QCLs	M5P.20.05
<u>Hiroaki Yasuda</u> National Institute of Information and Communications Technology, Japan	
Frequency Tuning Of A Terahertz Quantum-Cascade Laser By Rear-Facet Illumination Via A Diode Laser	M5P.20.06
<u>Martin Hempel</u> ¹ ; Benjamin Röben ¹ ; Lutz Schrottke ¹ ; Heinz-Wilhelm Hübers ² ; Holger Grahn ¹ ¹ Paul-Drude-Institut, Germany; ² German Aerospace Center (DLR), Institut of Optical Sensor Systems, Germany	
Germanium Quantum Fountain Structures On Silicon Substrates	M5P.20.07
<u>Monica De Seta</u> ¹ ; Diego Sabbagh ¹ ; Luciana Di Gaspare ¹ ; Johannes Schmidt ² ; Stephan Winnerl ³ ; Manfred Helm ² ; Michele Virgilio ⁴ ; Michele Ortolani ⁵ ¹ Dipartimento di Scienze Università di Roma Tre, Italy; ² Helmutz-Zentrum Dresden-Rossendorf and Institut für Angewandte Physik Dresden, Germany; ³ Helmutz-Zentrum Dresden-Rossendorf Dresden, Germany; ⁴ Dipartimento di Fisica "E. Fermi" Università di Pisa, Italy; ⁵ Dipartimento di Fisica, Università di Roma "La Sapienza", Italy	
Continuous-wave THz Quantum Cascade Lasers	M5P.20.08
<u>Jungi Liu</u> ¹ ; Yuanyuan Li ² ; Fengqi Liu ² ; Jinchuan Zhang ² ; Shenqiang Zhai ² ; Lijun Wang ² ; Shuman Liu ² ¹ Institute of Semiconductors, Chinese Academy of Sciences, China; ² Institute of Semiconductors, China	
Spectral Terahertz Imaging With A Quantum-Cascade Laser	M5P.20.09
<u>Till Hagelschuer</u> ; Nick Rothbart; Heiko Richter; Martin Wienold; Heinz-Wilhelm Hübers German Aerospace Center (DLR), Germany	
Feedhorn-integrated THz QCL Local Oscillators For The LOCUS Atmospheric Sounder	M5P.20.10
Alexander Valavanis ¹ ; <u>Manju Henry</u> ² ; Yingjun Han ¹ ; Olivier Auriacombe ² ; Rui Dong ¹ ; Thomas Rawlings ² ; Lianhe Li ¹ ; Matthew Oldfield ² ; Nick Brewster ² ; A. Giles Davies ¹ ; Brian Ellison ² ; Edmund H. Linfield ¹ ¹ University of Leeds, United Kingdom; ² STFC RAL Space, United Kingdom	

Tuesday, 27. September 2016

08:30 - 10:00		Tuesday Plenary Session Session Chair: Xi-Cheng Zhang, University of Rochester, USA	Plenary Auditorium 10/11/12
08:30	Successful Precision 300-THz Laser Interferometry For Gravitational-wave Detection <u>David Shoemaker</u> Kavli Institute, MIT, United States		T1.1
09:15	Metamaterials For THz Quantum Detection <u>Carlo Sirtori</u> Université Paris Diderot, France		T1.2
11:00 - 12:30		Ultrafast Measurements II (T2A) Session Chair: Ajay Nahata, University of Utah, USA	Room 20
11:00	Ultrafast THz-STM Of Si(111)-7x7 With Atomic Resolution (Keynote Talk) <u>Vedran Jelic</u> ¹ ; Krzysztof Iwaszczuk ² ; Peter Nguyen ¹ ; Christopher Rathje ³ ; Graham Hornig ¹ ; Haille Sharum ¹ ; James Hoffman ¹ ; Mark Freeman ¹ ; Frank Hegmann ¹ ¹ University of Alberta, Canada; ² Technical University of Denmark, Denmark; ³ University of Göttingen, Germany		T2A.1
11:30	THz Nano-Spectroscopy With 25 nm Spatial And 10 fs Time Resolution <u>Miriam Boehmler</u> ; Andreas Huber; Max Eisele neaspec GmbH, Germany		T2A.2
11:45	Electron Pulse Reshaping By THz Streaking At Metal Nanotips <u>Lara Wimmer</u> ¹ ; Georg Herink ² ; Oliver Karnbach ¹ ; Claus Ropers ¹ ¹ Georg-August University of Göttingen, Germany; ² Georg-August University Göttingen, Germany		T2A.3
12:00	Germanium Plasmonic Nanoantennas For Third-Harmonic Generation In The Mid Infrared <u>Marco P. Fischer</u> ¹ ; Aaron Riede ¹ ; Alexander Grupp ¹ ; Kevin Gallacher ² ; Jacopo Frigerio ³ ; Michele Ortolan ⁴ ; Douglas J. Paul ² ; Giovanni Isella ³ ; Alfred Leitenstorfer ¹ ; Paolo Biagioni ⁵ ; Daniele Brida ¹ ¹ Department of Physics and Center for Applied Photonics, University of Konstanz, Germany; ² School of Engineering, University of Glasgow, United Kingdom; ³ L-NESS, Dipartimento di Fisica del Politecnico di Milano, Italy; ⁴ Department of Physics, Sapienza University of Rome, Italy; ⁵ Dipartimento di Fisica, Politecnico di Milano, Italy		T2A.4
12:15	Charge Carrier Dynamics In Cu₂ZnSn(S/Se)₄ Thin Film Solar Cells Measured By Time Resolved Terahertz Spectroscopy <u>Hannes Hempel</u> ¹ ; Thomas Unold ¹ ; Rainer Eichberger ¹ ; Sönke Müller ² ; Gilles Dennler ³ ¹ Helmholtz-Zentrum Berlin für Materialien und Energie, Germany; ² Department Structure and Dynamics of Energy Materials, Helmholtz-Zentrum Berlin für Materialien und, Germany; ³ IMRA Europe SAS, France		T2A.5
11:00 - 12:30		Spectroscopy and Material Properties III (T2B) Session Chair: Withawat Withayachumnankul, University of Adelaide, Australia	Auditorium 10
11:00	Multi-Extreme THz ESR: Recent Achievements In Kobe <u>Hitoshi Ohta</u> ¹ ; Susumu Okubo ² ; Eiji Ohmichi ² ; Takahiro Sakurai ² ; Hideyuki Takahashi ² ; Shigeo Hara ² ¹ Kobe University, Molecular Photoscience Research Center, Japan; ² Kobe University, Japan		T2B.1
11:15	THz Spectroscopic Investigations Of Magnetodielectric Coupling In Sr_{0.55}Ba_{0.45}MnO₃ Ceramics <u>Filip Kadlec</u> ¹ ; Veronica Goian ¹ ; Christelle Kadlec ¹ ; Bogdan Dabrowski ² ; Dmitrii Nuzhnyy ¹ ; Martin Kempa ¹ ; Viktor Bovtun ¹ ; Maxim Savinov ¹ ; Jiří Hejtmánek ¹ ; Jan Prokleska ² ; Stanislav Kamba ¹ ¹ Institute of Physics, Czech Academy of Sciences, Czech Republic; ² Northern Illinois University, DeKalb, United States; ³ Faculty of Mathematics and Physics, Charles University, Czech Republic		T2B.2
11:30	Possible Light-induced Superconductivity In Metallic K₃C₆₀ <u>Alice Cantaluppi</u> ¹ ; Matteo Mitrano ¹ ; Daniele Nicoletti ¹ ; Stefan Kaiser ¹ ; Andrea Perucchi ² ; Stefano Lupi ³ ; Paola Di Pietro ² ; Daniele Pontiroli ⁴ ; Mauro Riccò ⁴ ; Stephen Clark ⁵ ; Dieter Jaksch ⁶ ; Andrea Cavalleri ¹ ¹ Max Planck Institute for the Structure and Dynamics of Matter, Germany; ² INSTM UdR Trieste-ST and Elettra - Sincrotrone Trieste S.C.p.A., Italy; ³ CNR-IOM and Dipartimento di Fisica, Università di Roma, Italy; ⁴ Dipartimento di Fisica e Scienze della Terra, Università degli Studi di Parma, Italy; ⁵ Department of Physics, University of Bath, United Kingdom; ⁶ Department of Physics, Oxford University, Clarendon Laboratory, United Kingdom		T2B.3
12:00	Synchrotron Radiation For Probing The Quantum Ground State In Tb₂Ti₂O₇ <u>Evan Constable</u> ¹ ; S. De Brion ¹ ; V. Simonet ¹ ; J. Robert ¹ ; R. Ballou ¹ ; S. Petit ² ; C. Decorse ³ ; J. -B. Brubach ⁴ ; P. Roy ⁴ ¹ Institut Néel, France; ² Laboratoire Léon Brillouin, France; ³ Université Paris-Sud, France; ⁴ SOLEIL synchrotron, France		T2B.4
12:15	Terahertz Dynamics Of Spin Resonance Splitting In TmFeO₃ Single Crystal Kailin Zhang ¹ ; Xiumei Liu ¹ ; Kai Xu ¹ ; Bo Li ² ; Shixun Cao ¹ ; <u>Zuanming Jin</u> ¹ ; Guohong Ma ¹ ¹ Shanghai University, China; ² East China Normal University, China		T2B.5
11:00 - 12:30		Metamaterial Structures and Applications I (T2C) Session Chair: Willie Padilla, Duke University, USA	Auditorium 12
11:00	Terahertz Quantum Hall Effect In Spin-split 2D Heavy-hole Gases Michele Failla ¹ ; Janine Keller ² ; Giacomo Scalari ² ; Jérôme Faist ² ; Maksym Myronov ¹ ; David Leadley ¹ ; <u>James Lloyd-Hughes</u> ¹ ¹ University of Warwick, United Kingdom; ² ETH Zurich, Switzerland		T2C.1
11:15	Resonance Tuning With A System Of Coupled Dipoles <u>Moritz Wenclawiak</u> ; Karl Unterrainer; Juraj Darmo Technische Universität Wien - Institut für Photonik, Austria		T2C.2
11:30	Ultra-strong Coupling With Spin-split Heavy-hole Cyclotron Resonances In Strained Ge Quantum Wells <u>Janine Keller</u> ¹ ; Giacomo Scalari ¹ ; Gian Lorenzo Paravicini-Bagliani ¹ ; Curdin Maissen ¹ ; Johannes Haase ² ; Michele Failla ³ ; Maksym Myronov ³ ; David R. Leadley ³ ; James Lloyd-Hughes ³ ; Jerome Faist ¹ ¹ ETH Zurich, Switzerland; ² PSI, Switzerland; ³ University of Warwick, United Kingdom		T2C.3
11:45	Time-domain Electric Field Enhancement On Micrometer Scale In Coupled Split Ring Resonator Upon Terahertz Radiation <u>Simon Lehnskov Lange</u> ¹ ; Krzysztof Iwaszczuk ¹ ; Matthias Hoffmann ² ; Jes Broeng ¹ ; Peter Uhd Jepsen ¹		T2C.4

¹Technical University of Denmark, Denmark; ²Stanford Linear Accelerator Center, United States

12:00 **Gate Tunable Magneto-Plasmon Ultrastrongly Coupled To LC Cavity (Keynote Talk)** T2C.5
Gian Lorenzo Paravicini-Bagliani; Giacomo Scalari; Federico Valmorra; Janine Keller; Curdin Maissen; Matthias Beck; Jérôme Faist
ETH Zurich, Switzerland

11:00 - 12:30 **Devices, Components, and Systems IV (T2D)** Auditorium 11
Session Chair: Ci-Ling Pan, National Tsing Hua University, Taiwan

11:00 **THz Artificial Dielectric Lens** T2D.1
Rajind Mendis¹; Masaya Nagai²; Yiqiu Wang³; Nicholas Karl¹; Daniel Mittleman¹
¹Brown University, United States; ²Osaka University, Japan; ³Rice University, United States

11:15 **Broadband Terahertz Polarization Rotator Based On A twisted Parallel Plate Waveguide** T2D.2
Thea Bjørk Kristensen; Krzysztof Iwaszczuk; Peter Uhd Jepsen
Technical University of Denmark, Denmark

11:30 **Mode Selectivity Of Extraordinary Optical Transmission Inside A Terahertz Parallel-Plate Waveguide** T2D.3
Kimberly Reichel¹; Peter Lu²; Rajind Medis¹; Daniel Mittleman¹
¹Brown University, United States; ²Harvard University, United States

11:45 **Efficient Terahertz Reflectarray Based On Dielectric Resonator Antennas** T2D.4
Daniel Headland¹; Eduardo Carrasco²; Shruti Nirantar³; Philipp Gutruf³; James Schwarz³; Derek Abbott¹; Madhu Bhaskaran³; Sharath Sriram³; Julien Perruisseau-Carrier⁴; Christophe Fumeaux¹; Withawat Withayachumnankul¹
¹The University of Adelaide, Australia; ²Foundation for Research on Information Technologies in Society, Switzerland; ³RMIT University, Australia; ⁴École polytechnique fédérale de Lausanne, Switzerland

12:00 **Silicon Micromachined Terahertz Spectrometer Instruments** T2D.5
Goutam Chattopadhyay; Theodore Reck; Cecile Jung-Kubiak; David Ganzalez-Ovejero; Adrian Tang; Choonsup Lee; Maria Alonso-DelPino
NASA-Jet Propulsion Laboratory, California Institute of Technology, United States

12:15 **TE01 Mode Converter For Highly Overmoded Circular Waveguide At 188 GHz** T2D.6
Oleksandr Rybalko; Vitaliy Zhurbenko; Jan Henrik Ardenkjær-Larsen
DTU Elektro, Denmark

11:00 - 12:30 **Laser-Driven THz and mid-IR Sources II (T2E)** Room 19
Session Chair: Alexander Shkurinov, Moscow State University, Russia

11:00 **Hot-Electron Refluxing In Thin Foils Irradiated By Ultraintense Laser Pulses And Highly Efficient Terahertz Radiation (Keynote Talk)** T2E.1
Zhan Jin¹; Hongbin Zhuo²; Tomohiro Nakazawa³; Junghun Shin³; Satoshi Wakamatsu³; Noboru Yugami⁴; Tomonao Hosokai³; Mingyang Yu⁵; Zhengming Sheng⁶; Ryosuke Kodama³
¹Photon Pioneers Center, Osaka University, Japan; ²National University of Defense Technology, China; ³Osaka University, Japan; ⁴Utsunomiya University, Japan; ⁵Zhejiang University, China; ⁶Shanghai Jiao Tong University, China

11:30 **Pulse Sequences For High-Energy Terahertz Generation** T2E.2
Koustuban Ravi¹; Frederike Ahr²; Giovanni Cirmi²; Michael Hemmer²; Fabian Reichert²; Damian Schimpf²; Huseyin Cankaya²; Oliver Mücke²; Luis Zapata²; Nicholas Matlis²; Franz X. Kärtner²
¹Massachusetts Institute of Technology, Center for Free Electron Laser Science, Germany; ²Center for free electron laser science, Germany

11:45 **High-Power Terahertz Pulse Generation Using Table-Top Laser Driven Ion Accelerators** T2E.3
Amrutha Gopal¹; Abel Woldegeorgis²; Sven Herzer²
¹Institute of Optics and Quantum Electronics - Friedrich Schiller University, Germany; ²Friedrich-Schiller University, Jena, Germany

12:00 **Terahertz Emission Mechanism And Laser Excitation Position Dependence Of Nano-Grating Electrode Photomixers** T2E.4
Reshma Anamari Mohandas¹; Joshua R. Freeman¹; Mark C. Rosamond¹; Lalitha Ponnampalam²; Alwyn J. Seeds²; Paul J. Cannard³; David G. Moodie³; Michael J. Robertson³; A. Giles Davies¹; Edmund H. Linfield¹; Paul Dean¹
¹University of Leeds, United Kingdom; ²University College London, United Kingdom; ³CIP Technologies, United Kingdom

12:15 **Photonics-based 1-THz Signal Generation And Its Evaluation On Phase Noise Characteristics** T2E.5
Atsushi Kanno; Norihiko Sekine; Akifumi Kasamatsu; Naokatsu Yamamoto
National Institute of Information and Communications Technology, Japan

14:00 - 15:30 **Imaging, inspection and remote sensing I (T3A)** Auditorium 11
Session Chair: Kodo Kawase, Nagoya University, Japan

14:00 **Frequency Analysis Of Terahertz Time-domain (THz-TDI) Imaging Of A XIX Century Chinese Lacquered Screen (Keynote Talk)** T3A.1
Corinna Ludovica Koch Dandolo¹; Johanne Bornemann Mogensen²; Mads Christian Christensen²; Peter Uhd Jepsen³
¹Technical University of Denmark, Switzerland; ²National museum of Denmark, Denmark; ³Technical University of Denmark, Denmark

14:30 **THz Permittivity Imaging Using Multi-tone Unwrapped Phase Slope Method** T3A.2
Teruo Jyo; Hiroshi Hamada; Ho-jin Song; Daisuke Kitayama; Makoto Yaita; Hideyuki Nosaka
NTT Corporation, Japan

14:45 **Frequency Modulated Continuous Wave Terahertz Imaging For Art Restoration** T3A.3
Jean-Paul Guillet¹; Kejia Wang²; Marie Roux³; Frédéric Fauquet¹; Frédéric Darracq¹; Patrick Mounaix¹
¹Bordeaux University, IMS, UMR CNRS 5218, France; ²Wuhan National Laboratory for Optoelectronics, China; ³L'atelier des renaissances, France

15:00 **Hidden Engraved Character Recognition By Using THz Imaging** T3A.4
Kaori Fukunaga¹; Takashi Maeno¹; Takao Makino²
¹NICT, Japan; ²Kibi Conservation Studio for Cultural Objects, Japan

15:15 **Comparative Study Of Mid-20th C. Art Using THz And X-ray Imaging** T3A.5
J. Bianca Jackson¹; Marcello Melis²; Junliang Dong³; David Giovannacci⁴; Gillian Walker⁵; Alexandre Locquet³; John Bowen⁵; David S. Citrin³

14:00 - 15:30		Spectroscopy and Material Properties IV (T3B)	Auditorium 10
Session Chair: Jan Balzer, University of Marburg, Germany			
14:00	Near-field THz Time-domain Spectroscopy Of Anisotropic Dielectric Micro-particles <u>Irina Khromova</u> ¹ ; Petr Kuzel ² ; Igal Brener ³ ; John Reno ³ ; U-Chan Chung Seu ⁴ ; Catherine Elissalde ⁴ ; Mario Maglione ⁴ ; Patrick Mounaix ⁴ ; Oleg Mitrofanov ⁵ ¹ King's College London, United Kingdom; ² Academy of Sciences of the Czech Republic, Czech Republic; ³ Sandia National Laboratories, United States; ⁴ University of Bordeaux, France; ⁵ University College London, France		T3B.1
14:15	Laser Terahertz Emission Microscopy With Near-field Probes <u>Pernille Klarskov</u> ; Daniel Mittleman Brown University, United States		T3B.2
14:30	Vectorial Mapping Of Resonant THz Near-fields <u>Arkabrata Bhattacharya</u> ; Alexei Halpin; Jaime Gomez-Rivas FOM Institute DIFFER, Netherlands		T3B.3
14:45	Terahertz Magnetospectroscopy Studies Of An AlGaIn/GaN Heterostructure <u>Matthias Beck</u> ¹ ; Ben F. Spencer ² ; Darren Graham ² ; Albrecht Bartels ¹ ; Morgan T. Hibberd ² ; William Smith ² ; Phil Dawson ² ; Ivor Guiney ³ ; Colin Humphreys ³ ¹ Laser Quantum GmbH, Germany; ² School of Physics and Astronomy and the Photon Science Institute, The University of Manchester, United Kingdom; ³ Department of Materials Science and Metallurgy, University of Cambridge, United Kingdom		T3B.4
15:00	Mid-infrared Spectroscopy Of Sulphur And Selenium Donors In Silicon For Quantum Optics <u>Ryan Stock</u> ¹ ; William Royle ¹ ; Chris Hodges ¹ ; Yuri Astrov ² ; Valentina Shuman ² ; Leonid Portsel ² ; Anatoly Lodygin ² ; Stephen Lynch ¹ ¹ Cardiff University, United Kingdom; ² Ioffe Physico-Technical Institute, Russian Federation		T3B.5
15:15	Mid-Infrared Plasmonic Platform Based On N-doped Ge-on Si: Molecular Sensing With Germanium Nano-antennas On Si <u>Leonetta Baldassarre</u> ¹ ; Emilie Sakat ² ; Monica Bollani ³ ; Antonio Samarelli ⁴ ; Kevin Gallacher ⁴ ; Jacopo Frigerio ⁵ ; Giovanni Pellegrini ² ; Valeria Gilberti ² ; Andrea Ballabio ⁵ ; Marco P. Fischer ⁷ ; Daniele Brida ⁷ ; Giovanni Isella ⁵ ; Douglas Paul ⁴ ; Michele Ortolani ¹ ; Paolo Biagioni ² ¹ Sapienza University of Rome, Italy; ² Politecnico di Milano, Italy; ³ IFN-CNR, Italy; ⁴ University of Glasgow, United Kingdom; ⁵ LNESS, Politecnico di Milano, Italy; ⁶ Istituto Italiano di Tecnologia, Italy; ⁷ University of Konstanz, Germany		T3B.6
14:00 - 15:30		Sources, Detectors, and Receivers I (T3C)	Auditorium 12
Session Chair: Miriam Vitiello, Consiglio Nazionale delle Ricerche, Italy			
14:00	Room-Temperature Resonant-Tunneling-Diode Terahertz Oscillators (Keynote Talk) <u>Masahiro Asada</u> Tokyo Institute of Technology, Japan		T3C.1
14:30	An Ultra-compact 16-pixel Local Oscillator At 1.9 THz <u>Jose Siles</u> ; Robert Lin; Peter Bruneau; Choonsup Lee; Imran Mehdi NASA Jet Propulsion Laboratory, United States		T3C.2
14:45	V-Band MMIC LNAs And Mixers For Observing The Early Universe <u>Lorene Samoska</u> ¹ ; Mikko Varonen ² ; Pekka Kangaslahti ¹ ; Andy Fung ¹ ; Rohit Gawande ¹ ; Mary Soria ¹ ; Richard Lai ³ ; Stephen Sarkozy ³ ¹ Jet Propulsion Lab, United States; ² Aalto University, Finland; ³ Northrop Grumman Corporation, United States		T3C.3
15:00	Far-Infrared Room-Temperature Focal Plane Modules For Radiation Budget Instrument <u>Giacomo Mariani</u> ; Matthew Kenyon; John Pearson; Warren Holmes NASA Jet Propulsion Laboratory, United States		T3C.4
15:15	Receiver Front-End Development Activities For MetOp-SG <u>Simon Rea</u> ¹ ; Brian Moyna ¹ ; Brian Ellison ¹ ; Bertrand Thomas ² ; Michael Brandt ² ; Martin Philipp ² ¹ RAL Space, United Kingdom; ² Radiometer Physics GmbH, Germany		T3C.5
14:00 - 15:30		Ultrafast Measurements III (T3D)	Room 20
Session Chair: Frank Hegmann, University of Alberta, Canada			
14:00	Terahertz-induced Anomalous Velocity Of Spin-polarized Carriers <u>Shekhar Priyadarshi</u> ; Klaus Pierz; Mark Bieler Physikalisch-Technische Bundesanstalt, Germany		T3D.1
14:15	Non-Linear Ultra-Fast Terahertz Spectroscopies In Liquid Phase <u>Janne Savolainen</u> Ruhr-University Bochum, Germany		T3D.2
14:30	Extracting The Key Electrical Properties Of Semiconductors Using Optical Pump Terahertz Probe Spectroscopy (Keynote Talk) <u>Michael Johnston</u> University of Oxford, United Kingdom		T3D.3
15:00	THz Induced Ultrafast Modulation Of NIR Refractive Index Of Silicon <u>Abebe Tilahun Tarekegne</u> ¹ ; Hideki Hirori ² ; Krzysztof Iwaszczuk ¹ ; Koichiro Tanaka ³ ; Peter Uhd Jepsen ¹ ¹ DTU Fotonik, Technical University of Denmark, Denmark; ² Institute for Integrated Cell-Material Sciences, Kyoto University, Japan; ³ Department of Physics, Graduate School of Science, Kyoto University, Japan		T3D.4
15:15	Real-Time Mapping Of High-Frequency Phonon-Polariton Dispersions In Ferroelectric LiNbO₃ <u>Tomonori Kuribayashi</u> ; Yu Shiozawa; Yasuo Minami; Ikufumi Katayama; Jun Takeda Yokohama National University, Japan		T3D.5
14:00 - 15:30		Laser-Driven THz and mid-IR Sources III (T3E)	Room 19
Session Chair: Christoph P. Hauri, PSI/EPFL, Switzerland			
14:00	Enhancement Of Terahertz Generation By Using A Circularly-Polarized Two-Color Field <u>Dongwen Zhang</u> ; Chao Meng; Yindong Huang; Wenbo Chen; Zhihui Lü; Xiaowei Wang; Dongwen Zhang; Zengxiu Zhao; Jianmin Yuan; Jianhua Wu		T3E.1

	National University of Defense Technology, China	
14:15	Frequency-tunable THz Polariton Laser Based On Intracavity RbTiOPO₄ Crystal <u>Tiago Almeida Ortega</u> ; Helen M. Pask; David J. Spence; Andrew J. Lee Macquarie University, Australia	T3E.2
14:30	Multiple-<micro>J Mid-IR Supercontinuum Generation In Quadratic Nonlinear Crystals <u>Morten Bache</u> ¹ ; Binbin Zhou ¹ ; Satoshi Ashihara ² ; Ashley Stingel ³ ; Heather Vansalous ³ ; Poul B. Petersen ³ ¹ Technical University of Denmark, Denmark; ² University of Tokyo, Japan; ³ Cornell University, United States	T3E.3
14:45	Enhanced Stimulated Polariton Scattering In KTiOPO₄ Terahertz Parametric Oscillator Based On Green Laser Pumping <u>Chao Yan</u> ; Yuye Wang; Degang Xu; Pengxiang Liu; Jia Shi; Dexian Yan; Hongxiang Liu; Yixin He; Meitong Nie; Longhuang Tang; Kai Zhong; Wei Shi; Jianquan Yao Tianjin university, China	T3E.4
15:00	Near-field Terahertz Emission By Transient Photocurrents: Monte-Carlo Simulation And Comparison To Experiment (Keynote Talk) Sofia Corzo-Garcia ¹ ; Arturo Hernandez-Serrano ¹ ; <u>Enrique Castro-Camus</u> ¹ ; Oleg Mitrofanov ² ¹ Centro de Investigaciones en Optica A.C., Mexico; ² UCL, United Kingdom	T3E.5

16:00 - 17:30		Auditorium 11
Imaging, inspection and remote sensing II (T4A)		
Session Chair: J. Bianca Jackson, University of Reading, United Kingdom		
16:00	A Fully-Integrated Terahertz Near-Field Sensor For Super-Resolution Imaging In SiGe BiCMOS <u>Philipp Hillger</u> ; Janusz Grzyb; Ullrich R. Pfeiffer University of Wuppertal, Germany	T4A.1
16:15	A CMOS 0.15-um In-Pixel Noise Reduction Technique For Readout Of Antenna-Coupled FET-based THz Detectors <u>Moustafa Khatib</u> ; Matteo Perenzoni; David Stoppa FBK, Italy	T4A.2
16:30	Terahertz Imaging With Hz-Level Frame Rates Based On Self-Mixing In A Quantum-Cascade Laser <u>Martin Wienold</u> ; Till Hagelschuer; Nick Rothbart; Heinz-Wilhelm Hübers German Aerospace Center (DLR), Germany	T4A.3
16:45	Laser Self-Detection Operation Of A Mid-IR Near-Field Microscope <u>Fritz Keilmann</u> ¹ ; Clemens Liewald ¹ ; Gaetano Scamarcio ² ; L. Columbo ² ; M. Brambilla ² ¹ Ludwig-Maximilians-Universität München, Germany; ² Universita Bari, Italy	T4A.4
17:00	A General Purpose, Ultra-High Sensitivity Terahertz Camera Based On Kinetic Inductance Detectors For Commercial/Industrial Applications <u>Sam Rowe</u> ¹ ; Simon Doyle ¹ ; Chris Dunscombe ¹ ; Pete Hargrave ¹ ; Enzo Pascale ¹ ; Ken Wood ² ¹ Cardiff University, United Kingdom; ² QMC Instruments Ltd., United Kingdom	T4A.5
17:15	Understanding Mask Switching For THz Compressive Imaging <u>Sven Augustin</u> ; Heinz-Wilhelm Hübers Humboldt Universität zu Berlin/German Aerospace Center, Germany	T4A.6

16:00 - 17:30		Auditorium 10
Spectroscopy and Material Properties V (T4B)		
Session Chair: Martin Koch, University of Marburg, Germany		
16:00	Graphene Plasmonics: From Terahertz To Mid-infrared In Less Than A Micron (Keynote Talk) <u>Mark Lundberg</u> ¹ ; Frank Koppens ² ¹ ICFO-The Institute of Photonic Sciences, Spain; ² ICFO - The Institute of Photonic Sciences, Spain	T4B.1
16:30	Optical Modulation Of THz Plasmonic Resonances Using Perovskites <u>Ashish Chanana</u> ; Chuang Zhang; Yaxin Zhai; Valy Vardeny; Ajay Nahata University of Utah, United States	T4B.2
16:45	Terahertz Time-Domain Magneto-Spectroscopy Using Electronically Controlled Optical Sampling <u>Milad Yahyapour</u> ¹ ; Nico Vieweg ¹ ; Thomas Puppe ¹ ; Anselm Deninger ¹ ; Oleksiy Drachenko ² ; Jean Léotin ² ¹ OPTICA Photonics AG, Germany; ² Laboratoire National des Champs Magnétiques Intenses, France	T4B.3
17:00	Temperature-driven Massless Kane Fermions In HgCdTe Crystals (Keynote Talk) Sandra Ruffenach ¹ ; Sergey Krishtopenko ¹ ; Michal Marcinkiewicz ¹ ; Christophe Consejo ¹ ; Sergey Morozov ² ; Vladimir Gavrilenko ² ; Dmytro But ³ ; Wojciech Knap ¹ ; Nikolay Mikhailov ⁴ ; Sergey Dvoretzskii ⁴ ; <u>Frédéric Tepe</u> ¹ ¹ L2C UMR5221, France; ² IPM RAS, Russian Federation; ³ CNRS, France; ⁴ ISP RAS, Russian Federation	T4B.4

16:00 - 17:30		Auditorium 12
Sources, Detectors, and Receivers II (T4C)		
Session Chair: Diwei Liu, University of Electronic Science and Technology of China, China		
16:00	Nanostructured Photoconductive Terahertz Detector For Near-field Microscopy <u>Oleg Mitrofanov</u> ¹ ; Robert Thompson ¹ ; Thomas Siday ¹ ; Igal Brener ² ; Ting Shan Luk ² ; John Reno ² ¹ UCL, United Kingdom; ² CINT, Sandia National Laboratories, United States	T4C.1
16:15	Echo-less Photoconductive Antenna Sources For High-resolution Terahertz Time-domain Spectroscopy Kenneth Maussang ¹ ; Anthony Brewer ¹ ; José Palomo ¹ ; Jean-Michel Manceau ² ; Raffaele Colombelli ³ ; Isabelle Sagnes ⁴ ; Juliette Mangeney ¹ ; <u>Jérôme Tignon</u> ¹ ; Sukhdeep Dhillon ¹ ¹ Laboratoire Pierre Aigrain - ENS - CNRS, France; ² Institut d'Electronique Fondamentale - CNRS - Université Paris Sud, France; ³ Institut d'Electronique Fondamentale - CNRS - Université Paris Sud, France; ⁴ Laboratoire de Photonique et de Nanostructures - CNRS, France	T4C.2
16:30	Graphene Surface Plasmon Polaritons Terahertz Source Excited By Electron Beam <u>Min Hu</u> ; Sen Gong; Tao Zhao; Renbin Zhong; Ping Zhang; Shenggang Liu University of Electronic Science and Technology of China, China	T4C.3
16:45	Pulsed THz Time Domain System With ErAs:In(Al)GaAs Photoconductors <u>Mario Méndez Aller</u> ¹ ; Anuar de Jesús Fernández-Olvera ¹ ; Hong Lu ² ; Arthur C. Gossard ³ ; Sascha Preu ¹ ¹ TU Darmstadt, Germany; ² College of Engineering and Applied Science, Nanjing, China, China; ³ University of California, Santa Barbara, United States	T4C.4

17:00	CW THz Photomixers At 850 nm And 1550 nm Using Dielectrophoretic Alignment Of Ag-nanowire <u>Mohammad Tanvir Haidar</u> ; Shihab Al-Daffaie; Oktay Yilmazoglu; Ahid Hajo; Franko Küppers TU Darmstadt, Germany	T4C.5
17:15	Array Configuration And Silicon-Lens Integration Of Asymmetric Dual-Grating-Gate Plasmonic THz Detectors <u>Fuzuki Kasuya</u> ¹ ; Hiroki Taniguchi ¹ ; Takayuki Watanabe ¹ ; Tetsuya Suemitsu ¹ ; Taiichi Otsuji ¹ ; Tadao Ishibashi ² ; Makoto Shimizu ³ ; Yuma Takida ⁴ ; Hiromasa Ito ⁴ ; Hiroaki Minamide ⁴ ; Akira Satou ¹ ¹ Tohoku University, Japan; ² NTT Electronics Techno, Japan; ³ NTT Electronics, Japan; ⁴ RIKEN Center for Advanced Photonics, RIKEN, Japan	T4C.6

Metamaterial Structures and Applications II (T4D)		Room 19
Session Chair: Jerome Faist, ETH Zürich, Switzerland		
16:00	Metasurface--based Devices For Terahertz Wavefront Modulation (Keynote Talk) <u>Yan Zhang</u> Department of Physics, Capital Normal University, China	T4D.1
16:30	Electrically Modulated Nonlinear Terahertz Metamaterials <u>George Keiser</u> ¹ ; Nicholas Karl ¹ ; Caleb Tulloss ¹ ; Hou-Tong Chen ² ; Antoinette Taylor ² ; Igal Brener ³ ; Alexander Benz ³ ; John Reno ³ ; Daniel Mittleman ¹ ¹ Brown University, United States; ² Los Alamos National Laboratory, United States; ³ Sandia National Laboratory, United States	T4D.2
16:45	Characterization Of Switchable Terahertz Metasurfaces <u>Nicholas Karl</u> ¹ ; Martin Heimbeck ² ; Henry Everitt ² ; Hou-Tong Chen ³ ; Antoinette Taylor ³ ; Alexander Benz ⁴ ; John Reno ⁴ ; Igal Brener ⁴ ; Rajind Mendis ¹ ; Daniel Mittleman ¹ ¹ Brown University, United States; ² US Army AMRDEC, Redstone Arsenal, Huntsville, AL, United States; ³ CINT, Los Alamos National Laboratory, Los Alamos, NM, United States; ⁴ CINT, Sandia National Laboratories, Albuquerque NM, United States	T4D.3
17:00	Bistable Physical Geometries For Terahertz Plasmonics Using Shape Memory Alloys <u>Barun Gupta</u> ; Shashank Pandey; Ajay Nahata University of Utah, United States	T4D.4
17:15	Manipulate Terahertz Surface Wave With Metasurface <u>Jianguang Han</u> ; Guanhua Ren; Xueqian Zhang; Quan Xu; Yanfeng Li; Zhen Tian; Jianqiang Gu; Chuenmei Ouyang; Weili Zhang Tianjin University, China	T4D.5

Metrology II (T4E)		Room 20
Session Chair: Thomas Kleine-Ostmann, PTB, Germany		
16:00	Detection Sensitivity Of Electrooptic Sampling For Continuous-Wave Terahertz Sources Throughout Broad Frequency Range <u>Yuta Kaneko</u> ¹ ; Mayu Kirigaya ¹ ; Ikufumi Katayama ¹ ; Isao Morohashi ² ; Yoshihisa Irimajiri ² ; Shingo Saito ² ; Norihiko Sekine ² ; Masaaki Ashida ³ ; Iwao Hosako ² ¹ Yokohama National University, Japan; ² National institute of Information and Communications Technology, Japan; ³ Osaka University, Japan	T4E.1
16:15	Estimation Of Spectroscopic Uncertainty And Correlation In Terahertz Time Domain Spectroscopy <u>Nicholas Greenall</u> ; Edmund H. Linfield; A. Giles Davies; Lianhe Li; John Cunningham; Andrew Burnett University of Leeds, United Kingdom	T4E.2
16:30	An International Intercomparison Of THz Time-domain Spectrometers (Keynote Talk) <u>Mira Naftaly</u> National Physical Laboratory UK, United Kingdom	T4E.3
17:00	Stress Measurements In YTZP Ceramic Using GHz And THz Radiation <u>Gilles Diederich</u> ; Peter Schemmel; Andrew J Moore Heriot-Watt University, United Kingdom	T4E.4
17:15	THz-Metrology Of Time-Domain-Spectroscopy Systems <u>Andreas Steiger</u> ¹ ; Karsten Lange ² ; Mathias Kehrt ¹ ¹ PTB, Germany; ² SLT Sensor- und Lasertechnik GmbH, Germany	T4E.5

Tuesday Poster Session (T5P)		Congress Hall A
Session Chairs: Peter Uhd Jepsen, Krzysztof Iwaszczuk, Morten Bache, DTU, Denmark		
	Study On Material-Classification Of Objects Detected By The THz Passive Body Scanner For Security Screening <u>Norihisa Hiromoto</u> ¹ ; Kohji Mori ¹ ; Jun'ichi Sato ² ¹ Shizuoka University, Japan; ² KSK Corporation, Japan	T5P.03.01
	Extracting Dielectric Parameter Based On Multiple Beam Interference Principle And FTIR System In Terahertz Range <u>Maorong Wang</u> ; Kai Zhong; Degang Xu; Yuye Wang; Wei Shi; Jianquan Yao Tianjin University, China	T5P.05.01
	The Quantum Ratchet Effect In Two Dimensional Semiconductors For Detection Of Terahertz Radiation Yee Sin Ang ¹ ; Zhongshui Ma ² ; <u>Chao Zhang</u> ¹ ¹ University of Wollongong, Australia; ² Peking University, China	T5P.05.02
	THz Birefringence In Wood: Polarization Dependent Frequency Gaps In THz Spectra <u>Peter Zolliker</u> ; Markus Rueggeberg; Erwin Hack Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland	T5P.05.03
	Temperature Dependence Of Spin Reorientation And Crystal-field Transitions In TmFeO₃ Studied With Terahertz Transient <u>Guohong Ma</u> Shanghai University, China	T5P.05.04
	Ferromagnetic Resonance In Hexagonal Ferrite Ba₃Co₂Fe₂₄O₄₁ At The THz Frequency Range <u>Grigorii Dunaevskii</u> ; Valentin Suslyaev; Victor Zhuravlev; Alexander Badin; Kirill Dorozhkin National Research Tomsk state University, Russian Federation	T5P.05.05
	Nonlinear Optical Properties Of Bilayer Graphene With Rhsba Spin-Orbit Interaction In Terahertz Regime Zheng Liu ¹ ; Juncheng Cao ¹ ; Matthew Sanderson ² ; <u>Chao Zhang</u> ²	T5P.05.06

¹ SIMIT, Chinses Academy of Sciences, China; ² University of Wollongong, Australia	
Improve Optical Modulation Depth Of Terahertz Wave By Monolayers Of Plasmonic Nanoparticles	T5P.05.07
<u>Tianlong Wen</u> ; Chong Zhang; Qiye Wen; Yu-Lan Jing; Huai-Wu Zhang; Jiayang Li; Wei Tian; Yuanpeng Li University of Electronic Science and Technology of China, China	
Kerr Index Of Cyclic Olefin Co/polymers For THz Pulse Propagation Simulations	T5P.05.08
<u>Eva Noskovičová</u> ¹ ; Lenka Slusná ² ; Dusan Lorenc ³ ; Martin Koys ³ ; Dusan Velič ³ ¹ Faculty of Natural Sciences Comenius University, Slovakia; ² Faculty of Natural Sciences, Slovakia; ³ International Laser Centre, Slovakia	
Terahertz Frequency Electrical Properties Of Nickel Cobalt Ferrites	T5P.05.09
<u>Alan Boss</u> ¹ ; Antonio Migliano ² ; Ingrid Wilke ³ ¹ Institute Technological of Aeronautics, Brazil; ² Institute of Advanced Studies, Brazil; ³ Rensselaer Polytechnic Institute, United States	
Probing Charge Transfer Dynamics In Porphyrin-Based Organic Semiconductors By Time-Resolved THz Spectroscopy	T5P.05.10
<u>Kaoru Ohta</u> ¹ ; Shunrou Tokonami ¹ ; Sho Hiraoka ¹ ; Kohtaro Takahashi ² ; Yuto Tamura ² ; Hiroko Yamada ² ; Keisuke Tominaga ¹ ¹ Kobe University, Japan; ² Nara Institute of Science and Technology, Japan	
Terahertz Conductivity Of A Graphene-Topological Insulator Stacking	T5P.05.11
<u>Matthew Sanderson</u> ; Chao Zhang University of Wollongong, Australia	
Terahertz Dynamics Of Nanoconfined Water Molecules	T5P.05.12
<u>Elena Zhukova</u> ¹ ; Victor Torgashev ² ; Victor Thomas ³ ; Mikhail Belyanchikov ⁴ ; Maxim Savinov ⁵ ; Christelle Kadlec ⁵ ; Filip Kadlec ⁵ ; Anatoly Prokhorov ⁶ ; Lenar Kadyrov ⁷ ; Jan Petzelt ⁵ ; Tatyana Ostapchuk ⁵ ; Dmitry Fursenko ³ ; Pavel Thomas ⁸ ; Gilman Shakurov ⁹ ; Martin Dressel ¹⁰ ; Boris Gorshunov ¹¹ ¹ Moscow institute of physics and technology (state university), Russian Federation; ² Faculty of Physics, Southern Federal University, Russian Federation; ³ Institute of Geology and Mineralogy, Russian Federation; ⁴ Moscow Institute of Physics and Technology, Russian Federation; ⁵ Institute of Physics AS CR, Czech Republic; ⁶ A.M. Prokhorov General Physics Institute, Russian Federation; ⁷ Moscow institute of physics and technology(state university), Russian Federation; ⁸ Independent University of Moscow, Russian Federation; ⁹ Kazan Physical-Technical Institute, Russian Federation; ¹⁰ 1. Physikalisches Institut, Universität Stuttgart, Germany; ¹¹ Moscow institute of physics and technology, Russian Federation	
Terahertz Dielectric Properties Of MWCNT/PE Composites	T5P.05.13
<u>Sergey Sarkisov</u> ¹ ; Valentin Suslyaev ¹ ; Victor Zhuravlev ¹ ; Kirill Dorozhkin ¹ ; Vladimir Kuznetsov ² ; Sergey Moseenkov ² ; Nina Semikolenova ² ; Vladimir Zakharov ² ; Grigorii Dunaevskii ¹ ¹ Tomsk State University, Russian Federation; ² Boreskov Institute of Catalysis, Russian Federation	
Polarization Anisotropy Of Interband Electroluminescence In Narrow Gap Sb-based Semiconductors	T5P.05.14
<u>Maksim Vinnichenko</u> ¹ ; Ivan Makhov ¹ ; Vadim Panevin ¹ ; Dmitry Firsov ¹ ; Leonid Vorobjev ¹ ; Leon Shterengas ² ; Gregory Belenky ² ; Gella Kipshidze ² ¹ Peter the Great St.Petersburg Polytechnic University, Russian Federation; ² State University of New York at Stony Brook, United States	
Detection Of Aging PETN With Broadband Terahertz Waves	T5P.05.15
<u>Ming Xu</u> ; Zhijin Yan; Ruibin Li; Junjie Duan; Like Zhang; Lei Hou; Hong Liu; Wei Shi Xi'an University of Technology, China	
Terahertz Radiation Related To The Electron Relaxation After Interband Optical Pumping In Doped Quantum Wells	T5P.05.16
<u>Maksim Vinnichenko</u> ¹ ; Ivan Makhov ¹ ; Vadim Panevin ¹ ; Anton Sofronov ¹ ; Dmitry Firsov ¹ ; Leonid Vorobjev ¹ ; Aleksey Vasil'ev ² ¹ Peter the Great St.Petersburg Polytechnic University, Russian Federation; ² Ioffe Institute, Russian Federation	
Tunable Polar Dielectrics For Applications At Millimeter Wavelengths	T5P.05.17
<u>Charlotte Cochard</u> ¹ ; Thiemo Spielmann ² ; Marion Matters-Kammerer ³ ; Rainier van Dommele ³ ; Alexei Halpin ⁴ ; Jaime Gomez-Rivas ⁴ ; Torsten Granzow ¹ ¹ Luxembourg Institutue of Science and Technology (LIST), Luxembourg; ² IEE S.A., Luxembourg; ³ Eindhoven University of Technology, Netherlands; ⁴ Dutch Institute for Fundamental Energy Research, Netherlands	
Ultrafast Carrier Dynamics In BiVO₄: Interplay Between Free Carriers, Trapped Carriers And Low-frequency Lattice Vibrations	T5P.05.18
<u>Lyubov Titova</u> ¹ ; Benjamin Dringoli ¹ ; Keith Butler ² ; Lite Zhou ¹ ; Binod Giri ¹ ; Pratap Rao ¹ ¹ Worcester Polytechnic Institute, United States; ² University of Bath, United Kingdom	
Continuous Wave Terahertz System With Optical Switch And Coaxial DFB LD	T5P.05.19
<u>Joo Beom Eom</u> ; Chihoon Kim; Jaesung Ahn Korea Photonics Technology Institute, Korea, Republic of	
Terahertz Time Domain Spectroscopy On Methane Hydrate	T5P.05.20
<u>Kei Takeya</u> ; Ryohei Takahashi; Kodo Kawase Nagoya University, Japan	
Quantitative Evaluation Of Photocarriers In Semiconductor P-i-n Structures With Time-resolved Terahertz Reflection Spectroscopy	T5P.05.21
<u>Genki Yamashita</u> ¹ ; Eiichi Matsubara ² ; Masaya Nagai ¹ ; Changsu Kim ³ ; Hidefumi Akiyama ³ ; Yoshihiko Kanemitsu ⁴ ; Masaaki Ashida ¹ ¹ Osaka University, Japan; ² Osaka Dental University, Japan; ³ The University of Tokyo, Japan; ⁴ Kyoto University, Japan	
THz Response Of A Transparent Polymer At Different Tacticity And Temperature	T5P.05.22
<u>Maxim Nazarov</u> ¹ ; Michail Kitai ² ; Alexander Shkurinov ² ¹ Kurchatov Institute National Research Center, Russian Federation; ² Crystallography and Photonics Federal Research Center, RAS, Russian Federation	
The Study Of Millimeter-wave Based Quasi-Optical Photoconductivity Decay Technique For Precise Measurement Of Minority Carrier Life Time	T5P.05.23
<u>Mun Seok Choe</u> ¹ ; Ashwini Sawant ² ; Kyu-Sup Lee ³ ; Nan Ei Yu ³ ; EunMi Choi ² ¹ Ulsan National Institutue of Science and Technology, Korea, Republic of; ² Ulsan National Institute of Science and Technology, Korea, Republic of; ³ Gwangju Institute of Science and Technology, Korea, Republic of	
THz Magnetospectroscopy Of Double HgTe Quantum Well	T5P.05.24

M. Marcinkiewicz ¹ ; Sergey Krishtopenko ¹ ; Sandra Ruffenach ¹ ; <u>C. Consejo</u> ¹ ; Dmytro But ¹ ; A.M. Kadykov ¹ ; A.M. Fadeev ² ; Sergey Morozov ² ; N.N. Michailov ³ ; Sergey Dvoretzskii ³ ; V.I. Gavrilenko ² ; Wojciech Knap ¹ ; Frédéric Teppe ¹ ¹ L2C - University of Montpellier, France; ² Institute for Physics of Microstructures RAS, Russian Federation; ³ Institute of Semiconductor Physics, Siberian Branch RAS, Russian Federation	
Terahertz Analysis Of Quinacridone Pigments	T5P.05.25
<u>Andrew Squires</u> ; Madeleine Kelly; Roger A. Lewis University of Wollongong, Australia	
Chemometrics Of Bi-Heterocyclic Kind Of The Drug Specimens In The THz Domain	T5P.05.26
Boguslaw Szlachetko ¹ ; Lukasz Sterczewski ¹ ; <u>Kacper Nowak</u> ¹ ; Piotr Swiatek ² ; Malgorzata Strzelecka ² ; Stanislaw Plinska ² ; Wieslaw Malinka ² ; Edward Plinski ¹ ; Michal Grzelczak ¹ ¹ Wroclaw University of Technology, Poland; ² Wroclaw Medical University, Poland	
Single-wall Carbon Nanotubes Oriented By Gas Flow At Synthesis By Aerosol CVD Method As Terahertz Polarizers	T5P.05.27
<u>Sergey Sarkisov</u> ¹ ; Alexei Kosobutsky ² ; Sergey Shandakov ² ; Yury Sarkisov ³ ; Oleg Tolbanov ¹ ; Grigorii Dunaevskii ¹ ¹ Tomsk State University, Russian Federation; ² Kemerovo State University, Russian Federation; ³ Tomsk State University of Architecture and Building, Russian Federation	
Characterization Of Non-vertically Aligned Semiconductor Nanowires By THz Emission Measurements	T5P.05.28
<u>Ieva Beleckaite</u> ¹ ; Ramunas Adomavicius ¹ ; Gediminas Molis ¹ ; Arunas Krotkus ¹ ; Aloyzas Siusys ² ; Anna Reszka ² ; Tomasz Wojciechowski ² ; Janusz Sadowski ³ ¹ Center for Physical Sciences and Technology, Lithuania; ² Institute of Physics, Polish Academy of Sciences, Poland; ³ MAX - IV Laboratory, Lund University, Sweden	
Intersubband Optical Absorption In Quantum Well Structures In Tilted Magnetic Field	T5P.05.29
<u>Vinh Doan The Ngo</u> ¹ ; Maksim Telenkov ² ; Yury Mityagin ² ¹ National University of Science and Technology «MISIS», Russian Federation; ² Lebedev Physical Institute, Russian Academy of Sciences, Russian Federation	
Terahertz Spectroscopy Of Topological Insulator Sb₂Se₃ And Its Ultrafast Nonequilibrium Carrier Dynamics	T5P.05.30
<u>Jaehun Park</u> ¹ ; Tae Hyeon Kim ² ; KwangSik Jeong ² ; Hyejin Choi ² ; Seonghoon Jung ¹ ; Mann-Ho Cho ² ¹ Pohang Accelerator Laboratory, Korea, Republic of; ² Yonsei University, Korea, Republic of	
Terahertz Spectroscopy Of Isolated Graphene Flakes Inside Polymer-Based Nanocomposite Samples	T5P.05.31
<u>Anton Koroliov</u> ¹ ; Zygmunt Staniszewski ² ; Genyu Chen ¹ ; Rabi Shrestha ¹ ; Adam Laszcz ³ ; Andrzej Czerwinski ³ ; Mirosława El Fray ² ; Christiaan Richter ⁴ ; Roman Sobolewski ¹ ¹ University of Rochester, United States; ² West Pomeranian University of Technology, Poland; ³ Institute of Electron Technology, Poland; ⁴ Rochester Institute of Technology, United States	
Investigating Infrared Light Induced Electro-optical Properties Of Graphene Using Terahertz Spectroscopy	T5P.05.32
<u>Yiwen Sun</u> ; Shengxin Yang; Pengju Du Shenzhen University, China	
Terahertz Dielectric Properties Of KTaO₃ Crystal: Electric-field Tunability, Comparison With SrTiO₃	T5P.05.33
<u>Volodymyr Skoromets</u> ; Christelle Kadlec; Hynek Němec; Petr Kuzel Institute of Physics, Academy of Sciences of the Czech Republic, Czech Republic	
Extracting Complex Optical Properties Of Ultra-thin Conductors Using Time-domain THz Spectroscopy	T5P.05.34
Farah Vandrevala; Arka Karmakar; Josep Miquel Jornet; <u>Erik Einarsson</u> University at Buffalo, United States	
High Fill-Factor Interdigital-Electrode For THz Biospectroscopy	T5P.05.35
<u>W-D. Zhang</u> ; Adrea Mingardi; Elliott Brown Wright State University, United States	
Chemometrics Applied To Terahertz And Raman Spectra For Explosives Analysis	T5P.05.36
<u>Joyce Bou Sleiman</u> ¹ ; Sebastian Engelbrecht ² ; Lionel Merlat ² ; Bernd M. Fischer ² ; Bruno Bousquet ³ ; Patrick Mounaix ¹ ¹ Bordeaux University-IMS, France; ² French-German Research Institute of Saint Louis ISL, France; ³ Bordeaux University- CELIA, France	
Gas Cell Measurement Of Methanol Using A Phase-locked THz-QCL And An HEBM At 3.7-THz Band	T5P.09.01
<u>Yoshihisa Irimajiri</u> ; Akira Kawakami; Isao Morohashi; Motohiro Kumagai; Shigeo Nagano; Norihiko Sekine; Satoshi Ochiai; Shukichi Tanaka; Yuko Hanado; Yoshinori Uzawa; Iwao Hosako National Institute of Information and Communications Technology, Japan	
THz Spectroscopic Imaging Of Concealed Chemicals Using Is-TPG	T5P.09.02
<u>Mikiya Kato</u> ; Kosuke Murate; Kodo Kawase Nagoya University, Japan	
Terahertz Imaging Based On Hilbert Receiver	T5P.09.03
<u>Chao Li</u> ; Zheng Lu Institute of Electronics, Chinese Academy of Sciences, China	
Millimeter-Wave Inline Holography With Step-Frequency Continuous-Wave	T5P.09.04
<u>Chao Li</u> ; Xiang Gao Institute of Electronics, Chinese Academy of Sciences, China	
Enhanced Time Of Flight THz Imaging Via A De-noising Procedure Based On Band Pass Filtering	T5P.09.05
<u>Ilaria Catapano</u> ¹ ; Luca Mazzola ² ; Cinzia Toscano ² ; Francesco Soldovieri ¹ ¹ Institute for Electromagnetic Sensing of the Environment (IREA) - National Research Council of Italy, Italy; ² Italian Aerospace Research Centre, Italy	
Terahertz Super-focusing Based On Archimedes Spiral Array	T5P.09.06
<u>XiaoFei Zang</u> ¹ ; Lin Chen ² ; Yan Peng ² ; YiMing Zhu ² ¹ Shanghai Key Lab of Modern Optical System, University of Shanghai for Science and Technology, China; ² Shanghai Key Lab of Modern Optical System, University of Shanghai for Science and Technology, China	
Off-axis THz Digital Holography By Use Of THz Quantum Cascade Laser And Uncooled Micro-bolometer Array Detector	T5P.09.07

<u>Takayuki Ogawa</u> ¹ ; Takeo Minamikawa ² ; Hirotsugu Yamamoto ³ ; Takeshi Yasui ² ¹ Tokushima University, Japan; ² Tokushima University, JST-ERATO Intelligent Optical Synthesizer Project, Japan; ³ Utsunomiya University, JST-ERATO Intelligent Optical Synthesizer Project, Japan	
Study Of 0.14THz Water Surface Clutter Reflectivity At Near Vertical Incidence	T5P.09.08
BinBin Cheng; <u>JianFei An</u> ; HaiChuan Lin; Zheng Feng; ZhenMao Cui; Fengjun Chen; Jie Liu the Institute of Electronic Engineering, China Academy of Engineering Physics, China	
Correct Imaging Of Large-size Terahertz Beams By Small-size Camera Without Energy Losses	T5P.09.09
<u>Vitaly Kubarev</u> Budker Institute of Nuclear Physics, Russian Federation	
Time-Domain THz Near-Field Imaging Incorporating Hadamard Multiplexing Method	T5P.09.10
Mingguang Tuo; Min Liang; Jitao Zhang; <u>Hao Xin</u> University of Arizona, United States	
A Statistical Post-Processing Method For Three-Dimensional Visualization For Terahertz Pulse-Echo Imaging	T5P.09.11
<u>Hiroshi Hanaizumi</u> ¹ ; Kaori Fukunaga ² ¹ Hosei University, Japan; ² National Institute of Information and Communication Technology, Japan	
Side-lobe Suppression Using Coherence Factors For Terahertz Array Imaging	T5P.09.12
Yanwen Jiang ¹ ; <u>Hongqiang Wang</u> ¹ ; Yuliang Qin ¹ ; Bin Deng ¹ ; Zhaowen Zhuang ¹ ; BinBin Chengdu ² ¹ School of Electronic Science and Engineering, National University of Defense Technology, China; ² Microsystem and Terahertz Research Center, China Academy of Engineering Physics, China	
Amplitude And Phase Mapping Of Millimeter-waves Generated By A Free-running Gunn Diode Oscillator	T5P.09.13
<u>Shintaro Hisatake</u> ¹ ; Hikaru Nakajima ¹ ; Hirohisa Uchida ² ; Kunio Miyaji ³ ; Tadao Nagatsuma ¹ ¹ Osaka University, Japan; ² ARKRAY, inc., Japan; ³ Think-Lands Co., Ltd., Japan	
Terahertz Off-axis Digital Holography	T5P.09.14
Xiaowei Han; <u>Wei Shi</u> ; Lei Hou; Ming Xu; Hong Liu; Yujuan Xu Xi'an University of Technology, China	
0.14THz Imaging System For Security And Surveillance	T5P.09.15
<u>Yujiao Zhao</u> ¹ ; Guang Tian ² ; Xianjin Deng ¹ ; Binbin Cheng ¹ ; Jie Liu ¹ ¹ China Academy of Engineering Physics, China; ² BOCOM Smart Network Technologies Inc, China	
Millimeter Wave Near-Field Imagery With Micrometer Spatial Resolution	T5P.09.16
<u>Laurent Chusseau</u> ; Pierre Payet; Jérémy Raoult IES University Montpellier, France	
A Low-Cost Millimeter-Wave Phase-Contrast Imaging Technique	T5P.09.17
<u>Pierre Payet</u> ; Laurent Chusseau; Jérémy Raoult IES University Montpellier, France	
Holography As Imaging Technique For The THz Range	T5P.09.18
<u>Yulia Choporova</u> ; Boris Knyazev; Mikhail Mitkov Budker Institute of nuclear physics, Russian Federation	
Transmission Of High-power Terahertz Beams With Orbital Angular Momentum Through Atmosphere	T5P.09.19
<u>Boris Knyazev</u> ¹ ; Yulia Choporova ¹ ; Vladimir Pavelyev ² ; Natalya Osintseva ³ ; Boris Volodkin ² ¹ Budker Institute of Nuclear Physics SB RAS, Russian Federation; ² Samara State Aerospace University, Russian Federation; ³ Novosibirsk State Technical University, Russian Federation	
Tomography And Image Processing For Polymer additive Manufacturing Characterization	T5P.09.20
<u>Patrick Mounaix</u> ¹ ; Jean Baptiste Perraud ¹ ; Joyce Bou-Sleiman ¹ ; Anne Françoise Obaton ² ; Benoit Recur ³ ; Hugo Balacey ¹ ; Frederic Darracq ¹ ; Jean-Paul Guillet ¹ ¹ IMS, University of Bordeaux, UMR CNRS 5218, France; ² Laboratoire National de Métrologie et d'Essais, France; ³ Noctylio SAS, France	
Attenuated Total Internal Reflection Imaging With Continuous Terahertz Wave	T5P.09.21
<u>Hongxiang Liu</u> ¹ ; Yuye Wang ¹ ; Degang Xu ¹ ; Pan Duan ¹ ; Meitong Nie ¹ ; Jia Shi ¹ ; Chao Yan ¹ ; Yixin He ¹ ; Tunan Chen ² ; Hua Feng ² ; Jianquan Yao ¹ ¹ Tianjin University, China; ² Third Military Medical University, China	
Compressive Sensing Imaging With A Graphene Modulator At THz Frequency In Transmission Mode	T5P.09.22
<u>Vedat Ali Özkan</u> ¹ ; Taylan Takan ¹ ; Nurbek Kakenov ² ; Coşkun Kocabaş ² ; Hakan Altan ¹ ¹ Middle East Technical University, Turkey; ² Bilkent University, Turkey	
Optimization Of Frequency Selective Absorbers For Sub-mm Security Imagers	T5P.09.23
Shahab Oddin Dabironezare ¹ ; Juha Hassel ² ; Leif Grönberg ² ; Erio Gandini ¹ ; Andrea Neto ¹ ; <u>Nuria Llombart</u> ¹ ¹ Technical University of Delft, Netherlands; ² VTT Technical Research Center of Finland, Finland	
A Millimeter Resolution Imaging Radar At 0.67THz	T5P.09.24
<u>Jianfei An</u> ; Binbin Cheng; Ge Jiang; Peng Chen China Academy of Engineering Physics, China	
Conical Waveguide With Sub-wavelength Output Aperture Without Cutoff For Near-field Terahertz Imaging	T5P.09.25
Shuchang Liu ¹ ; Oleg Mitrofanov ² ; <u>Ajay Nahata</u> ¹ ¹ University of Utah, United States; ² UCL, United Kingdom	
THz Emission-based Magnetic Field Distribution Mapping Using InSb As Probe Semiconductor	T5P.09.26
<u>Valynn Katrine Mag-usara</u> ¹ ; Dmitry Bulgarevich ² ; Mitsuharu Shiwa ² ; Masahiko Tani ¹ ¹ Research Center for Development of Far-Infrared Region, University of Fukui, Japan; ² National Institute for Materials Science, Japan	
Millimeter/Submillimeter Wave Video Imaging Using A THz Camera For Outdoor Conditions	T5P.09.27
Marc Terroux; <u>Linda Marchese</u> ; Denis Dufour; Ovidiu Pancrati; Michel Doucet; Nathalie Blanchard; Alain Bergeron INO, Canada	

Amplitude-phase Imaging Of Pulsed Broadband Terahertz Vortex Beams Generated By Spiral Phase Plate	T5P.09.28
<u>Varvara Semenova</u> ; Maxim Kulya; Nikolay Petrov; Anton Tsyppkin; Sergey Putilin; Yaroslav Grachev; Victor Bespalov ITMO University, Russian Federation	
A Wave Propagation Model For A Terahertz Single Pixel Camera	T5P.09.29
<u>Jan Hieronymus</u> ¹ ; Sven Augustin ² ; Heinz-Wilhelm Hübers ² ¹ German Aerospace Center (DLR), Institute of Optical Sensor Systems, Germany; ² Humboldt-Universität zu Berlin, Department of Physics, Newtonstr. 5, 12489 Berlin, Germany, Germany	
Illumination Aspects Of Sparse Line Arrays For 3D Terahertz Imaging	T5P.09.30
<u>Bessem Baccouche</u> ¹ ; Shiva Mohammadzadeh ¹ ; Andreas Keil ² ; Matthias Kahl ³ ; Peter Haring Bolivar ³ ; Torsten Loeffler ⁴ ; Wolfgang Sauer-Greff ⁵ ; Ralph Urbansky ⁵ ; Joachim Jonuscheit ¹ ; Fabian Friederich ¹ ¹ Fraunhofer Institute for Physical Measurements Techniques IPM, Germany; ² Becker Photonik GmbH, Germany; ³ University Siegen, Germany; ⁴ Synview GmbH, Germany; ⁵ Kaiserslautern University of technology, Germany	
Transmission Properties Of 2 μm Apertures: Applications For Near-field Microscopy	T5P.09.31
<u>Thomas Siday</u> ; Oleg Mitrofanov University College London, United Kingdom	
Millimeter Wave Computational Imaging With 3D Printed Leaky Wave Frequency Diverse Antenna	T5P.09.32
<u>Ruoyu Zhu</u> ; Tomas Zvolensky; Daniel Marks Duke University, United States	
Extraction Of Water Signal By Independent Component Analysis And Application To THz Imaging	T5P.09.33
Soner Balci ¹ ; Alexander Maleski ¹ ; Matheus Mello Nascimento ² ; Elizabeth Philip ¹ ; Patrick Kung ¹ ; <u>Seongsin Margaret Kim</u> ¹ ¹ University of Alabama, United States; ² The University of Brasília, Brazil	
Terahertz Imaging With Arrays Of Plasma Field Effect Transistors Detectors	T5P.09.34
<u>Wojciech Knap</u> ¹ ; Maciej Sypek ² ; Jarosław Suszek ² ; Dmytro But ¹ ; Krzesimir Szuklarek ³ ; Agnieszka Siemion ² ; Grzegorz Cywinski ³ ; Nina Diakonova ¹ ; Frédéric Teppé ¹ ¹ University of Montpellier & CNRS, France; ² Warsaw University of Technology, Poland; ³ Institute of High Pressure Physics of Polish Academy of Sciences, Poland	
Probing Phonon-derived Thermal Evanescent Waves With Different Wavelengths	T5P.09.35
<u>Yusuke Kajihara</u> ; Takafumi Yokoyama; Kuan-Ting Lin; Sunmi Kim The University of Tokyo, Japan	
Laser-induced THz Generation And Thermal Effects In Metals	T5P.19.01
<u>Ivan Oladyshkin</u> ; Daniil Fadeev; Vyacheslav Mironov Institute of Applied Physics RAS, Russian Federation	
Narrow Band THz Emission From Tunable Spintronic Films	T5P.19.02
<u>Nilesh Awari</u> ¹ ; Sergey Kovalev ² ; C. Fowley ² ; K Rode ³ ; Y. C. Lau ³ ; D. Betto ³ ; N. Thiyagarajah ³ ; B. Green ² ; O. Yildirim ² ; J. Lindner ² ; J. Fassbender ² ; M. Coey ³ ; A. Deac ² ; Michael Gensch ² ¹ Helmholtz Zentrum Dresden Rossendorf, University of Groningen, 9747 AG Groningen, Netherlands, Germany; ² Helmholtz Zentrum Dresden Rossendorf, Germany; ³ CRANN, AMBER and School of Physics, Trinity College Dublin, Dublin 2, Ireland, Ireland	
Optimization Of Terahertz Generation From LiNbO₃ Under Intense Laser Excitation With The Effect Of Three-photon Absorption	T5P.19.03
<u>Sen-Cheng Zhong</u> China Academy of Engineering Physics, China	
Highly Distributed Photoconductor For CW THz Generation	T5P.19.04
<u>Emilien Peytavit</u> IEMN CNRS/Lille University, France	
Sub-THz Signal Generation Based On Bi-directional Use Of Dual-parallel Polarization Modulators And Sagnac Loops	T5P.19.05
<u>Dong Liang</u> ; Qinggui Tan; Wei Jiang; Zhongbo Zhu; Zheng Cao; Xiaojun Li National Key Laboratory of Science and Technology on Space Microwave, China	
Efficient And Widely-tunable THz-wave Difference Frequency Generation With Organic Crystals DSTMS And OH1	T5P.19.06
<u>Pengxiang Liu</u> ¹ ; Degang Xu ² ¹ Nankai University, China; ² Tianjin University, China	
Spectral interference of two terahertz pulses emitting from laser plasmas	T5P.19.07
<u>Yanping Chen</u> Shanghai Jiao Tong University, China	
High Efficient MLD-THz-TDS Systems Using Laser Chaos And Super Focusing With Metal V-grooved Waveguide	T5P.19.08
<u>Fumiyoshi Kuwashima</u> ¹ ; Takuya Shira ¹ ; Toshihiro Kishibata ¹ ; Yusuke Akamine ¹ ; Kazuyuki Iwao ¹ ; Manatu Ooi ¹ ; Naoya Sakaue ¹ ; Takuro Sirasaki ¹ ; Siori Gouda ¹ ; Masahiko Tani ² ; Kazuyoshi Kurihara ³ ; Kohji Yamamoto ² ; Takeshi Nagashima ⁴ ; Makoto Nakajima ⁵ ; Masanori Hangyo ⁵ ¹ Fukui Univ. of Tech., Japan; ² Research Center for Development of Far-Infrared Region, University of Fukui, Japan; ³ Faculty of Education and Regional Studies, University of Fukui, Japan; ⁴ Setsuman University, Japan; ⁵ Institute of Laser Engineering, Osaka University, Japan	
Compact High-repetition-rate Optical Terahertz Source Based On An Efficient 2-μm Dual-wavelength KTP OPO	T5P.19.09
<u>Jialin Mei</u> ¹ ; Kai Zhong ¹ ; Maorong Wang ¹ ; Pengxiang Liu ¹ ; Degang Xu ¹ ; Yuye Wang ¹ ; Wei Shi ¹ ; Jianquan Yao ¹ ; Robert Norwood ² ; Nasser Peyghambarian ² ¹ Tianjin university, China; ² University of Arizona, United States	
Terahertz Electromagnetic Wave Generation By High-intensity Laser Pulse along Metal Surfaces	T5P.19.10
<u>Andrey Kuratov</u> ¹ ; Andrey Brantov ² ; Yuriy Aliev ² ; Valery Bychenkov ² ¹ Dukhov Research Institute of Automatics (VNIIA), Russian Federation; ² Lebedev Physical Institute, RAS, Russian Federation	
High Power Broadband Terahertz Pulse Generation Using Chirped Aperiodically Poled Structures	T5P.19.11
<u>Alireza Yahaghi</u> ; Koustuban Ravi; Arya Fallahi; Franz X. Kärtner Centre for Free Electron Laser Science (CFEL), Germany	

Developing Terahertz Sources For Relativistic Particle Acceleration	T5P.19.12
<u>Daniel Lake</u> ¹ ; Matthew Cliffe ¹ ; Edward Snedden ² ; David Walsh ² ; Darren Graham ¹ ; Steven Jamison ² ¹ The University of Manchester, United Kingdom; ² ASTeC, United Kingdom	
Intense THz Source Based On BNA Organic Crystal Pumped At Conventional Ti:Sapphire Wavelength	T5P.19.13
<u>Mostafa Shalaby</u> ; Carlo Vicario; Christoph P. Hauri Paul Scherrer Institute, Switzerland	
Design Of A Frequency Reconfigurable, Terahertz Antenna For Photomixers	T5P.19.14
<u>Kazım Demir</u> ¹ ; Habib Bilgin ² ; Asaf Behzat Sahin ¹ ; Mehmet Unlu ¹ ¹ Yildirim Beyazit University, Turkey; ² Bogazici University, Turkey	
Spectral Characterization Of High-Power Plasmonic Photomixers	T5P.19.15
<u>Shang-Hua Yang</u> ¹ ; Mona Jarrahi ² ¹ University of Michigan, United States; ² University of California, Los Angeles, United States	
THz Spectra Of Seven Red Mineral Pigments Used In Ancient Chinese Artworks	T5P.24.01
<u>Zhenwei Zhang</u> ¹ ; Cunlin Zhang ¹ ; Yuping Yang ² ¹ Department of Physics, Capital Normal University, China; ² School of Science, Minzu University of China, China	
European Medieval Parchment Studied By THz Time Domain Spectroscopy And Imaging	T5P.24.02
<u>Patrick Mounaix</u> ¹ ; Jean Baptiste Perraud ¹ ; hugo Balacey ¹ ; Anne Lejeune ² ; Martine Fabre ³ ¹ IMS, University of Bordeaux ,UMR CNRS 5218, France; ² Archives départementales des Côtes-d'Armor, France; ³ 3CRBC (EA 4451), France	
Digital Holographic Imaging Of Terahertz Surface Waves	T5P.25.01
<u>Xinke Wang</u> ¹ ; Sen Wang ² ; Yan Zhang ¹ ¹ Capital Normal University, China; ² Harbin Institute of Technology, China	
Completely Evolution Of Gouy Phase Shift In Longitudinal Terahertz Wave	T5P.25.02
<u>Yan Peng</u> ; Tao Geng; Xiaofei Zang; Lin Chen; Yiming Zhu The University of Shanghai for Science and Technology, China	
Phase Dependent High-harmonics And Terahertz-wave Spectroscopy (HATS) From Aligned Carbon Dioxide	T5P.25.04
<u>Yindong Huang</u> ; Chao Meng; Jing Zhao; Xiaowei Wang; Zhihui Lv; Quan Guo; Dongwen Zhang; Jianmin Yuan; Zengxiu Zhao National University of Defense Technology, China	
Observation Of Mode-selective Phonon Excitation Of 6H-SiC by MIR-FEL Pump And Pico-second Probe Laser	T5P.25.05
<u>Tsubasa Katsurayama</u> ¹ ; Tomoya Murata ¹ ; Kyohei Yoshida ² ; Heishun Zen ¹ ; Kan Hachiya ¹ ; Takeshi Nogi ¹ ; Sikharin Suphakul ¹ ; Konstantin Torgasin ¹ ; Toshiteru Kii ¹ ; Kai Masuda ¹ ; Hideaki Ohgaki ¹ ¹ Kyoto university, Japan; ² Kumamoto university, Japan	
In Situ Spatial Mapping Of Gouy Phase Slip With Terahertz Radiation	T5P.25.06
<u>Chao Meng</u> ; Zhihui Lv; Yindong Huang; Xiaowei Wang; Wenbo Chen; Dongwen Zhang; Zengxiu Zhao; Jianmin Yuan National University of Defense Technology, China	
Collective Hydration Dynamics In Binary Mixtures: A THz Time Domain Spectroscopic Study	T5P.25.07
<u>Debasish Das Mahanta</u> ; Dipak Kumar Das; Animesh Patra; Nirnay Samanta; Rajib Kumar Mitra Satyendranath Bose National Centre For Basic Sciences, India	
Traceable Calibration Of Eye Pattern Generators	T5P.27.01
<u>Joo-Gwang Lee</u> ; Chihyun Cho Korea Research Institute of Standards and Science, Korea, Republic of	
Simulation Of Probe Misalignment Effects During RF On-Wafer Probing	T5P.27.02
<u>Fabian von Kleist-Retzow</u> ; Olaf Haessler; Sergej Fatikow University Oldenburg, Germany	
Frequency Calibration Of Distant THz Quantum Cascade Laser By THz Frequency Reference Transfer	T5P.27.03
<u>Motohiro Kumagai</u> ; Shigeo Nagano; Yoshihisa Irimajiri; Yuko Hanado; Iwao Hosako National Institute of Information and Communications Technology, Japan	

Wednesday, 28. September 2016

08:30 - 10:00		Wednesday Plenary Session Session Chair: Peter Uhd Jepsen, Technical University of Denmark	Plenary Auditorium 10/11/12
08:30	Electron Dynamics In Solar Energy Converting Materials <u>Villy Sundström</u> Lund University, Sweden		W1.1
09:15	The Times They Are A'Changin... <u>Søren Rud Keiding</u> Aarhus University, Denmark		W1.2
11:00 - 12:30		Imaging, inspection and remote sensing III (W2A) Session Chair: René Beigang, University of Kaiserslautern, Germany	Room 20
11:00	24x24 Pixel Focal Plane Array For THz Imaging Applications <u>Dan Corcos</u> ¹ ; Sergey Pivnik ¹ ; Ofer Markish ¹ ; Thomas Morf ² ; Ute Drechsler ² ; André Bischof ³ ; Danny Elad ¹ ¹ IBM Research - Haifa, Israel; ² IBM Research - Zurich, Switzerland; ³ CSEM, Switzerland		W2A.1
11:15	A New 3D THz Scanner For The THz-ARTE Project Andrea Doria ¹ ; <u>Gian Piero Gallerano</u> ¹ ; Emilio Giovenale ¹ ; Marcello Picollo ² ; Kaori Fukunaga ³ ¹ ENEA, Italy; ² IFAC-CNR, Italy; ³ NICT, Japan		W2A.2
11:30	Visualization Of Terahertz Radiation On Silicon-based CCD And CMOS Sensor At High Resolution (Keynote Talk) <u>Christoph P. Hauri</u> ¹ ; Mostafa Shalaby ¹ ; Carlo Vicario ² ¹ Paul Scherrer Institute, Switzerland; ² PSI, Switzerland		W2A.3
12:00	Towards Passive Imaging With CMOS THz Cameras <u>Stefan Malz</u> ; Ritesh Jain; Ullrich R. Pfeiffer University of Wuppertal, Germany		W2A.4
12:15	Uncooled Terahertz Video Micro-bolometer Camera: Toolbox To Optimize The Sensitivity By Tuning Antennas And Cavity Jerome Meilhan; <u>Jonathan Oden</u> ; Jean-Louis Ouvrier-Buffet; Antoine Hamelin; Baptiste Delplanque; Francois Simoens CEA-LETI, France		W2A.5
11:00 - 12:30		Spectroscopy and Material Properties VI (W2B) Session Chair: Filip Kadlec, Academy of Science of the Czech Republic, Czech Republic	Auditorium 10
11:00	Ultrabroadband THz Time-domain Spectroscopy Of Biomolecular Crystals <u>Korbinian J. Kaltenecker</u> ¹ ; Sebastian Engelbrecht ¹ ; Krzysztof Iwaszczuk ² ; Bernd M. Fischer ¹ ; Peter Uhd Jepsen ² ¹ French-German Research Institute of Saint-Louis, France; ² Department of Photonics Engineering, Technical University of Denmark, Denmark		W2B.1
11:15	The Use Of Dye Photosensibilization To Control Light Induced Ultrafast Phase Transition Of VO₂ Films For Terahertz Applications Mikhail Esaulkov ¹ ; Maxim Zhanavskiy ² ; Alexander Shkurinov ³ ; Vladimir Zaitsev ³ ; Oleg Novodvorsky ¹ ; Lyubov Parshina ¹ ; Vladimir Mikhalevsky ¹ ; Igor Chernykh ² ; <u>Petr Solyankin</u> ³ ¹ Institute on Laser and Information Technologies of the RAS (ILIT RAS), Russian Federation; ² National research center Kurchatov Institute, Russian Federation; ³ Faculty of Physics, Moscow State University, Russian Federation		W2B.2
11:30	Calculating The Complex Permittivity Of Powdered Crystalline Material At Infrared And Terahertz Frequencies <u>Andrew Burnett</u> ¹ ; John Kendrick ² ¹ University of Leeds, United Kingdom; ² University of Bradford, United Kingdom		W2B.3
11:45	The Influence Of Intermolecular Forces On The Terahertz Response Of Amorphous Materials <u>Michael Ruggiero</u> ¹ ; Juraj Sibik ² ; J. Axel Zeitler ¹ ¹ University of Cambridge, United Kingdom; ² Roche, Switzerland		W2B.4
12:00	Correlation Between Salt-induced Change In Lipid Hydration Water And Inter-space Of Multi-lamellar Vesicles <u>Da-Hye Choi</u> ¹ ; Heyjin Son ¹ ; Jung-Min Jang ¹ ; Jin-Young Jeong ¹ ; Kihoon Eom ¹ ; Kyeong Sik Jin ² ; Jaehun Park ² ; Gun-Sik Park ¹ ¹ Seoul National University, Korea, Republic of; ² Pohang Accelerator Laboratory, Korea, Republic of		W2B.5
12:15	On The Issue Of Universal Dielectric Responses In Proteins <u>Konstantin Motovilov</u> ¹ ; Aleksei Pronin ² ; Elena Zhukova ¹ ; Zarin Gagkaeva ¹ ; Victor Torgashev ³ ; Maxim Savinov ⁴ ; Vadim Grinenko ⁵ ; Mikhail Belyanchikov ¹ ; Artem Grebenko ¹ ; Konstantin Sidoruk ⁶ ; Martin Dressel ⁷ ; Boris Gorshunov ¹ ¹ Moscow Institute of Physics and Technology, Russian Federation; ² A.M. Prokhorov General Physics Institute, Russian Federation; ³ Faculty of Physics, Southern Federal University, Russian Federation; ⁴ Institute of Physics, ASCR, Czech Republic; ⁵ Leibniz Institute for Solid State and Materials Research Dresden, Germany; ⁶ Scientific Center of Russian Federation Research Institute for Genetics and Selection of Industrial, Russian Federation; ⁷ 1. Physikalisches Institut, Universität Stuttgart, Germany		W2B.6
11:00 - 12:30		Sources, Detectors, and Receivers III (W2C) Session Chair: Benjamin Williams, UCLA, USA	Auditorium 11
11:00	Measuring Photon Statistics In The Terahertz Domain (Keynote Talk) <u>Jérôme Faist</u> ; Ileana-Cristina Benea-Chelmus; Markus Roesch; Matthias Beck; Giacomo Scalari ETH Zurich, Switzerland		W2C.1
11:30	High-Performance Terahertz Detector Based On Plasmonic Nano-antennas <u>Nezih Yardimci</u> ; Mona Jarrahi University of California - Los Angeles, United States		W2C.2
11:45	Broadband Heterodyne Terahertz Detector Based On Plasmonic Photomixing Ning Wang ¹ ; <u>Mona Jarrahi</u> ² ¹ University of Michigan, Ann Arbor, United States; ² University of California, Los Angeles, United States		W2C.3
12:00	Improvement Of Heterodyne THz Electro-Optic Sampling Technique <u>Masahiko Tani</u> ¹ ; Takuro Yasumoto ¹ ; Daiki Gotoh ¹ ; Hideaki Kitahara ¹ ; Takashi Furuya ¹ ; Kohji Yamamoto ¹ ; Michael Bakunov ² ¹ Research Center for Development of Far-Infrared Region, University of Fukui, Japan; ² University of Nizhny Novgorod, Russian		W2C.4

Federation

12:15 **Plasmonic Large-Area Photoconductive Emitters Operating At 1550 nm** W2C.5
 Nezhil Yardimci; Mona Jarrahi
 University of California - Los Angeles, United States

11:00 - 12:30 Metamaterial Structures and Applications III (W2D) Auditorium 12
 Session Chair: Giacomo Scalari, ETH Zürich, Switzerland

11:00 **Photoconductive Microprobe Based Near-field Scanning Of Terahertz Resonances Of A Single High-index TiO₂ Microsphere** W2D.1
 Michael Nagel¹; Simon Sawallich¹; Catherine Elissalde²; Patrick Mounaix³; Christopher Matheisen¹
¹Protemics GmbH, Germany; ²ICMCB/Univ. Bordeaux, France; ³IMS UMR/Univ. Bordeaux, France

11:15 **Near-field Visualization Of Electromagnetically Induced Transparency In Resonant Terahertz Structures** W2D.2
 Alexei Halpin¹; Arkabrata Bhattacharya¹; Christiaan Mennes²; Jaime Gomez-Rivas¹
¹Dutch Institute for Fundamental Energy Research (DIFFER), Netherlands; ²Dutch Institute for Atomic, Molecular and Optical Physics (AMOLF), Netherlands

11:30 **Near-field Imaging Of Magnetic Resonance In Terahertz Dielectric Resonator Antennas** W2D.3
 Wendy Lee¹; Korbinian J. Kaltenecker²; Shruti Nirantar³; Withawat Withayachumnanukul¹; Markus Walther²; Madhu Bhaskaran³; Bernd M. Fischer¹; Christophe Fumeaux¹; Sharath Sriram³
¹The University of Adelaide, Australia; ²University of Freiburg, Germany; ³RMIT University, Australia

11:45 **Hiding Images With Multi-Color THz Metasurfaces** W2D.4
 Ashish Chanana¹; Andrew Paulsen²; Ajay Nahata¹
¹University of Utah, United States; ²Massachusetts Institute of Technology, United States

12:00 **Observation And Control Of Spoof Localized Surface Plasmons Using Terahertz Near-field Microscope (Keynote Talk)** W2D.5
 Shohei Morimoto¹; Takashi Arikawa¹; François Blanchard²; Kyosuke Sakai³; Keiji Sasaki³; Koichiro Tanaka¹
¹Kyoto University, Japan; ²École de Technologie Supérieure (ÉTS) Montréal, Canada; ³Hokkaido University, Japan

11:00 - 12:30 High-Field THz Wave Generation and Nonlinear THz Physics I (W2E) Room 19
 Session Chair: Mikhail Belkin, University of Texas at Austin, USA

11:00 **Terahertz Funneling-Induced Quantum Tunneling At Angstrom Scale (Keynote Talk)** W2E.1
 Dai-Sik Kim¹; Young-Mi Bahk¹; Joon-Yeon Kim¹; Bong Joo Kang²; Yong Seung Kim³; Joohyun Park⁴; Won Tae Kim²; Tae Yun Kim¹; Taehee Kang¹; Jiyeah Rhie¹; Sanghoon Han¹; Hyeongtag Jeon⁴; Cheol-Hwan Park¹; Fabian Rotermund²
¹Seoul National University, Korea, Republic of; ²Ajou University, Korea, Republic of; ³Sejong University, Korea, Republic of; ⁴Hanyang University, Korea, Republic of

11:30 **Coherent Control Of The Motion Of Electrons In A Tunnel Junction Via Single-Cycle THz Electric Field** W2E.2
 Katsumasa Yoshioka¹; Ikufumi Katayama¹; Yasuo Minami¹; Masahiro Kitajima²; Shoji Yoshida³; Hidemi Shigekawa³; Jun Takeda¹
¹Yokohama National University, Japan; ²Yokohama National University, LxRay Co. Ltd., Japan; ³University of Tsukuba, Japan

11:45 **Robustness Of Various Metals Against High THz Field Induced Damage** W2E.3
 Jianfei Zhu¹; Krzysztof Iwaszczuk¹; Abebe Tilahun Tarekegne¹; Yungui Ma²; Peter Uhd Jepsen¹
¹Technical University of Denmark, Denmark; ²Zhejiang University, China

12:00 **Extreme Laser Spectral Broadening Driven By Intense THz Field** W2E.4
 Carlo Vlcario¹; Mostafa Shalaby²; Christoph P. Hauri²
¹Paul Scherrer Institute, Switzerland; ²PSI, Switzerland

12:15 **High-field High-repetition-rate Prototype User Facility For Coherent THz Control Of Matter** W2E.5
 Sergey Kovalev¹; Bert Green¹; Nilesh Awari¹; Alan Fisher²; Nikola Stojanovic³; Michael Gensch¹
¹Helmholtz Zentrum Dresden Rossendorf, Germany; ²SLAC, United States; ³DESY, Germany

14:00 - 15:30 Applications in Biology and Medicine I (W3A) Room 20
 Session Chair: Lybov V. Titova, Worcester Polytechnic Institute, USA

14:00 **Biomedical THz Imaging And Spectroscopy: High Sensitivity Is Both A Blessing And A Curse (Keynote Talk)** W3A.1
 Emma Pickwell-MacPherson
 Chinese University of Hong Kong, Hong Kong

14:30 **Automated Data And Image Processing For Biomedical Sample Analysis** W3A.2
 Patrick Mounaix¹; Hugo Balacey¹; Amel Al-Ibadi¹; Gaetan Macrogan²; Jean-Paul Guillet¹; Emma Pickwell-MacPherson³
¹IMS, University of Bordeaux, UMR CNRS 5218, France; ²Institut Bergonié -Bordeaux France, France; ³Electronic Engineering, Chinese University of Hong Kong (CUHK), Hong Kong

14:45 **In Vivo THz Imaging Of Human Skin: Accounting For Occlusion Effects** W3A.3
 Qiushuo Sun; Yuezhi He; Edward Parrott; Emma Pickwell-MacPherson
 The Chinese University of Hong Kong, Hong Kong

15:00 **Biomedical Diagnosis Of Cerebral Ischemia With Continuous-wave THz Imaging** W3A.4
 Jia Shi¹; Yuye Wang¹; Degang Xu¹; Chao Yan¹; Longhuang Tang¹; Pan Duan¹; Yixin He¹; Hongxiang Liu¹; Tunan Chen²; Hua Feng²; Jianquan Yao¹
¹Tianjin University, China; ²Third Military Medical University, China

15:15 **High Spatial Resolution Terahertz Imaging Of Carcinoma Tissues At 0.6 THz Frequencies** W3A.5
 Irmantas Kasalynas¹; Rimvydas Venckevicius¹; Linas Minkevicius¹; Faustino Wahaia²; Vytautas Janonis¹; Vincas Tamosiunas¹; Dalius Seliuta¹; Gintaras Valusis¹; Aleksander Seseke³; Janez Trontelj³; Catia Silva⁴
¹Center for Physical Sciences and Technology, Lithuania; ²University of Porto, Portugal; ³University of Ljubljana, Slovenia; ⁴Centro Hospitalar Sao Joao, Portugal

14:00 - 15:30 Spectroscopy and Material Properties VII (W3B) Auditorium 10
 Session Chair: Dmitry Turchinovich, Max Planck Institute for Polymer Research, Germany

14:00 **Helicity-Dependent Terahertz Radiation From Topological Insulator Sb₂Te₃ Thin Film By Femtosecond Optical Excitation** W3B.1
 Chien-Ming Tu¹; Yi-Cheng Chen²; Ping Huang²; Pei-Yu Chuang³; Ming-Yu Lin³; Chih-Wei Luo²; Cheng-Maw Cheng⁴; Jiunn-Yuan Lin²; Jung-Chun A. Huang³; Way-Faung Pong⁵; Takayoshi Kobayashi⁶
¹Lund University, Sweden; ²National Chiao Tung University, Taiwan; ³National Cheng Kung University, Taiwan; ⁴National

Synchrotron Radiation Research Center, Taiwan; ⁵Tamkang University, Taiwan; ⁶The University of Electro-Communications, Japan

14:15	Ultrastrong Light-matter Coupling At 300 GHz With Few (<80) Electrons <u>Giacomo Scalari</u> ¹ ; Janine Keller ¹ ; Curdin Maissen ¹ ; Sara Cibella ² ; Roberto Leoni ² ; Matthias Beck ¹ ; Jérôme Faist ¹ ¹ Institute of Quantum Electronics, ETH Zürich, Switzerland; ² INFN CNR Roma, Italy	W3B.2
14:30	Using Terahertz Pulses To Shed New Light On Quantum Materials (Keynote Talk) <u>Rohit Prasankumar</u> ; Pamela Bowlan; Kamaraju Natarajan; Dmitry Yarotski; Antoinette Taylor Los Alamos National Laboratory, United States	W3B.3
15:00	Terahertz Cyclotron Emission From HgCdTe Bulk Films <u>Dmytro But</u> ¹ ; Christophe Consejo ¹ ; Sergey Krystopenko ¹ ; Nina Dyakonova ¹ ; Alexander Kadykov ¹ ; Nikolay Michailov ² ; Sergey Dvoretzki ² ; Vladimir Gavrilenko ³ ; Sergey Morozov ³ ; Frédéric Teppe ¹ ; Wojciech Knap ¹ ¹ University of Montpellier & CNRS, France; ² Institute of Semiconductor Physics, Siberian Branch RAS, Russian Federation; ³ Institute for Physics of Microstructures RAS, Russian Federation	W3B.4
15:15	A Study Of Surface Electron States In Topological Insulators (Bi_{1-x}In_x)₂Se₃ With The Use Of Terahertz Laser Radiation <u>Alexandra Galeeva</u> ¹ ; Svetlana Egorova ¹ ; Vladimir Chernichkin ¹ ; Marina Tamm ¹ ; Lada Yashina ¹ ; Vladimir Rumyantsev ² ; Sergey Morozov ² ; Helene Plank ³ ; Sergey Danilov ³ ; Ludmila Ryabova ¹ ; Dmitry Khokhlov ¹ ¹ M.V. Lomonosov Moscow State University, Russian Federation; ² Institute for Physics of Microstructures, Russian Federation; ³ University of Regensburg, Germany	W3B.5

14:00 - 15:30	Sources, Detectors, and Receivers IV (W3C) Session Chair: Michele Ortolani, Sapienza Universita di Roma, Italy	Auditorium 11
14:00	Dual-gated Graphene With Ion Gel Gates As Mid-infrared Photodetectors <u>Sébastien Nanot</u> ¹ ; Cheng Peng ² ; Dmitri Efetov ² ; Mara Batzer ¹ ; Romain Parret ¹ ; Dirk Englund ² ; Frank Koppens ¹ ¹ ICFO - Institute of Photonic Sciences, Spain; ² MIT, Massachusetts Institute of technology, United States	W3C.1
14:15	Zero-bias Schottky Diode Based THz Detectors At Room Temperature Using Metallic Nanowire <u>Ahid Hajo</u> ; Shihab Al-Daffaie; Oktay Yilmazoglu; Mohammad Tanvir Haidar; Franko Küppers TU Darmstadt, Germany	W3C.2
14:30	Room Temperature, Very Sensitive Bolometer Using Doubly Clamped Microelectromechanical Resonators <u>Ya Zhang</u> ; Yasuyuki Watanabe; Suguro Hosono; Naomi Nagai; Kazuhiko Hirakawa University of Tokyo, Japan	W3C.3
14:45	Black Phosphorus And Hybrid Van Der Wall Heterostructured Terahertz Photodetectors <u>Leonardo Viti</u> Consiglio Nazionale delle Ricerche, Italy	W3C.4
15:00	Zero Gate-Bias Terahertz Detection With An Asymmetric NMOS Transistor <u>Ritesh Jain</u> ¹ ; Rucker Holger ² ; Ullrich R. Pfeiffer ¹ ¹ IHCT, University of Wuppertal, Germany; ² IHP Microelectronics, Germany	W3C.5
15:15	THz Power Measurements With Room-Temp Pyroelectric Detectors <u>Elliott Brown</u> ; H. Bagherzadeh; W-D. Zhang Wright State University, United States	W3C.6

14:00 - 15:30	Metamaterial Structures and Applications IV (W3D) Session Chair: Koichiro Tanaka, Kyoto University, Japan	Auditorium 12
14:00	Planar Mesh-lens Arrays For Millimeter And Sub-mm Wave Focal Planes <u>Giampaolo Pisano</u> ¹ ; Bruno Maffei ² ; Matthew Robinson ³ ; Prafulla Deo ³ ; Maarten van der Vorst ⁴ ; Neil Trappe ⁵ ; Carole Tucker ¹ ¹ Cardiff University, United Kingdom; ² IAS, Université Paris-Sud, France; ³ The University of Manchester, United Kingdom; ⁴ European Space Agency, Netherlands; ⁵ NUI Maynooth, Ireland	W3D.1
14:15	Tunable Terahertz Metamaterials Based On Nematic Liquid Crystals <u>Antonio Ferraro</u> ¹ ; Dimitrios Zografopoulos ² ; Goran Isic ³ ; Borislav Vasic ³ ; Rados Gajic ³ ; Romeo Beccherelli ² ¹ Università della Calabria, Italy; ² Consiglio Nazionale delle Ricerche, Istituto per la Microelettronica e Microsistemi (CNR-IMM), Roma, Italy; ³ Center for Solid State Physics and New Materials Institute of Physics, University of Belgrade Belgra, Serbia and Montenegro	W3D.2
14:30	THz Circular Patch Resonators Loaded With Semiconductor Heterostructures <u>Christian Georg Derntl</u> ; Karl Unterrainer; Juraj Darmo TU Wien, Austria	W3D.3
14:45	Reconfigurable Meta-Surface For Millimeter-Wave Beam-Scanning Mohammed Reza Hashemi ¹ ; Shang-Hua Yang ¹ ; Tongyu Wang ² ; Nelson Sepúlveda ² ; <u>Mona Jarrahi</u> ¹ ¹ University of California, Los Angeles, United States; ² Michigan State University, United States	W3D.4
15:00	Hybrid Antiresonant Metamaterial Waveguides For THz And IR <u>Alessio Stefani</u> ; Richard Lwin; Alexander Argyros The University of Sydney, Australia	W3D.5
15:15	High Transmission Superconducting THz Switch Based On A Electrically Tunable Metamaterial <u>Biao-Bing Jin</u> ; Chun Li; Cai-Hong Zhang; Lin Kang; Weiwei Xu; Jian Chen; Peiheng Wu Research Institute of Superconductor Electronics, Nanjing University, China	W3D.6

14:00 - 15:30	High-Field THz Wave Generation and Nonlinear THz Physics II (W3E) Session Chair: Dai-Sik Kim, Seoul National University, Korea	Room 19
14:00	THz-driven Ultrafast Spin-lattice Scattering Matthias Hoffmann ¹ ; Meng-Jun Sher ² ; Zhao Chen ² ; Mahesh Samant ³ ; Stuart Parkin ⁴ ; <u>Stefano Bonetti</u> ⁵ ¹ SLAC Linear Accelerator Laboratory, United States; ² Stanford University, United States; ³ IBM Almaden Research Center, United States; ⁴ Max-Planck Institut f. Mikrostrukturphysik, Germany; ⁵ Stockholm University, Sweden	W3E.1
14:15	Phase-sensitive Observation Of THz-dressed Exciton <u>Kento Uchida</u> ¹ ; Tomohito Otake ² ; Toshimitsu Mochizuki ³ ; Changsu Kim ⁴ ; Masahiro Yoshita ⁴ ; Hidefumi Akiyama ⁴ ; Loren Pfeiffer ⁵ ; Ken West ⁵ ; Koichiro Tanaka ¹ ; Hideki Hirori ¹	W3E.2

	¹ Kyoto University, Japan; ² National Institutes for Quantum and Radiological Science and Technology, Japan; ³ National Institutes of Advanced Industrial Science and Technology, Japan; ⁴ University of Tokyo, Japan; ⁵ Princeton University, United States	
14:30	Coherent Manipulation Of Laser-induced Spin Reorientation Dynamics In ErFeO₃ With Intense THz Magnetic Nearfields <u>Takayuki Kurihara</u> ¹ ; Hiroshi Watanabe ¹ ; Makoto Nakajima ¹ ; Tohru Suemoto ² ¹ Osaka University, Japan; ² Toyota Physical and Chemical Research Institute, Japan	W3E.3
14:45	Altering Polymer Morphology By Intense Terahertz Wave Irradiation <u>Hiromichi Hoshina</u> ¹ ; Hal Suzuki ¹ ; Chiko Otani ¹ ; Masaya Nagai ² ; Keigo Kawase ² ; Akinori Irizawa ² ; Goro Isoyama ² ¹ RIKEN, Japan; ² Osaka University, Japan	W3E.4
15:00	Nonlinear Quantum Control Of Landau Systems Beyond Kohn's Theorem (Keynote Talk) <u>Christoph Lange</u> ¹ ; Thomas Maag ¹ ; Andreas Bayer ¹ ; Sebastian Baierl ¹ ; Matthias Hohenleutner ¹ ; Dieter Schuh ¹ ; Dominique Bougeard ¹ ; Rupert Huber ¹ ; Martin Mootz ² ; John Sipe ³ ; Stephan Koch ² ; Mackillo Kira ² ¹ Universität Regensburg, Germany; ² Universität Marburg, Germany; ³ University of Toronto, Canada	W3E.5
16:00 - 17:00	Applications in Biology and Medicine II (W4A) Session Chair: Emma Pickwell-MacPherson, Chinese University of Hong Kong, Hong Kong	Room 20
16:00	First Millimeter-Wave Animal In Vivo Measurements Of L-Glucose And D-Glucose: Further Steps Towards A Non-Invasive Glucometer (Keynote Talk) <u>Peter Siegel</u> ¹ ; Wangde Dai ² ; Robert Kloner ² ; Marie Csete ² ; Victor Pikov ³ ¹ California Institute of Technology, United States; ² Huntington Medical Research Institutes, United States; ³ Glaxo Smith Kline, United Kingdom	W4A.1
16:30	Application Of THz Reflectometry To Cornea Hydration Measurements <u>Andrew Angeluts</u> ¹ ; Alexey Balakin ¹ ; Mikhail Mishchenko ¹ ; Ilja Ozheredov ¹ ; Alexander Shkurinov ¹ ; Mikhail Prokopchuk ¹ ; Tatiana Saphonova ² ¹ Lomonosov Moscow State University, Russian Federation; ² FGBNU NIIGB, Russian Federation	W4A.2
16:45	DNA Detection By THz Pumping <u>Andrew Chernev</u> ¹ ; Leonid Klyachkin ² ; Anna Malyarenko ² ; Anton Emel'yanov ¹ ; Michael Dubina ¹ ; Nikolay Bagraev ² ¹ Saint Petersburg Academic University, Russian Federation; ² Ioffe Physical Technical Institute, Russian Federation	W4A.3
16:00 - 17:00	Spectroscopy and Material Properties VIII (W4B) Session Chair: Fritz Keilmann, Ludwig Maximilian University, Munich, Germany	Auditorium 10
16:00	Detection Of Non-Radiative Defects In GaN With Laser THz Emission Microscopy Yuji Sakai ¹ ; <u>Iwao Kawayama</u> ¹ ; Hidetoshi Nakanishi ² ; Masayoshi Tonouchi ¹ ¹ Osaka University, Japan; ² SCREEN Holdings Co., Ltd., Japan	W4B.1
16:15	Influence Of Doping Concentration And Surface Preparation On THz Emission From Silicon <u>Ulrike Blumröder</u> ¹ ; Heike Angermann ² ; Clemens Kloß ¹ ; Stefan Nolte ¹ ¹ Institute of Applied Physics, Abbe Center of Photonics, Friedrich-Schiller-University, Germany; ² Institut für Silizium-Photovoltaik, Helmholtz-Zentrum Berlin, Germany	W4B.2
16:30	Efficient Terahertz Generation By Ordered Arrays Of GaAs Nanowires <u>Valerii Trukhin</u> ¹ ; Alexey Bouravleuv ² ; Ilia Mustafin ¹ ; Joona-Pekko Kakko ³ ; Teppo Huhtio ³ ; Harri Lipsanen ³ ; George Cirlin ⁴ ; Sergey Morozov ⁵ ; Dmitrii Kuritsyn ⁵ ; Vladimir Romyantsev ⁵ ¹ Ioffe Institute, ITMO University, Russian Federation; ² St Petersburg Academic University, Russian Federation; ³ Aalto University, Finland; ⁴ St Petersburg Academic University, ITMO University, Russian Federation; ⁵ Institute for Physics of Microstructures RAS, Russian Federation	W4B.3
16:45	THz Spectroscopy And THz Generation In A Prussian Blue Analogue Amine Ould Hamouda ¹ ; Antonio Iazzolino ² ; Hiroko Tokoro ³ ; Shin-Ichi Ohkoshi ³ ; <u>Eric Freysz</u> ⁴ ¹ Universite Bordeaux, France; ² Université Bordeaux, France; ³ The university of Tokyo, Japan; ⁴ Université Bordeaux, LOMA, France	W4B.4
16:00 - 17:00	Gyro-Oscillators and Amplifiers I (W4C) Session Chair: Stefano Alberti, EPFL, Switzerland	Auditorium 11
16:00	Development Of A Wide-Band Window In HE_{1,1} Guide For Gyrotrons Michael Read ¹ ; <u>R. Lawrence Ives</u> ¹ ; David Marsden ¹ ; George Collins ¹ ; William Guss ² ; Richard J. Temkin ² ; Jeffrey Neilson ³ ; John Lohr ⁴ ; Thuc Bui ¹ ; Yuri Gorelov ⁴ ; Charles Muller ⁴ ; Mirela Cengher ⁴ ; Alexandra LeViness ⁴ ¹ Calabazas Creek Research Inc., United States; ² Massachusetts Institute of Technology, United States; ³ Lexam Research, United States; ⁴ General Atomic, United States	W4C.1
16:15	Proposal Of An Inverse Magnetron Injection Gun For Future Hollow-Cylindrical-Cavity High Power Gyrotrons <u>Sebastian Ruess</u> ; Konstantinos Avramidis; Gerd Gantenbein; Stefan Illy; Ioannis Pagonakis; Tomasz Rzesnicki; Manfred Thumm; John Jelonnek Karlsruhe Institute of Technology, Germany	W4C.2
16:30	Ion Compensation Of The Space Charge In The Gyrotron Helical Electron Beams <u>Vladimir Manuilov</u> ; Vladimir Semenov Insitute of Applied Physics RAS, Russian Federation	W4C.3
16:45	1.5 MW CW RF Load For Gyrotrons <u>Lawrence Ives</u> ¹ ; David Marsden ¹ ; Thuc Bui ¹ ; Jeffrey Neilson ² ; George Collins ¹ ; Rasul Karimov ¹ ; Maxwell Mizuhara ¹ ¹ Calabazas Creek Research, Inc., United States; ² LEXAM Research, United States	W4C.4
16:00 - 17:00	Metamaterial Structures and Applications V (W4D) Session Chair: Korbinian Kaltenecker, French-German Research Institute of Saint-Louis, France	Auditorium 12
16:00	Transparent Terahertz Metamaterial With A Refractive Index Of Zero <u>Tatsuya Sato</u> ; Takehito Suzuki Ibaraki University, Japan	W4D.1
16:15	Broadband Terahertz Plasmonic Wave Retarders <u>Chunrui Han</u> ; Edward Parrott; Emma Pickwell-MacPherson The Chinese University of Hong Kong, Hong Kong	W4D.2

16:30	Terahertz Waveguide With A Negative Effective Index Of Refraction Measured Using Time Domain Techniques <u>Shashank Pandey</u> ; Barun Gupta; Brandon Cui; David Schurig; Ajay Nahata University of Utah, United States	W4D.3
16:45	Slowing Terahertz Wave Using Thin Flexible Metamaterials <u>Mohammad Parvinnezhad Hokmabadi</u> ; Elizabeth Philip; Elmer Rivera; Patrick Kung; Seongsin Margaret Kim University of Alabama, United States	W4D.4

16:00 - 17:00	High-Field THz Wave Generation and Nonlinear THz Physics III (W4E) Session Chair: Gian Piero Gallerano, ENEA – Frascati, Italy	Room 19
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16:00	Strong Confinement Of THz Pulse By Femtosecond Laser Filamentation (Keynote Talk) Jiayu Zhao; Jing Yang; Ping Chen; Cheng Gong; Lu Sun; Xiaolei Wang; <u>Weiwei Liu</u> Institute of Modern Optics, Nankai University, China	W4E.1
16:30	THz And X-ray Emission As A Tool For Study Of Ionization Dynamics In Gas Clusters (Keynote Talk) <u>Alexander Shkurinov</u> ¹ ; Alexey Balakin ¹ ; Marat Dzhidzhoev ¹ ; Vyacheslav Gordienko ¹ ; Mikhail Esaulkov ² ; Igor Kotelnikov ³ ¹ Lomonosov Moscow State University, Russian Federation; ² Institute on Laser and Information Technologies of the RAS (ILIT RAS), Russian Federation; ³ Budker Institute of Nuclear Physics, Russian Federation	W4E.2

17:00 - 18:30	Wednesday Poster Session (W5P) Session Chairs: Peter Uhd Jepsen, Krzysztof Iwaszczuk, Morten Bache, DTU, Denmark	Congress Hall A
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W5P.08.01	A Frequency-Domain Spectrometer Design For Measurement Of THz Smith-Purcell Radiation <u>Xuling Lin</u> ; Zhuo Zhang; Xuan Zhang; Ningjuan Ruan Beijing Institute of Space Mechanics and Electricity, China	W5P.08.01
W5P.08.02	Cherenkov-type Generation And Detection Of Terahertz Radiation In A GaAs With Metal-coat Structure Ramon delos Santos ¹ ; Shinpei Ozawa ² ; Valynn Katrine Mag-usara ² ; Syougo Azuma ² ; Anthony Tuico ¹ ; Vernalyn Copa ¹ ; Arnel Salvador ¹ ; Kohji Yamamoto ² ; Armando Somintac ¹ ; Kazuyoshi Kurihara ² ; Hideaki Kitahara ² ; Masahiko Tani ² ; <u>Elmer Estacio</u> ¹ ¹ University of the Philippines Diliman, Philippines; ² University of Fukui, Japan	W5P.08.02
W5P.08.03	Long-wavelength Stimulated Emission In HgCdTe Quantum Well Waveguide Heterostructures <u>Sergey Morozov</u> ¹ ; Vladimir Romyantsev ² ; Alexander Kadykov ² ; Konstantin Kudryavtsev ² ; Aleksander Dubinov ² ; Mikhail Fadeev ² ; Nikolay Mikhailov ³ ; Sergey Dvoretzki ³ ; Stephan Winnerl ⁴ ; Manfred Helm ⁴ ¹ Institute for Physics of Microstructures RAS, Russian Federation; ² Institute for Physics of Microstructures, Russian Federation; ³ A.V.Rzhanov Institute of Semiconductor Physics, Siberian Branch of RAS, Russian Federation; ⁴ Institute of Ion Beam Physics and Materials Research, Helmholtz-zentrum Dresden-Rossendorf, Germany	W5P.08.03
W5P.08.04	Investigations On A Graphene Loaded Terahertz Gyrotron <u>Diwei Liu</u> ; Sen Gong; Tao Zhao; Min Hu; Renbin Zhong; Shenggang Liu University of Electronic Science and Technology of China, China	W5P.08.04
W5P.08.05	Cyclotron Electron Beam Excited Surface Plasmon Polaritons Light Radiation <u>Sen Gong</u> ; Tao Zhao; Min Hu; Renbin Zhong; Xiaoxing Chen; Diwei Liu; Ping Zhang; Shenggang Liu Terahertz Science and Technology Research Center, University of Electronic Science and Technology of China	W5P.08.05
W5P.08.06	Detection Properties Of VOX Microbolometer On Si₃N₄/SiO₂ Membrane Fabricated By MOD At 200 GHz Band <u>Takashi Uchida</u> ; Akihito Matsushita; Takashi Tachiki National Defense Academy, Japan	W5P.08.06
W5P.08.07	Measurements Of THz Pulse Signals Based On Superconducting Hot Electron Bolometer Detectors <u>Jian Chen</u> Nanjing Univ., China	W5P.08.07
W5P.08.08	Terahertz Radiation From Graphene Surface Plasmon Polaritons <u>Dazhi Li</u> ¹ ; Yuanyuan Wang ² ; Makoto Nakajima ³ ; Masaki Hashida ⁴ ; Yanyu Wei ² ; Shuji Miyamoto ⁵ ; Masahiko Tani ⁶ ¹ Institute for Laser Technology, Japan; ² University of Electronic Science and Technology of China, China; ³ Osaka University, Japan; ⁴ Kyoto University, Japan; ⁵ University of Hyogo, Japan; ⁶ Research Center for Development of Far-Infrared Region, University of Fukui, Japan	W5P.08.08
W5P.08.10	0.3THz EIK Simulation And Design With A Double Grating And Sub-wavelength Holes Array Structure <u>Zongjun Shi</u> ; Zhi Luo; Ting Zhang; Xiaopin Tang; Ziqiang Yang; Feng Lan University of Electronic Science and Technology of China, China	W5P.08.10
W5P.08.11	Wideband THz HEB Mixers Using HPCVD MgB₂ Thin Films <u>Evgenii Novoselov</u> ; Naichuan Zhang; Sergey Cherednichenko Chalmers University of Technology, Sweden	W5P.08.11
W5P.08.12	Modulation Schemes For Resonant Tunneling Diodes To Enhance The Data-Rate Of Wireless Communications <u>Sebastian Diebold</u> ¹ ; Shunsuke Nakai ¹ ; Kousuke Nishio ¹ ; Jaeyoung Kim ² ; Kazuisao Tsuruda ² ; Toshikazu Mukai ² ; Masayuki Fujita ¹ ; Tadao Nagatsuma ¹ ¹ Osaka University, Japan; ² ROHM Co., Ltd., Japan	W5P.08.12
W5P.08.13	Terahertz Wave Generation In GaP Waveguides By Optical Rectification With Femtosecond Bessel Beam Shuaishuai Xu; <u>Yanfeng Li</u> ; Hui Cao; Minglie Hu; Lu Chai; Chingyue Wang Tianjin University, China	W5P.08.13
W5P.08.14	Resonant Cavities Using Nanostructured Front Mirror For Efficient LT-GaAs Photoconductor Operating At $\lambda=1.55 \mu\text{m}$ <u>Maximilien Billet</u> ; Phillipp Latzel; Fabio Pavanello; Guillaume Ducournau; Jean-François Lampin; Emilien Peytavit Institut d'électronique de microélectronique et de nanotechnologies, France	W5P.08.14
W5P.08.15	A W-band High Efficiency Balanced Frequency Tripler <u>Zhongbo Zhu</u> ; Xiaojun Li; Qinggui Tan; Dong Liang; Wei Jiang; Zheng Cao National Key Laboratory of Science and Technology on Space Microwave, China	W5P.08.15
W5P.08.16	Mechanism Of Carbon Nanotubes Terahertz Detectors Based On Photothermoelectric Effect <u>Daichi Suzuki</u> ; Shunri Oda; Yukio Kawano Tokyo Institute of Technology, Japan	W5P.08.16

A 80mW 140GHz Solid-State Power Amplifier Module	W5P.08.17
<u>jie liu</u> ; Jian Zhang; Xianjin Deng; Bin-bin Cheng China Academy of Engineering Physics, China	
The Diode Heterostructures For THz Devices	W5P.08.18
<u>Dmitry Pavelyev</u> ¹ ; Aleksey Vasil'ev ² ; Vladimir Kozlov ³ ; Yuri Koschurinov ⁴ ; Elizaveta Obolensky ⁴ ; Sergey Obolensky ⁴ ; Victor Ustinov ⁵ ; Dmitry Pavelyev ⁴ ; Vladimir Kozlov ³ ; Yuri Koschurinov ⁴ ; Sergey Obolensky ⁴ ; Victor Ustinov ¹ ¹ Lobachevsky State University of Nizhny Novgorod, Russian Federation; ² SHM R&E Center, RAS, Saint Petersburg, Russian Federation; ³ IPM RAS, Nizhny Novgorod, Russian Federation; ⁴ Lobachevsky State University of Nizhny Novgorod, Russian Federation; ⁵ Ioffe Institute, Saint Petersburg, Russian Federation	
Photoconductive Connected Array: A Novel Solution For Pulsed Terahertz Radiation	W5P.08.19
<u>Alessandro Garufo</u> ; Giorgio Carluccio; Nuria Llobart; Andrea Neto Delft University of Technology, Netherlands	
Responsivity And NEP Optimization Of FET-based Terahertz Detectors	W5P.08.20
<u>Matteo Perenzoni</u> ; David Stoppa FBK, Italy	
Terahertz Spectrometer Based On High Temperature Superconducting Josephson Junction	W5P.08.21
Yingchao Xu; <u>Weiwei Xu</u> ; Mei Yu; Fan Zhao; Jian Chen; Biao-Bing Jin; Lin Kang; Peiheng Wu Nanjing University, China	
Generations Of Linear Frequency Modulation Continuous Waves	W5P.08.22
<u>Tianxin Yang</u> ; Da Xing; Zhaoyu Lu; Cheng Guo; Chunfeng Ge; Zhaoying Wang Tianjin University, China	
High Performance InP Based Single Photon Avalanche Diodes Integrated With Metal-Insulator-Metal Plasmonic Microcavities	W5P.08.23
<u>Wenjuan Wang</u> ; Jie Wen; Zhifeng Li; Ning Li; Wei Lu Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China	
Difference Frequencies Of CO And CO₂ Lasers When Tuning Phase-matching Angle In AgGaSe₂ Crystal	W5P.08.24
<u>Yury Klimachev</u> ; Oksana Budilova; Andrey Ionin; Igor Kinyaevskiy; Andrei Kotkov; Andrey Kozlov; Leonid Seleznev P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Russian Federation	
Q-switched Cryogenically Cooled Slab RF Discharge CO Laser	W5P.08.25
<u>Dmitry Sinityn</u> ; Andrey Ionin; Andrey Kozlov; Aleksei Levchenko; Daria Mokrousova; Leonid Seleznev; Elena Sunchugasheva P.N. Lebedev Physical Institute, Russian Federation	
Propagation Effect Of Broadband Frequency-Chirped THz Wave Pulse In Periodically Poled Lithium Niobate	W5P.08.26
<u>Junichi Hamazaki</u> ; Yoh Ogawa; Norihiko Sekine; Akifumi Kasamatsu; Atsushi Kanno; Naokatsu Yamamoto; Iwao Hosako National Institute of Information and Communications Technology, Japan	
Direct Detection Of 300GHz Using Commercial GaAs High Electron Mobility Transistors	W5P.08.27
Elham Javadi ¹ ; Yahya Moubarak Meziani ² ; Mahmoud Shahabadi ³ ; Naser Masoumi ³ ; <u>Juan Antonio Delgado Notario</u> ² ; Jesus Enrique Velazquez Perez ² ¹ Salamanca and tehran university, Spain; ² Salamanca university, Spain; ³ tehran university, Iran	
Current Injection Induced Terahertz Emission From P-n Si Structures	W5P.08.28
<u>Alexey Zakharin</u> ¹ ; Alexander Andrianov ¹ ; Nickolay Sobolev ¹ ; Yuri Vasilyev ¹ ; Sergey Egorov ² ¹ Ioffe Institute, Russian Federation; ² St. Peterburg Mining University, Russian Federation	
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<u>Ivan Ryger</u> ¹ ; Dave Harber ² ; Michelle Stephens ¹ ; Malcolm White ¹ ; Nathan Tomlin ¹ ; Peter Lobotka ³ ; John Lehman ¹ ¹ National Institute of Standards and Technology, United States; ² Laboratory for Atmospheric and Space Physics, United States; ³ Institute of Electrical Engineering, SAS, Slovakia	
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<u>Kazuya Nakayama</u> ¹ ; Shigeki Okajima ¹ ; Tsuyoshi Akiyama ² ; Kenji Tanaka ² ; Kazuo Kawahata ² ¹ Chubu University, Japan; ² NIFS, Japan	
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<u>Kei Takeya</u> ¹ ; Tsubasa Minami ¹ ; Hirohisa Uchida ² ; Kodo Kawase ¹ ¹ Nagoya University, Japan; ² Arkray Inc., Japan	
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<u>Yuma Takida</u> ; Kouji Nawata; Yu Tokizane; Zhengli Han; Mio Koyama; Takashi Notake; Shin'ichiro Hayashi; Hiroaki Minamide RIKEN, Japan	
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<u>Cunjun Ruan</u> ¹ ; Min Zhan ¹ ; Hongtao Liang ² ¹ School of Electronic and Information Engineering, Beihang University, China; ² Institute of Electronics, Chinese Academy of Sciences, China	
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<u>Hideaki Kitahara</u> ¹ ; Takuro Yasumoto ¹ ; Kohji Yamamoto ¹ ; Takashi Furuya ¹ ; Takashi Notake ² ; Hiroaki Minamide ² ; Michael Bakunov ³ ; Masahiko Tani ¹ ¹ Research Center for Development of Far-Infrared Region, University of Fukui, Japan; ² RIKEN Center for Advanced Photonics, Japan; ³ University of Nizhny Novgorod, Russian Federation	
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<u>Ze-Ren Li</u> ; Zhaohui Zhai; Li-Guo Zhu; Sen-Cheng Zhong; Jun Li; Qi-Xian Peng; Jian-Heng Zhao Institute of Fluid Physics, China Academy of Engineering Physics, China	
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¹ University of Leeds, United Kingdom; ² Delft University of Technology, Netherlands	
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<u>Sunmi Kim</u> ¹ ; Susumu Komiyama ¹ ; Mikhail Patrashin ² ; Yusuke Kajihara ¹	
¹ The university of Tokyo, Japan; ² National Institute of Information and Communications Technology (NICT), Japan	
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<u>Kouhei Kasagi</u> ; Shintaro Fukuma; Safumi Suzuki; Masahiro Asada Tokyo Institute of Technology, Japan	
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Alexey Koronovskii ¹ ; Vladimir Makarov ² ; Vladimir Maksimenko ² ; <u>Alexander Hramov</u> ² ; Alexander Balanov ³ ¹ Saratov State University, Russian Federation; ² Saratov State Technical University, Russian Federation; ³ Loughborough University, United Kingdom	
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<u>Akira Kawakami</u> ¹ ; Hisashi Shimakage ² ; Junsei Horikawa ³ ; Masaharu Hyodo ⁴ ; Shingo Saito ¹ ; Shunkichi Tanaka ¹ ; Yoshinori Uzawa ¹ ¹ National Institute of Information and Communications Technology, Japan; ² Ibaraki University, Japan; ³ Fukui College, Japan; ⁴ Kanazawa University, Japan	
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<u>Tatiana Karetnikova</u> ¹ ; Andrey Benedik ¹ ; Andrey Rozhnev ¹ ; Nikita Ryskin ¹ ; Gennadiy Torgashov ² ; Nikolay Sinityn ² ; Pavel Shalaev ³ ¹ Saratov State University, Russian Federation; ² Saratov Branch, Institute of Radio Engineering and Electronics, RAS, Russian Federation; ³ "Almaz" R&D Co., Russian Federation	
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<u>Wenxin Liu</u> Institute of Electronics, Chinese Academy of Sciences, China	
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<u>Marcin Bialek</u> ¹ ; Jerzy Wróbel ² ; Vladimir Umansky ³ ; Jerzy Lusakowski ¹ ¹ University of Warsaw, Poland; ² Institute of Physics, Polish Academy of Sciences, Poland; ³ Wiezmann Institute of Science, Israel	
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<u>Pavel Yagoubov</u> ¹ ; Alvaro Gonzalez ² ; Valeria Tapia ³ ; Fausto Patricio Mena ³ ; Nicolas Reyes ³ ; Fabrizio Villa ⁴ ; Francesco Cuttaia ⁴ ; Renzo Nesti ¹ ; Sara Ricciardi ⁴ ¹ European Southern Observatory, Germany; ² National Astronomical Observatory of Japan, Japan; ³ Universidad de Chile, Chile; ⁴ Istituto Nazionale di Astrofisica, Italy	
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Alexander Borodin ¹ ; <u>Mikhail Esaulkov</u> ² ; Petr Solyankin ³ ; Alexander Frolov ⁴ ; Alexander Shkurinov ¹ ¹ M.V.Lomonosov Moscow State University, Russian Federation; ² Institute on Laser and Information Technologies - branch of FSRC "Crystallography and photonics" RAS, Russian Federation; ³ MSU, Russian Federation; ⁴ JiHT, Russian Federation	
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<u>Hawal Rashid</u> ; Vincent Desmaris; Alexey Pavolotsky; Victor Belitsky Group for Advanced Receiver Development, Sweden	
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Lu Duan; Xin Rao; Jun Zhou University of Electronic Science and Technology of China, China	
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Maryam Hajji ; Dagou Zeze; Claudio Balocco; Andrew J. Gallant School of Engineering and Computing sciences, Durham University, United Kingdom	
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Heng-He Tang ¹ ; Yunhua Tan ¹ ; Tianjun Ma ² ; Pu-Kun Liu ¹ ¹ Peking University, China; ² Institute of Electronics, Chinese Academy of Sciences, China	
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Korbinian J. Kaltenecker ¹ ; Chunrui Han ² ; Bernd M. Fischer ¹ ; Emma Pickwell-MacPherson ² ; Edward Parrott ² ¹ French-German Research Institute of Saint-Louis, France; ² The Chinese University of Hong Kong, Hong Kong	
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Paul Moseley ; Peter Ade Cardiff University, United Kingdom	
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Christelle Kadlec ¹ ; Michal Sindler ² ; Filip Dominec ¹ ; Filip Kadlec ¹ ; Petr Kuzel ¹ ; Catherine Elissalde ³ ; Patrick Mounaix ² ; Hynek Nemeč ¹ ¹ Institute of Physics, Czech Academy of Sciences, Czech Republic; ² IMS, Univ. Bordeaux, UMR CNRS, France; ³ ICMCB, Univ. Bordeaux, CNRS, France	
Spectrally Tunable Terahertz Liquid Crystal Metamaterial Perfect Absorber	W5P.11.21
Mohammad Parvinnezhad Hokmabadi ¹ ; Abubaker M. Tareki ² ; Elmer Rivera ¹ ; Patrick Kung ¹ ; Robert G. Lindquist ² ; Seongsin Margaret Kim ¹ ¹ University of Alabama, United States; ² University of Alabama in Huntsville, United States	
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Mohammad Esmail Aryaee Panah ¹ ; Li Han ² ; Dennis Valbjørn Christensen ² ; Nini Pryds ² ; Andrei V. Lavrinenko ³ ; Elizaveta S. Semenova ³ ¹ Technical University of Denmark, Denmark; ² Technical University of Denmark, Department of Energy Conversion and Storage, Denmark; ³ Technical University of Denmark, Department of Photonics Engineering, Denmark	
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Shohei Morimoto ¹ ; Takashi Arikawa ¹ ; François Blanchard ² ; Kyosuke Sakai ³ ; Keiji Sasaki ³ ; Koichiro Tanaka ¹ ¹ Kyoto University, Japan; ² École de Technologie Supérieure (ÉTS) Montréal, Canada; ³ Hokkaido University, Japan	
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Amir Ebrahimi ; Withawat Withayachumnankul; Derek Abbott The University of Adelaide, Australia	
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Xiang Li ¹ ; Claudio Paoloni ¹ ; Diana Gamzina ² ; Branko Popovic ² ; Logan Himes ² ; Robert Barchfeld ² ; Rosa Letizia ¹ ; Ye Tang ³ ; Hanyan Li ³ ; Rob Waring ⁴ ; Jun Zhang ⁴ ; Pan Pan ² ; Jinjun Feng ³ ; Neville C. Luhmann Jr ² ¹ Lancaster University, United Kingdom; ² University of California Davis, United States; ³ Beijing Vacuum Electronic Research Institute, China; ⁴ National University of Defense Technology, China	
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Huibo Zhang ¹ ; Alexander Aryshev ² ; Andrew Lancaster ¹ ; Mikhail Shevelev ² ; Nobuhiro Terunuma ² ; George Doucas ¹ ; Ivan Konoplev ¹ ¹ University of Oxford, United Kingdom; ² High Energy Accelerator Research Organization (KEK), Japan	
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Liangliang Zhang ¹ ; Yuejin Zhao ² ; Xiaomei Yu ³ ; Cunlin Zhang ¹ ; Xi-Cheng Zhang ⁴ ¹ Capital Normal University, China; ² Beijing Institute of Technology, China; ³ Peking University, China; ⁴ University of Rochester, United States	
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Shuyuan Chen ; Jiaqi Liu; Yongtao Shui; Lu Gao; Zhiye Jiang; Jingliang Bai; Hongyan Liu; Xin Liu; Xuefeng Zhang; Feng Xu; Peng Qin; Hu Li National Key Laboratory of Science and Technology on Test Physics and Numerical Mathematics, Beijing, China	
Controlled Shifting Of Carrier-envelope Phase Of Broadband Terahertz Pulses Using Prism Wave Plates	W5P.14.04
Yoichi Kawada ; Takashi Yasuda; Hironori Takahashi Hamamatsu Photonics K.K., Japan	
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Self-oscillations In Terahertz Laser Discharge: Nature, Parameters, And Suppression	W5P.14.06
Vitaly Kubarev ; Yaroslav Getmanov; Oleg A. Shevchenko Budker Institute of Nuclear Physics, Russian Federation	
Asymmetric Half-cycle THz Pulses With Large Ponderomotive Potential Generated From Photoconductive Antennas	W5P.14.07
Xavier Ropagnol ¹ ; Mohsen Raeeszadeh ² ; Safieddin Safavi-Naeini ² ; Matthew Reid ³ ; Marc Andre Gauthier ¹ ; Tsuneyuki Ozaki ¹ ¹ INRS-EMT, Canada; ² University of Waterloo, Canada; ³ UNBC, Canada	
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Hongsong Qiu ¹ ; Hirofumi Harada ¹ ; Kousaku Kato ¹ ; Keisuke Takano ¹ ; Takayuki Kurihara ² ; Tohru Suemoto ² ; Masahiko Tani ³ ; Nobuhiko Sarukura ¹ ; Masashi Yoshimura ¹ ; Makoto Nakajima ¹ ¹ Institute of Laser Engineering, Osaka University, Japan; ² Institute for Solid State Physics, The University of Tokyo, Japan; ³ Research Center for Development of Far-Infrared Region, University of Fukui, Japan	
Compact Pseudospark Electron Beam Driven Millimeter And Terahertz Radiation Sources	W5P.14.09
Huabi Yin ; Adrian Cross; Liang Zhang; Wenlong He; Kevin Ronald; Alan Phelps University of Strathclyde, United Kingdom	
Non-linear Coefficients Of Crystals Measured At THz Frequencies	W5P.14.10

Mira Naftaly¹; John Molloy¹; Nikolas Stavrios²; Konstantin Litvinenko³

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Terahertz-induced Demagnetization In Ferromagnets

W5P.14.11

Mostafa Shalaby; Carlo Vicario; Christoph P. Hauri

Paul Scherrer Institute, Switzerland

Nonlinear Ultrafast Terahertz Waveform Modulation In Highly N-doped InGaAs Thin Film

W5P.14.12

Xin Chai¹; Xavier Ropagnol¹; Mohsen Raeiszadeh²; Safieddin Safavi-Naeini²; Matthew Reid³; Marc Andre Gauthier¹; Tsuneyuki Ozaki¹

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Time Domain Analysis Of A Superconductor's Nonlinear THz Response

W5P.14.13

G. Lawrence Carr; Xiaoxiang Xi

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Hybrid Tilted-pulse-front Excitation Scheme For Efficient Generation Of High-energy Terahertz Pulses

W5P.14.14

László Pálfalvi; Zoltán Ollmann; Levente Tokodi; Andrea Buzády; János Hebling

Institute of Physics, University of Pécs, Hungary

Advanced Techniques For Terahertz Detection Using Spectral-domain Interferometry

W5P.15.01

Akram Ibrahim¹; Marie Kirouac-Turmel²; Gargi Sharma³; Kanwarpal Kanwarpal Singh⁴; Densi Férachou¹; Tsuneyuki Ozaki¹

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Real-time Absolute Frequency Measurement Of CW-THz Radiation Using Dual THz Combs Induced By A Free-running, Dual-wavelength, Mode-locked Fiber Laser

W5P.15.02

Tatsuya Mizuguchi¹; Guoqing Hu²; Xin Zhao²; Takeo Minamikawa¹; Yuli Yang²; Cui Li²; Zheng Zheng²; Takeshi Yasui¹

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Scanning Probe Tips Made Of Epitaxial Germanium With Plasma Frequency In The Mid Infrared

W5P.15.03

Michele Ortolani¹; Emilie Sakat²; Valeria Gilberti³; Leonetta Baldassarre¹; Monica Bollani⁴; Virginia Altoe⁵; Mauro Melli⁵; Alexander Weber-Bargioni⁵; Andrea Notargiacomo⁴; Marialilia Pea⁴; Michele Celebrano⁶; Marco Finazzi⁶; Jacopo Frigerio⁶; Giovanni Isella⁶; Paolo Biagioni⁶; Jean-Paul Hugonin²; Stefano Cabrini⁵

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Calibration Of A Broadband Plasma-based Terahertz Full-polarimetry System

W5P.15.04

M. Hassan Arbab¹; Elyas Bayati¹; Kenichi Oguichi²; Shinichi Watanabe²; Dale Winebrenner¹

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Ferroelectric Cathode For MMW Gyrotrons

W5P.21.01

Moshe Einat; Yafit Orbach; Eviatar Avraham; Moritz Pilosof

Ariel University, Israel

Thursday, 29 September 2016

08:30 - 10:00		Thursday Plenary Session Session Chair: Peter H. Siegel, California Institute of Technology, USA	Plenary Auditorium 10/11/12
08:30	Development And Applications Of High Power THz Radiation Sources -- Gyrotrons <u>Toshitaka Idehara</u> University of Fukui, FIR Center, Japan		H1.1
09:15	Exploring The Use Of Metamaterial Apertures In A Millimeter-wave Imaging System <u>David Smith</u> Duke University, United States		H1.2
11:00 - 12:30		Applications in Biology and Medicine III (H2A) Session Chair: Vincent Wallace, University of Western Australia, Australia	Room 20
11:00	Terahertz Super-focusing Device And Its Application In Bio-detection (Keynote Talk) <u>Yiming Zhu</u> ; Xiaofei Zang; Yan Peng; Lin Chen University of Shanghai for Science and Technology, China		H2A.1
11:30	Diagnosis Of Malignant Melanoma By Micromachined Near-Field Millimeter-Wave Probe Fritzi Töpfer ¹ ; Lennart Emtestam ² ; <u>Joachim Oberhammer</u> ¹ ¹ KTH Royal Institute of Technology, Sweden; ² Karolinska Institutet, Sweden		H2A.2
11:45	Assessment Of Plants' Reaction To Drought Stress Using THz Time Domain Spectroscopy <u>Ralf Gente</u> ; Norman Born; Jan C. Balzer; Martin Koch Philipps-Universität Marburg, Germany		H2A.3
12:00	Probing Living Cells Composition By THz Attenuated Total Reflection - Application To Quantitative Permeabilization Measurement <u>Marianne Grognot</u> ; Guilhem Gallot Ecole Polytechnique, France		H2A.4
12:15	The Effects Of The Slow Freeze And Thaw Process On The THz Properties Of Biological Samples <u>Yuezhi He</u> ¹ ; Edward Parrott ² ; Emma Pickwell-MacPherson ² ; Benjamin S.-Y. Ung ² ¹ The Chinese University of Hong Kong, China; ² The Chinese University of Hong Kong, Hong Kong		H2A.5
11:00 - 12:30		Spectroscopy and Material Properties IX (H2B) Session Chair: Christoph Lange, University of Regensburg, Germany	Auditorium 10
11:00	A Smart Method For Magneto-optical Spectroscopy With A Quarter-wave Plate <u>Tomohide Morimoto</u> ; Genki Yamashita; Masaya Nagai; Masaaki Ashida Graduate School of Engineering Science/ Osaka University, Japan		H2B.1
11:15	Hot Carrier Dynamics In Monolayer Graphene Studied By Optical Pump/ultra-broadband THz Probe Spectroscopy <u>Sho Ikeda</u> ¹ ; Masatsugu Yamashita ² ; Chiko Otani ³ ¹ Tohoku University, Japan; ² RIKEN, Japan; ³ Tohoku University, RIKEN, Japan		H2B.2
11:30	Spin-Resolved Terahertz Spectroscopy (Keynote Talk) <u>Dmitry Turchinovich</u> ¹ ; Zuanming Jin ² ; Tobias Kampfrath ³ ; Mathias Kläui ⁴ ; Mischa Bonn ¹ ¹ Max Planck Institute for Polymer Research, Germany; ² Shanghai University, China; ³ Fritz Haber Institute of the Max Planck Society, Germany; ⁴ University of Mainz, Germany		H2B.3
12:00	Photomixer-based THz Electron Magnetic Resonance Measurements <u>David Daughton</u> ¹ ; Masaki Yamaguchi ² ; Li Li ³ ; Jing Han ³ ; Katsuya Inoue ³ ¹ Lake Shore Cryotronics, United States; ² Toyo Corporation, Japan; ³ Center for Chiral Science, Department of Chemistry and Institute for Advanced Materials Research, Hi, Japan		H2B.4
12:15	Magneto-optical Hexaferrites For Terahertz Isolating Applications <u>Tomás Horák</u> ¹ ; Mathias Vanwolleghem ¹ ; Guillaume Ducournau ¹ ; Kamil Postava ² ; Pierre Koleják ² ; Jean-François Lampin ¹ ¹ IEMN, CNRS UMR 8520, France; ² Department of Physics and Nanotechnology Centre, Technical University of Ostrava, Czech Republic		H2B.5
11:00 - 12:30		Sources, Detectors, and Receivers V (H2C) Session Chair: XueChu Shen, Shanghai Institute of Technical Physics, China	Auditorium 12
11:00	1.3 W Femtosecond Mid-IR Source At 8.5 μm Wavelength Marcus Seidel ¹ ; <u>Oleg Pronin</u> ¹ ; Ferenc Krausz ² ¹ Max-Planck-Institute of Quantum Optics, Germany; ² Max-Planck-Institute of Quantum Optics, LMU München, Germany		H2C.1
11:15	Continuous Wave Terahertz Molecular Laser Optically Pumped By A Quantum Cascade Laser Antoine Pagies; Guillaume Ducournau; <u>Jean-François Lampin</u> IEMN - CNRS, France		H2C.2
11:30	Frequency Accuracy And Resolution Of A GaP Continuous-Wave Terahertz Spectrometer <u>Tetsuo Sasaki</u> ¹ ; Tadao Tanabe ² ; Jun-ichi Nishizawa ² ¹ Shizuoka University, Japan; ² Tohoku University, Japan		H2C.3
11:45	Multi-mJ Infrared Femtosecond Hydrogen Raman Laser <u>Carlo Vicario</u> ¹ ; Mostafa Shalaby ¹ ; Leonid Losev ² ; Alexander Konyashchenko ² ; Christoph P. Hauri ¹ ¹ Paul Scherrer Institute, Switzerland; ² P. N. Lebedev Physical Institute, Russian Federation		H2C.4
12:00	Strong Sub-terahertz Surface Waves Generated On Metal Wires By Relativistic-intensity Laser Pulses (Keynote Talk) <u>Shigeki Tokita</u> ¹ ; Kensuke Teramoto ² ; Shunsuke Inoue ² ; Ryo Yasuhara ³ ; Takeshi Nagashima ⁴ ; Masaki Hashida ² ; Junji Kawanaka ¹ ; Noriaki Miyanaga ¹ ; Shuji Sakabe ² ¹ Osaka University, Japan; ² Kyoto University, Japan; ³ National Institute for Fusion Science, Japan; ⁴ Setsuman University, Japan		H2C.5
11:00 - 12:30		Gyro-Oscillators and Amplifiers II (H2D) Session Chair: Alexander Litvak, Institute of Applied Physics, Russian Academy of Sciences	Auditorium 11

11:00	Start-up Scenario Studies In Gyrotron Oscillator Using A Novel Linear And Spectral Code <u>Jérémy Genoud</u> ¹ ; Trach-Minh Tran ¹ ; Stefano Alberti ¹ ; Patryk Kaminski ¹ ; Falk Braunmueller ¹ ; Jean-Philippe Hogge ¹ ; Minh Quang Tran ¹ ; William C. Guss ² ; Richard J. Temkin ² ¹ Swiss Plasma Center, EPFL, Switzerland; ² Plasma Science and Fusion Center, MIT, United States	H2D.1
11:15	Development Of Multi-frequency Gyrotron For ITER And DEMO At QST <u>Ryosuke Ikeda</u> ; Yasuhisa Oda; Takayuki Kobayashi; Masayuki Terakado; Ken Kajiwara; Koji Takahashi; Shinichi Moriyama; Keishi Sakamoto National Institutes for Quantum and Radiological Science and Technology, Japan	H2D.2
11:30	Development And Preliminary Tests Of A Second Harmonic Double-Beam Continuous Wave Gyrotron With Operating Frequency Of 0.79 THz <u>Mikhail Glyavin</u> ¹ ; Vladimir Manuilov ² ; Irina Zotova ² ; Eduard Khutoryan ³ ; Andrey Malkin ² ; Mikhail Morozkin ² ; Roman Rozental ² ; Anton Sedov ² ; Alexander Tsvetkov ² ; Vladislav Zaslavsky ² ; Naum Ginzburg ² ; Toshitaka Idehara ³ ¹ GYCOM, Insitute of Applied Physics RAS, Russian Federation; ² Insitute of Applied Physics RAS, Russian Federation; ³ Research Center for Development of Far-Infrared Region, University of Fukui, Japan	H2D.3
11:45	Radiation Input/Output System Of A Broadband W-band Gyrotron Traveling-Wave Amplifier <u>Sergey Mishakin</u> ; Sergey Samsonov; Dmitry Sobolev; Anton Gashturi; Gregory Denisov Institute of Applied Physics, Russian Federation	H2D.4
12:00	Development Of Gyro-Devices At IAP/GYCOM In The Range From Gigahertz To Terahertz (Keynote Talk) <u>Gregory Denisov</u> ; Mikhail Glyavin Institute of Applied Physics, Russian Federation	H2D.5

11:00 - 12:30		Room 19
High-Field THz Wave Generation and Nonlinear THz Physics IV (H2E) Session Chair: Krzysztof Iwaszczuk, Technical University of Denmark, Denmark		
11:00	Desorption Via Large-amplitude Intermolecular Vibration Driven By The Intense Picosecond THz Pulses (Keynote Talk) <u>Masaya Nagai</u> ¹ ; Eiichi Matsubara ¹ ; Masaaki Ashida ¹ ; Masanori Fuyuki ² ; Keigo Kawase ³ ; Akinori Irizawa ³ ; Goro Isoyama ³ ; Jun Aoki ³ ; Michisato Toyoda ³ ¹ Osaka Univ., Japan; ² Kio University, Japan; ³ Osaka University, Japan	H2E.1
11:30	Highly Efficient Generation Of Strong-Field 0.1-THz Radiation Xiaojun Wu; Anne-Laure Calendron; Koustuban Ravi; Chun Zhou; Michael Hemmer; Fabian Reichert; Dongfang Zhang; Huseyin Cankaya; Luis Zapata; <u>Nicholas Matlis</u> ; Franz X. Kärtner DESY, Germany	H2E.2
11:45	Semiconductor THz Source Scalable To mJ Energy <u>József Fülöp</u> ¹ ; Gyula Polónyi ¹ ; Balázs Monoszlai ² ; Giedrius Andriukaitis ³ ; Tadas Balciunas ³ ; Audrius Pugzlys ³ ; Andrius Baltuska ³ ; János Hebling ⁴ ¹ MTA-PTE High-Field Terahertz Research Group, Hungary; ² ELI-ALPS, Hungary; ³ Vienna University of Technology, Austria; ⁴ University of Pecs, Hungary	H2E.3
12:00	Generation Of 0.19-mJ THz Pulses In LiNbO3 Driven By 800-nm Femtosecond Laser <u>Li-Guo Zhu</u> ; Sen-Cheng Zhong China Academy of Engineering Physics, China	H2E.4
12:15	Compact Device For Intense THz Light Generation: Contact Grating With Fabry-Perot Resonator <u>Masaaki Tsubouchi</u> ; Keisuke Nagashima; Fumiko Yoshida; Yoshihiro Ochi; Momoko Maruyama National Institutes for Quantum and Radiological Science and Technology, Japan	H2E.5

14:00 - 15:30		Auditorium 10
Astronomy, planetary and environmental science (H3A) Session Chair: Ken Wood, QMC Instruments Ltd., United Kingdom		
14:00	Performance Of A 961 Pixel Kinetic Inductance Detector System For Future Space Borne Observatories <u>Jochem Baselmans</u> ¹ ; Juan Bueno ¹ ; Ozan Yurduseven ² ; Stephen Yates ¹ ; Nuria Llobart ² ; Vignesh Murugesan ¹ ; David Thoen ² ; Andrey Baryshev ¹ ; Andrea Neto ² ¹ SRON Netherlands Institute for Space Research, Netherlands; ² Delft University of Technology, Netherlands	H3A.1
14:15	Setup For Terahertz Low Temperature Emissivity Measurements Alexandra Galeeva ¹ ; Dmitry Dolzhenko ¹ ; Andrey Nicoric ² ; Ludmila Ryabova ¹ ; <u>Dmitry Khokhlov</u> ¹ ¹ M.V. Lomonosov Moscow State University, Russian Federation; ² Institute of Applied Physics of the Moldavian Academy of Sciences, Moldova, Republic of	H3A.2
14:30	THz Solar Photometers Performance On Board Of A Trans-Antarctic Stratospheric Balloon Flight <u>Pierre Kaufmann</u> ¹ ; Andre Abrantes ² ; Emilio Bortolucci ³ ; Amir Caspi ⁴ ; Luis Olavo Fernandes ¹ ; Grigory Kropotov ⁵ ; Amauri Kudaka ¹ ; Glenn Laurent ⁴ ; Nelson Machado ² ; Rogerio Marcon ³ ; Adolfo Marun ⁶ ; Valery Nicolaev ⁵ ; Ray Fernando Hidalgo Ramirez ¹ ; Jean-Pierre Raulin ¹ ; Pascal Saint-Hilaire ⁷ ; Albert Shih ⁸ ; Claudemir Silva ⁹ ; Alexander Timofeevsky ⁵ ¹ Universidade Presbiteriana Mackenzie, Brazil; ² Propertech, Brazil; ³ Unicamp, Brazil; ⁴ SRI, United States; ⁵ Tydex, Russian Federation; ⁶ Icate, Argentina; ⁷ UC Berkeley, United States; ⁸ NASA GSFC, United States; ⁹ Neuron, Brazil	H3A.3
14:45	Tropospheric Water And Cloud ICE (TWICE) Millimeter And Submillimeter-wave Radiometer Instrument For 6U-Class Nanosatellites <u>Steven Reising</u> ¹ ; Pekka Kangaslahti ² ; Erich Schlecht ² ; Jonathan Jiang ² ; Xavier Bosch-Lluis ¹ ; Mehmet Ogut ¹ ; Yuriy Goncharenko ¹ ; Sharmila Padmanabhan ² ; Richard Cofield ² ; Nacer Chahat ² ; Shannon Brown ² ; William Deal ³ ; Alex Zamora ³ ; Kevin Leong ³ ; Sean Shih ³ ; Gerry Mei ³ ¹ Colorado State University, United States; ² Jet Propulsion Laboratory, California Institute of Technology, United States; ³ Northrop Grumman Corporation, United States	H3A.4
15:00	Development Of Superconducting THz Receivers For Radio Astronomy (Keynote Talk) <u>Yoshinori Uzawa</u> ¹ ; Yasunori Fujii ² ; Matthias Kroug ² ; Kazumasa Makise ¹ ; Alvaro Gonzalez ² ; Keiko Kaneko ² ; Takafumi Kojima ² ; Akihira Miyachi ² ; Shingo Saito ² ; Hirotsuka Terai ¹ ; Zhen Wang ¹ ¹ National Institute of Information and Communications Technology, Japan; ² National Astronomical Observatory of Japan, Japan	H3A.5

14:00 - 15:30		Auditorium 11
Gyro-Oscillators and Amplifiers III (H3B) Session Chair: Manfred Thumm, Karlsruhe Institute of Technology, Germany		

14:00	Status And Experimental Results Of The European 1 MW, 170 GHz Industrial CW Prototype Gyrotron For ITER (Keynote Talk) <u>Jean-Philippe Hogge</u> ¹ ; Stefano Alberti ¹ ; Falk Braunmueller ¹ ; Christian Schlatter ¹ ; Minh Quang Tran ¹ ; Avramidis Konstantinos ² ; Gerd Gantenbein ² ; Stefan Illy ² ; Zisis Ioannidis ² ; John Jelonnek ² ; Jianbo Jin ² ; Thorsten Kobarg ² ; Markus Losert ² ; Ioannis Pagonakis ² ; Tomasz Rzesnicki ² ; Martin Schmid ² ; Manfred Thumm ² ; Virgile Hermann ³ ; Yoann Rozier ³ ; Ioannis Chelis ⁴ ; John Vomvoridis ⁴ ; George Latsas ⁵ ; Ioannis Tigelis ⁵ ; William Bin ⁶ ; Alessandro Bruschi ⁶ ; Maurizio Lontano ⁶ ; Walter Kasperek ⁷ ; Carsten Lechte ⁷ ; Ferran Albajar ⁸ ; Tullio Bonicelli ⁸ ; Pierre-Etienne Frigot ⁸ ; Anastasios Zisis ⁵ ¹ EPFL-SPC, Switzerland; ² KIT, Germany; ³ TED, France; ⁴ NTUA, Greece; ⁵ UoA, Greece; ⁶ IFP-CNR, Italy; ⁷ IGVP, Germany; ⁸ F4E, Spain	H3B.1
14:30	Developing A 0.33-THz Broadband Pulse Gyrotron <u>Chao-Hai Du</u> ; Xiang-Bo Qi; Bin Huang; Shi Pan; Xiao Ji; Pu-Kun Liu Peking University, China	H3B.2
14:45	Three-Wave Interaction During Electron Cyclotron Resonance Heating And Current Drive <u>Stefan Kragh Nielsen</u> ¹ ; Asger Schou Jacobsen ² ; Søren Kjer Hansen ¹ ; Søren Bang Korsholm ¹ ; Frank Leipold ¹ ; Morten Stejner ¹ ; Severin Denk ² ; Joerg Stober ² ; Martin Schubert ² ; Dietmar Wagner ² ¹ Technical University of Denmark, Denmark; ² MPG IPP Garching, Germany	H3B.3
15:00	Project Of Gyrotron For DNP Applications Based On NMR Magnet <u>Vladimir Bratman</u> ¹ ; Alexey Fedotov ¹ ; Yuriy Kalynov ¹ ; Petr Makhalov ¹ ; Vladimir Manuilov ² ¹ Institute of Applied Physics, Russian Academy of Sciences, Russian Federation; ² Nizhny Novgorod State University, Russian Federation	H3B.4
15:15	Passive Mode-Locking, Dissipative Solitons And Generation Of Ultrashort Pulses In Electron Oscillators With Saturable Absorber In The Feedback Loop <u>Naum Ginzburg</u> ; Gregory Denisov; Michael Vilkov; Alexander Sergeev; Irina Zotova; Ekaterina Kocharovskaya IAP RAS, Russian Federation	H3B.5

14:00 - 15:30	Sources, Detectors, and Receivers VI (H3C) Session Chair: Timothy Korter, Syracuse University, USA	Auditorium 12
14:00	Field Enhancement Effect In Nano-electrodes For THz Generation And Detection <u>Kiwon Moon</u> ¹ ; Eui Su Lee ² ; Il-Min Lee ² ; Sang-Pil Han ¹ ; Kyung Hyun Park ¹ ¹ Electronics and Telecommunications Research Institute, Korea, Republic of; ² Electronics and Telecommunications Research Institute, Korea, Republic of	H3C.1
14:15	High-resolution Terahertz Spectrometer With Up To 110 m Single-pass Base <u>Zhiming Huang</u> ¹ ; Jingguo Huang ¹ ; Yanqing Gao ¹ ; Qiuji Yang ¹ ; Jing Wu ¹ ; Yue Qu ¹ ; Yu.M. Andreev ² ; K.A. Kokh ³ ; G.V. Lanskii ² ; A.A. Lisenko ⁴ ; V.A. Svetlichnyi ³ ¹ Shanghai Institute of Technical Physics, Chinese Academy of Science, China; ² Institute of Monitoring of Climatic and Ecological Systems SB RAS, Russian Federation; ³ Siberian Physical-Technical Institute of Tomsk State University, Russian Federation; ⁴ Institute of Atmospheric Optics SB RAS, Russian Federation	H3C.2
14:30	Uncooled Phonon Noise Limited La_{0.7}Sr_{0.3}MnO₃ Suspended Bolometers <u>Bruno Guillet</u> ¹ ; Shuang Liu ¹ ; Ammar Aryan ¹ ; Carolina Adamo ² ; Darrell Schlom ² ; Laurence Méchin ¹ ¹ GREYC (CNRS-ENSICAEN-Université de Caen Normandie), France; ² Cornell University, United States	H3C.3
14:45	Real-time Detection Of The THz Pulses From A THz OPO Using AlGaIn/GaN TeraFETs <u>Wisseem Zouaghi</u> ¹ ; Daniel Voß ¹ ; Cormac McDonnell ² ; David Mundy ² ; James R. P. Bain ² ; Nils Hempler ² ; Graeme P. Malcolm ² ; Gareth T. Maker ² ; Adam Rämmer ³ ; Sergey A. Chevtchenko ³ ; Wolfgang Heinrich ³ ; Viktor Krozer ¹ ; Hartmut G. Roskos ¹ ¹ Johann Wolfgang Goethe-Universität, Germany; ² M-Squared Lasers Ltd, United Kingdom; ³ Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik (FBH), Germany	H3C.4
15:00	Terahertz Generation From Graphene Surface Plasmon Polaritons Excited By A Cyclotron Electron Beam <u>Tao Zhao</u> ; Min Hu; Renbin Zhong; Xiaoxing Chen; Ping Zhang; Sen Gong; Chao Zhang; Shenggang Liu University of Electronic Science and Technology of China, China	H3C.5
15:15	THz Detection By Multi-layered Topological Insulator <u>Kotaro Makino</u> ¹ ; Shota Kuromiya ² ; Keisuke Takano ² ; Kosaku Kato ² ; Makoto Nakajima ² ; Hitoshi Ida ³ ; Moto Kinoshita ³ ; Yuta Saito ⁴ ; Junji Tominaga ⁴ ; Takashi Nakano ⁴ ¹ National Institute of Advanced Industrial Science and Technology (AIST), Japan; ² Institute of Laser Engineering, Osaka University, Japan; ³ National Metrology Institute of Japan, AIST, Japan; ⁴ Nanoelectronics Research Institute, National Institute of Advanced Industrial Science and Technology, Japan	H3C.6

14:00 - 15:30	MMW and submillimeter wave systems I (H3D) Session Chair: Xianbin Yu, Zhejiang University, China	Room 20
14:00	Accurate Parameter Extraction From Liquids Measured Using On-chip Terahertz Spectroscopy <u>Matthew Swithenbank</u> ; Christopher Russell; Andrew Burnett; Linahe Li; A. Giles Davies; Edmund H. Linfield; John Cunningham; Christopher Wood University of Leeds, United Kingdom	H3D.1
14:15	Reflection Of Terahertz Surface Plasmons From Plane Mirrors And Transparent Plates <u>Vasily Gerasimov</u> ¹ ; Boris Knyazev ¹ ; Alexey Lemzyakov ¹ ; Alexey Nikitin ² ; German Zhizhin ² ¹ Budker Institute of Nuclear Physics of SB RAS, Russian Federation; ² Scientific and Technological Center for Unique Instrumentation of RAS, Russian Federation	H3D.2
14:30	High-Power THz Pulse Radiation With GHz Repetition Rate In Silicon (Keynote Talk) M. Mahdi Assefzadeh; Peiyu Chen; <u>Aydin Babakhani</u> Rice University, United States	H3D.3
15:00	Extension Of The Multi-Frequency ECRH System At ASDEX Upgrade <u>Dietmar Wagner</u> ¹ ; Joerg Stober ¹ ; Michael Kircher ¹ ; Fritz Leuterer ¹ ; Francesco Monaco ¹ ; Max Muenich ¹ ; Martin Schubert ¹ ; Hartmut Zohm ¹ ; Gerd Gantenbein ² ; John Jelonnek ² ; Manfred Thumm ² ; Andreas Meier ² ; Theo Scherer ² ; Dirk Strauss ² ; Walter Kasperek ³ ; Carsten Lechte ³ ; Burkhard Plaum ³ ; Alexander Zach ³ ; Alexander Litvak ⁴ ; Gregory Denisov ⁴ ; Alexey Chirkov ⁴ ; Leonid Popov ⁵ ; Vadim Nichiporenko ⁵ ; Vadim Myasnikov ⁵ ; Evgeny Tai ⁵ ; Elena Solyanova ⁵ ; Sergey Malygin ⁵ ¹ Max-Planck-Institut fuer Plasmaphysik, Germany; ² Karlsruhe Institute of Technology, Germany; ³ University of Stuttgart, Germany; ⁴ Institute of Applied Physics, Nizhny Novgorod, Russian Federation; ⁵ GYCOM, Russian Federation	H3D.4

15:15	A Traveling Wave Tube For 92-95 GHz Band Wireless Applications <u>Claudio Paoloni</u> ¹ ; Frédéric André ² ; Sophie Kohler ² ; Viktor Krozer ³ ; Quang Trung Le ⁴ ; Rosa Letizia ¹ ; Ahmed Sabaawi ¹ ; Giacomo Ulisse ³ ; Ralph Zimmerman ⁴ ¹ Lancaster University, United Kingdom; ² Thales Electron Devices, France; ³ Goethe University of Frankfurt, Germany; ⁴ HF Systems Engineering GmbH, Germany	H3D.5
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14:00 - 15:30	High-Field THz Wave Generation and Nonlinear THz Physics V (H3E)	Room 19
Session Chair: Morten Bache, Technical University of Denmark, Denmark		

14:00	Tracking The Ultrafast Motion Of A Single Molecular Orbital (Keynote Talk) <u>Dominik Peller</u> ; Tyler L. Cocker; Ping Yu; Jascha Repp; Rupert Huber University of Regensburg, Germany	H3E.1
14:30	Off-axis THz Parametric Oscillator In LiNbO₃ Slab Waveguide <u>YuChung Chiu</u> ¹ ; Tsong-Dong Wang ² ; Po-Chang Wang ¹ ; Yen-Chieh Huang ¹ ¹ National Tsing Hua University, Taiwan; ² Chung-Shan Institute of Science and Technology, Taiwan	H3E.2
14:45	Nonlinear Frequency Mixing In Quantum Cascade Lasers: Towards Broadband Wavelength Shifting And THz Up-Conversion <u>Sarah Houver</u> ¹ ; Armand Lebreton ¹ ; Raffaele Colombelli ² ; Lianhe Li ³ ; Edmund H. Linfield ³ ; A. Giles Davies ³ ; Jérôme Tignon ¹ ; Sukhdeep Dhillon ¹ ¹ Laboratoire Pierre Aigrain, France; ² Institut d'Electronique Fondamentale, France; ³ University of Leeds, United Kingdom	H3E.3
15:00	THz-Wave Generation Via Cascaded Optical Parametric Amplification Michael Hemmer ¹ ; Giovanni Cirmi ¹ ; Fabian Reichert ² ; Koustuban Ravi ¹ ; <u>Frederike Ahr</u> ¹ ; Huseyin Cankaya ¹ ; Nicholas Matlis ¹ ; Oliver Mücke ¹ ; Luis Zapata ¹ ; Franz X. Kärtner ¹ ¹ Center for Free Electron Laser Sciences (CFEL), Germany; ² Physics Department, University of Hamburg, Germany	H3E.4
15:15	All-optical Platform For THz Pulse-shaping <u>Lauren Gingras</u> ¹ ; François Blanchard ² ; David G. Cooke ¹ ¹ McGill University, Canada; ² École de Technologie Supérieure, Canada	H3E.5

16:00 - 17:30	Spectroscopy of Gases, Liquids, and Solids I (H4A)	Auditorium 10
Session Chair: Jianming Dai, Tianjin University, China		

16:00	Parallel-Plate Waveguide Terahertz Time Domain Spectroscopy For 2D Materials (Keynote Talk) Manjakavahoaka Razanoelina ¹ ; Filchito Renee Bagsican ¹ ; Xiang Zhang ² ; Lulu Ma ² ; Hironaru Murakami ¹ ; Robert Vajtai ² ; Daniel Mittleman ³ ; Pulickel Ajayan ² ; Junichiro Kono ² ; Masayoshi Tonouchi ² ; <u>Iwao Kawayama</u> ¹ ¹ Osaka University, Japan; ² Rice University, United States; ³ Brown University, United States	H4A.1
16:30	A Compact Gas Spectroscopy Sensor System Based On A Voltage-Frequency-Tuned 245 GHz SiGe Transmitter And Receiver <u>Nick Rothbart</u> ¹ ; Klaus Schmalz ² ; Johannes Borngräber ² ; Dietmar Kissinger ² ; Heinz-Wilhelm Hübers ¹ ¹ German Aerospace Center, Germany; ² IHP, Germany	H4A.2
16:45	Mid-infrared Intersubband Absorption From P-Ge Quantum Wells On Si <u>Kevin Gallacher</u> ¹ ; Andrea Ballabio ² ; Ross William Millar ³ ; Jacopo Frigerio ⁴ ; Aneeqa Bashir ⁵ ; Ian MacLaren ⁵ ; Giovanni Isella ² ; Michele Ortolani ⁶ ; Douglas J. Paul ³ ¹ University of Glasgow, United Kingdom; ² L-NESS, Dipartimento di Fisica del Politecnico di Milano, Italy; ³ University of Glasgow, School of Engineering, Rankine Building, United Kingdom; ⁴ L-NESS, Dipartimento di Fisica del Politecnico di Milano, Italy; ⁵ University of Glasgow, School of Physics and Astronomy, Kelvin Building, United Kingdom; ⁶ Center for Life Nanosciences, Istituto Italiano di Tecnologia, Italy	H4A.3
17:00	Pressure-Dependent Terahertz Time-Domain Spectroscopy <u>Wei Zhang</u> ¹ ; Daniel Nickel ² ; Daniel Mittleman ¹ ¹ Brown University, United States; ² Rice University, United States	H4A.4
17:15	Effects Of Nonsphericity On Attenuation Characteristics Of THz Atmospheric Propagation Yuwen Wang ¹ ; <u>Fang Zhang</u> ² ; Zhiwei Dong ² ; Huifang Sun ² ¹ Graduate School of Chinese Academy of Engineering Physics, China; ² Institute of Applied Physics and Computational Mathematics, China	H4A.5

16:00 - 17:30	Gyro-Oscillators and Amplifiers IV (H4B)	Auditorium 11
Session Chair: Richard J. Temkin, MIT, USA		

16:00	High Power Oscillation Test Of 300 GHz Band Gyrotron For Practical Use In Collective Thomson Scattering Diagnostics In LHD (Keynote Talk) <u>Teruo Saito</u> ¹ ; Yuusuke Yamaguchi ² ; Yoshinori Tatematsu ¹ ; Takumi Hirobe ¹ ; Jun Kasa ¹ ; Shin Kubo ³ ; Takashi Shimosuma ³ ; Kenji Tanaka ³ ; Masaki Nishiura ⁴ ; Masafumi Fukunari ⁴ ¹ University of Fukui, Japan; ² Yamaguchi, Japan; ³ National Institute for Fusion Science, Japan; ⁴ The University of Tokyo, Japan	H4B.1
16:30	Gyrotron Operation During The First W7-X Campaign - Handling And Reliability <u>Harald Braune</u> ; Heinrich Laqua; Stefan Marsen; Dmitry Moseev; Frank Noke; Frank Purps; Niko Schneider; Tino Schulz; Torsten Stange; Peter Uhren Max-Planck-Inst. f. Plasmaphysik Garching/Greifswald, Germany	H4B.2
16:45	Completion Phase Of Russian Gyrotron System Development In Russia <u>Leonid Popov</u> ¹ ; Yuri Belov ¹ ; Alexey Chirkov ² ; Gregory Denisov ² ; Yuri Efimov ³ ; Anatoly Ereemeev ² ; Alexander Litvak ² ; Vladimir Malygin ² ; Vadim Miasnikov ¹ ; Evgeny Sokolov ¹ ; Elena Soluyanova ¹ ; Evgeny Tai ¹ ; Sergey Usachev ¹ ; Igor Roy ⁴ ¹ Gycom Ltd., Russian Federation; ² Institute of applied physics, Russian Federation; ³ RTSoft, Russian Federation; ⁴ NRC Kurchatov Institute, Russian Federation	H4B.3
17:00	High Pulse Repetition Frequency Operation Of A W-band Gyro-TWA Based On A Cusp Electron Beam Source <u>Wenlong He</u> ; Craig Donaldson; Liang Zhang; Paul McElhinney; Huabi Yin; Jason Garner; Kevin Ronald; Adrian Cross; Alan Phelps University of Strathclyde, United Kingdom	H4B.4
17:15	Recent Experiments And Simulations On Gyro-TWTs With Helically Corrugated Waveguides <u>Sergey Samsonov</u> ¹ ; Alexander Bogdashov ² ; Gregory Denisov ³ ; Igor Gachev ² ; Sergey Mishakin ² ¹ Institute of Applied Physics RAS, GYCOM Ltd., Russian Federation; ² Institute of Applied Physics RAS, Russian Federation; ³ Institute of Applied Physics RAS, Nizhny Novgorod State University, Russian Federation	H4B.5

16:00 - 17:30		Sources, Detectors, and Receivers VII (H4C) Session Chair: Andreas Steiger, PTB Berlin, Germany	Auditorium 12
16:00	Photon Noise Limited Performance Over An Octave Of Bandwidth Of Kinetic Inductance Detectors For THz Astronomy <u>Juan Bueno</u> ¹ ; Ozan Yurduseven ² ; Stephen Yates ¹ ; Nuria Llobart ² ; Vignesh Murugesan ¹ ; David Thoen ¹ ; Andrey Baryshev ¹ ; Andrea Neto ¹ ; Jochem Baselmans ¹ ¹ SRON - Netherlands Institute of Space Research, Netherlands; ² Delft University of Technology, Netherlands	H4C.1	
16:15	THz Fast Detectors And THz Metadevices Based On Type-II Superconductors <u>Sara Cibella</u> ¹ ; Maria Gabriella Castellano ¹ ; Fabio Chiarello ¹ ; Alessandro Gaggero ¹ ; Ennio Giovine ¹ ; Giacomo Scalari ² ; Guido Torrioli ¹ ; roberto Leoni ¹ ¹ Istituto di Fotonica e Nanotecnologie CNR, Italy; ² institute of Quantume Electronics ETH, Switzerland	H4C.2	
16:30	Broadband And Low NEP Terahertz-Wave Detection Using Pre-Amplifier-Integrated Fermi-Level Managed Barrier Diode <u>Hiroshi Ito</u> ¹ ; Tadao Ishibashi ² ¹ Kitasato University, Japan; ² NTT Electronics Techno, Japan	H4C.3	
16:45	Sub-THz Zero-bias Detector With High Performances Based On Heterostructure Low Barrier Diode <u>Salman Nadar</u> ¹ ; Mohammed Zaknoue ² ; Xavier Wallart ³ ; Christophe Coinon ⁴ ; Emilien Peytavit ¹ ; Guillaume Ducournau ¹ ; Florent Gamand ⁵ ; Matthieu Werquin ⁵ ; Christophe Gaquiere ⁴ ; Jean-François Lampin ¹ ¹ Terahertz Photonics Group, IEMN, UMR CNRS 8520, Lille1 University, France; ² Anode Groupe, IEMN, UMR CNRS 8520, Lille1 University, France; ³ IEMN, UMR CNRS 8520, Lille1 University, France; ⁴ IEMN, UMR CNRS 8520, Lille1 University, France; ⁵ MC2-Technologie, France	H4C.4	
17:00	Single Photon Detection Of Terahertz Waves And Its Applications (Keynote Talk) <u>Kenji Ikushima</u> Tokyo University of A & T, Japan	H4C.5	
16:00 - 17:30		MMW and submillimeter wave systems II (H4D) Session Chair: Aydin Babakhani, Rice University, USA	Room 20
16:00	Initial Measurements With WM164 (1.1-1.5THz) VNA Extenders <u>Daniel Koller</u> ; Steven Durant; Cliff Rowland; Eric Bryerton; Jeffrey Hesler Virginia Diodes, Inc., United States	H4D.1	
16:15	A Compact Electronically Tunable 282 GHz High-Power Transmitter <u>Eric Bryerton</u> ; Jeffrey Hesler Virginia Diodes, Inc., United States	H4D.2	
16:30	Novel Communication Paradigms At MmWaves For 5G (Keynote Talk) <u>Harish Krishnaswamy</u> Columbia University, United States	H4D.3	
17:00	Pathfinder - A High Resolution 220 GHz Imaging Radar Providing Phenomenological Data For Security Scanner Development <u>David Macfarlane</u> ¹ ; Duncan Robertson ¹ ; Tomas Bryllert ² ¹ University of St Andrews, United Kingdom; ² Wasa Millimetre Wave AB, Sweden	H4D.4	
17:15	3-D High-Resolution Imaging At 240 GHz With A Single-Chip FMCW Monostatic Radar In SiGe HBT Technology <u>Janusz Grzyb</u> ; Konstantin Statnikov; Neelanjan Sarmah; Ullrich R. Pfeiffer University of Wuppertal, Germany	H4D.5	
16:00 - 17:30		Free Electron Lasers and Synchrotron Radiation I (H4E) Session Chair: George Neil, Thomas Jefferson National Accelerator Facility, USA	Room 19
16:00	Characterization Of THz Pulse Emitted From Femtosecond Electron Bunch Using Photoconductive Antenna And Interferometer <u>Koichi Kan</u> ; Jinfeng Yang; Masao Gohdo; Takafumi Kondoh; Itta Nozawa; Yoichi Yoshida The Institute of Scientific and Industrial Research (ISIR), Osaka University, Japan	H4E.1	
16:15	Ultrashort Electromagnetic Clusters Formation By Two-Stream Superheterodyne Free Electron Lasers Viktor Kulish ¹ ; Alexander Lysenko ² ; Iurii Volk ² ; <u>Oleksandr Rybalko</u> ³ ¹ National Aviation University, Ukraine; ² Sumy State University, Ukraine; ³ DTU Elektro, Denmark	H4E.2	
16:30	THz Coherent Transition Radiation At TeraFERMI: First Characterization Of THz Radiation And Electron Beam Dynamics <u>Simone Di Mitri</u> ¹ ; Andrea Perucchi ¹ ; Luca Capasso ¹ ; Paola Di Pietro ¹ ; Fabio Giorgianni ² ; Stefano Lupi ² ; Cristian Svetina ¹ ; Marco Veronese ³ ; Enrico Allaria ¹ ; Laura Badano ¹ ; Silvano Bassanese ¹ ; Maurizio Bossi ¹ ; Bruno Diviacco ¹ ; Mario Ferianis ¹ ; Eugenio Ferrari ¹ ; Giulio Gaio ¹ ; David Gauthier ¹ ; Federico Gelmetti ¹ ; Luca Giannessi ¹ ; Sandi Gruljia ¹ ; Massimo Milloch ¹ ; Giuseppe Penco ¹ ; Eleonore Rousset ¹ ; Mauro Trovò ¹ ; Claudio Serpico ¹ ¹ Elettra - Sincrotrone Trieste S.C.p.A., Italy; ² CNR-IOM, Università Roma La Sapienza, Italy	H4E.3	
16:45	Capabilities Of Coherent Spontaneous Terahertz Undulator Radiation From Short Electron Bunches <u>Vladimir Bratman</u> ¹ ; Nezah Balal ² ; Ilya Bandurkin ¹ ; Aharon Friedman ² ; Yury Lurie ² ; Andrey Savilov ¹ ¹ Institute of Applied Physics, Russian Academy of Sciences, Russian Federation; ² Ariel University, Israel	H4E.4	
17:00	Spectral Characterization Of THz Radiation From The Free Electron Laser FLARE And Its Implications For High-resolution ESR (Keynote Talk) <u>Mykhaylo Ozerov</u> ¹ ; Bence Bernath ² ; Dmytro Kamenskyi ² ; Britta Redlich ¹ ; Lex van der Meer ¹ ; Jan Kees Maan ¹ ¹ FELIX laboratory / Radboud University, Netherlands; ² HFML-EMFL / Radboud University, Netherlands	H4E.5	
17:30 - 19:00		Thursday Poster Session (H5P) Session Chairs: Peter Uhd Jepsen, Krzysztof Iwaszczuk, Morten Bache, DTU, Denmark	Congress Hall A
	Integration Of A Hole Coupler With A Turnstile For Sideband-Separation <u>Doug Henke</u> NRC Herzberg Astronomy and Astrophysics, Canada	H5P.01.01	
	Design Of A Dual Band Optical Calibration Device For ALMA Receivers <u>Daniel Montofre</u> ¹ ; Andrey Baryshev ¹ ; Fausto Patricio Mena ² ; Ronald Hesper ¹ ¹ Kapteyn Institute, Netherlands; ² DIE, Universidad de Chile, Chile	H5P.01.02	
	Possibility Of Using Near Infrared Irradiation For Prostate Cancer Imaging And Its Early Diagnosis	H5P.02.01	

Besarion Partsvania¹; Tamaz Sulaberidze¹; Gia Petriashvili¹; Alexandre Khuskvadze²; Levan Shoshiashvili³
¹Georgian Technical University, Institute of Cybernetics, Georgia; ²Tbilisi State Medical University, Georgia; ³Djavakishvili Tbilisi State University, Georgia

Study On THz Spectroscopic Characteristic Of Four DNA Nucleobases H5P.02.02

Yunfei Liu¹; Fang Wang¹; Dongbo Zhao²; Ling Jiang¹; Shuhua Li²
¹Nanjing Forestry University, China; ²Nanjing University, China

Investigation Of The Temperature Dependence Of THz Spectra Of Amino Acids Based On THz Spectroscopy And Density Functional Theory H5P.02.03

Ling Jiang¹; Jiangpin Yu¹; Chun Li²; Wenting Yi¹; Yutian Xu¹; Yunfei Liu¹
¹Nanjing Forestry University, China; ²Nanjing University, China

Characterization Of A 25 GHz Irradiation System Of Biological Samples H5P.02.04

Gian Luca Ravera; Silvio Ceccuzzi; Andrea Doria; Gian Piero Gallerano; Emilio Giovenale
ENEA, Italy

Investigation On Resonating Frequency Of Human Sweat Ducts In Normal Mode Of Operation H5P.02.05

Saroi Tripathi¹; Kodo Kawase²
¹Shizuoka University, Japan; ²Nagoya University, Japan

Alterations In Neuronal Action Potential Shape And Spiking Rate Caused By Pulsed 60 GHz Millimeter Wave Radiation H5P.02.06

Sergii Romanenko¹; Peter Siegel²; Victor Pikov³; Vincent Wallace¹
¹The University of Western Australia, Australia; ²California Institute of Technology, United States; ³Huntington Medical Research Institutes, United States

Analysis Of Exhaled Human Breath Via Terahertz Molecular Spectroscopy H5P.02.07

Ivan Medvedev¹; Robert Schueler¹; Jessica Thomas¹; Kenneth O²; Hyun-joo Nam²; Navneet Sharma²; Qian Zhong²; David Lary²; Philip Raskin³
¹Wright State University, United States; ²University of Texas at Dallas, United States; ³University of Texas Southwestern Medical Center, United States

Characterisation Of Microstructural Changes During The Hydration Of Pharmaceutical Tablets Using Terahertz Pulsed Imaging H5P.02.08

Daniel Markl; Samy Yassin; Parry Wang; J. Axel Zeitler
University of Cambridge, United Kingdom

Preliminary Study Of Different Scar Types With Terahertz Imaging H5P.02.09

Shuting Fan¹; Emma Pickwell-MacPherson²; Vincent Wallace¹
¹University of Western Australia, Australia; ²Hong Kong University of Science and Technology, Hong Kong

Diagnosing Otitis Media Using Terahertz Oscope H5P.02.10

Hyeon Sang Bark¹; Tae-In Jeon¹; Young Bin Ji²; Seung Jae Oh²; Dong Woo Park³; Sam Kyu Noh³
¹Korea Maritime and Ocean University, Korea, Republic of; ²Yonsei University College of Medicine, Korea, Republic of; ³Korea Research Institute of Standard and Science, Korea, Republic of

Dielectric Properties Of Albumin And Glucose Solutions In The THz Frequency Range H5P.02.11

Olga Cherkasova¹; Maxim Nazarov²; Alexander Shkurinov³
¹Institute of Laser Physics of SB RAS, Russian Federation; ²Crystallography and Photonics Federal Research Center, Russian Academy of Sciences 3Kurchatov Insti, Russian Federation; ³Crystallography and Photonics Federal Research Center, Russian Academy of Sciences; 4Lomonosov Mosc, Russian Federation

Small-size Wire Phantom To Study The Effect Of MMW On Nerve Fibre H5P.02.12

Simona D'Agostino¹; Fabio Di Pietrantonio¹; Massimiliano Benetti¹; Domenico Cannata¹; Marta Cavagnaro²; Dariush Sardari³; Pasquale Stano⁴; Alfonsina Ramundo-Orlando¹
¹National Research Council of Italy, Italy; ²University La Sapienza, Italy; ³Department Islamic Azad University, Science and Research Branch, Iran; ⁴Dept. Biology Roma 3 University, Italy

Investigation Of The Characteristics Of Nucleobases Using Broadband Terahertz Spectroscopy H5P.02.13

Peri Jones; Carole Tucker; Peter Ade
Cardiff University, United Kingdom

Bayesian Analysis Of Non-thermal Structural Changes Induced By Terahertz Radiation In Protein Crystals H5P.06.01

Gergely Katona¹; Ida V. Lundholm¹; Helena Rodilla²; Maria-Jose Garcia-Bonete¹; Annette Duelli¹; Weixiao Y. Wahlgren¹; Gleb Bourenkov³; Josip Vukusic²; Ran Friedman⁴; Thomas Schneider³; Jan Stake²
¹University of Gothenburg, Sweden; ²Chalmers University of Technology, Sweden; ³European Molecular Biology Laboratory Hamburg Outstation, EMBL c/o DESY, Germany; ⁴Linnaeus University, Sweden

Gyrotropy And Absorption Of DNA And Amylose At THz Frequencies H5P.06.02

Anna Semenova¹; Olga Smolanskaya²; Michael Khodzitsky²; Egor Sedykh²; Vladimir Vaks¹; Vera Balya²; Evgeniy Odlyanitskiy²
¹Institute for physics of Microstructures, Russian Federation; ²ITMO University, Russian Federation

Analysis Of Hydration In Protein Aqueous Solution Using Two-dimensional Terahertz Correlation Spectroscopy H5P.06.03

Jun Zhou; Xin Rao; Lu Duan
University of Electronic Science and Technology of China, China

Ferromagnetic Fluids Based On Semisynthetic Oils At The THz Frequency Range H5P.07.01

Grigorii Dunaevskij; Alexandra Pavlova; Valentin Suslyaev; Victor Zhuravlev; Alexander Badin
National Research Tomsk state University, Russian Federation

Terahertz Coherent Raman Spectroscopy Of Dimethyl Sulfoxide And Water Mixtures Using Frequency Chirped Pulses H5P.07.02

Shun Nakae¹; Stefan Funkner¹; Kazuko Mizuno¹; Satoshi Nagata¹; Gudrun Niehues¹; Takashi Furuya²; Hideaki Kitahara¹; Kohji Yamamoto¹; Masahiko Tani¹
¹Research Center for Development of Far-Infrared Region, University of Fukui, Japan; ²Department of Technology, University of Fukui, Japan

Assignment Of Terahertz Vibrational Mode In Sucrose Powder By Comparing With Single-crystalline And Computational Spectra H5P.07.03

Takeru Ohashi¹; Katsumi Takahashi¹; Hiroshi Sato¹; Hiromitsu Takaba²

¹ IHI Corporation, Japan; ² Kogakunin University, Japan	
Infrared Spectroscopy Of Water Molecules In Porous Coordination Polymer	H5P.07.04
<u>Tomoaki Ichii</u> ¹ ; Takashi Arikawa ¹ ; Hiroshi Sato ² ; Susumu Kitagawa ³ ; Koichiro Tanaka ¹ ¹ Department of Physics, Kyoto University, Japan; ² Department of Chemistry and Biotechnology, The University of Tokyo, Japan; ³ Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University, Japan	
Terahertz Absorption Analysis Of Fish Lipid Oxidation Using Quantum Chemical Calculation	H5P.07.05
<u>Toshiyuki Miyazaki</u> ¹ ; Yuuichirou Akamatsu ² ¹ Hokkaido Research Organization, Japan; ² Hokkaido University, Japan	
Terahertz Pump -- Terahertz Probe System At Novosibirsk Free Electron Laser: Commissioning And Results Of First Experiments	H5P.07.06
<u>Boris Knyazev</u> ¹ ; Yulia Choporova ¹ ; Heinz-Wilhelm Hübers ² ; Vladimir Ovchar ¹ ; Roman Zhukavin ³ ; Harald Schneider ⁴ ; Gennady Kulipanov ¹ ; Valery Shastin ⁵ ; Nikolay Abrosimov ⁶ ; Oleg A. Shevchenko ⁷ ; Nikolay Vinokurov ⁷ ; Vasily Gerasimov ⁷ ; Sergey Sergeev ⁸ ; Konstantin Kovalevsky ⁸ ¹ Budker Institute of Nuclear Physics SB RAS, Russian Federation; ² Humboldt-Universitaet zu Berlin, Germany; ³ Institute for Physics of Microstructures RAS, Russian Federation; ⁴ Helmholtz-Zentrum Dresden-Rossendorf, Germany; ⁵ Institute for Physics of Microstructures, Russian Federation; ⁶ Leibniz Institute of Crystal Growth, Germany; ⁷ Budker Institute of nuclear physics, Russian Federation; ⁸ Institute for Physics of Microstructures, Russian Federation	
Terahertz Spectroscopic Characterization For Carbon-based Materials	H5P.07.07
<u>Hao Zhang</u> ; Josip Horvat; Roger A. Lewis School of Physics and Institute for Superconducting & Electronic Materials, University of Wollongong, Australia	
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<u>Jessica Mabin</u> ; Eman Alghamdi; Chris Hodges; Simon Freakley; Stephen Lynch Cardiff University, United Kingdom	
Multilayer Extraction Of Complex Refractive Index In Broadband Transmission Terahertz Time Domain Spectroscopy	H5P.07.09
<u>Nicholas Greenall</u> ; Lianhe Li; Edmund H. Linfield; A. Giles Davies; John Cunningham; Andrew Burnett University of Leeds, United Kingdom	
THz Waveguide Sensor For Small Volume Liquid Samples	H5P.07.10
<u>Amin Soltani</u> ¹ ; Hamidreza Neshasteh ² ; Amideddin Mataji-Kojouri ² ; Norman Born ¹ ; Jan Balzer ¹ ; Mahmoud Shahabadi ² ; Enrique Castro-Camus ³ ; Martin Koch ¹ ¹ Philipps University of Marburg, Germany; ² School of Electrical and Computer Engineering, University of Tehran, Tehran, Iran, Iran; ³ Centro de Investigaciones en Optica A.C., Loma del Bosque 115, Lomas del Campestre, Leon GTO, Mexico, Mexico	
Design Of THz Setup In The Restricted Geometry Available In High-field Magnets	H5P.07.11
<u>Bence Bernath</u> ¹ ; Mykhaylo Ozerov ² ; Dmytro Kamenskyi ¹ ; Hans Engelkamp ¹ ; Peter Christianen ¹ ; Britta Redlich ² ; Alexander van der Meer ² ; Jan Kees Maan ² ¹ High Field Magnet Laboratory, Netherlands; ² FELIX laboratory, Netherlands	
Uncertainty Analysis For Attenuated Total Reflection THz-TDS	H5P.07.12
<u>Amin Soltani</u> ¹ ; David Jahn ¹ ; Enrique Castro-Camus ² ; Martin Koch ¹ ; Withawat Withayachumnankul ³ ¹ Philipps University of Marburg, Germany; ² Centro de Investigaciones en Optica A.C., Loma del Bosque 115, Lomas del Campestre, Leon GTO, Mexico, Mexico; ³ School of Electrical and Electronic Engineering, The University of Adelaide, Adelaide, SA 5005, Aust, Australia	
Photonic-Crystal Based Enhancement Of Terahertz Spectroscopy In Microfluidic Cells	H5P.07.13
<u>Andreas K. Klein</u> ; Jonathan M. Hammler; Dagou Zeze; Claudio Balocco; Andrew J. Gallant Durham University, United Kingdom	
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David Jahn ¹ ; <u>Amin Soltani</u> ¹ ; Jan Balzer ¹ ; Martin Koch ¹ ; Withawat Withayachumnankul ² ¹ Philipps University of Marburg, Germany; ² School of Electrical and Electronic Engineering, The University of Adelaide, Adelaide, SA 5005, Aust, Australia	
Combining THz-FTIR And THz-TDS To Study Alcohol Aqueous Solutions	H5P.07.15
<u>Katsuyoshi Aoki</u> ; Fabian Böhm; Claudius Hoberg; Gerhard Schwaab; Janne Savolainen; Martina Havenith Ruhr-University Bochum, Germany	
Large Gain Of Gaseous Ammonia Near 1 THz	H5P.07.16
<u>Martin Micica</u> ¹ ; Mathias Vanwolleghem ² ; Antoine Pagies ² ; Kamil Postava ³ ; Jaromir Pistora ³ ; Jean-François Lampin ² ¹ VSB - Technical University of Ostrava, CZ; IEMN, Lille 1 University, FR, Czech Republic; ² IEMN, Lille 1 University, France; ³ VSB - Technical University of Ostrava, Czech Republic	
Development Of A Millimeter Wave Pulsed ESR System By Using A Gyrotron As A Light Source	H5P.07.17
<u>Seitaro Mitsudo</u> ; Chihiro Umegaki; Kenshi Hiiragi; Muu Narioka; Yoshinori Tatematsu University of Fukui, Japan	
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<u>Ingrid Wilke</u> ; Michael Aldersley; Prakash Joshi Rensselaer Polytechnic Institute, United States	
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<u>Miguel Navarro-Cia</u> ¹ ; Jiang Wu ² ; Huiyun Liu ² ; Oleg Mitrofanov ² ¹ University of Birmingham, United Kingdom; ² University College London, United Kingdom	
Progress On The Upgrade Of The TCV EC-system With Two 1MW Dual-frequency Gyrotrons	H5P.16.02
<u>Stefano Alberti</u> ¹ ; Jérémy Genoud ¹ ; Timothy Goodman ¹ ; Jean-Philippe Hogge ¹ ; Miguel Silva ¹ ; Trach-Minh Tran ¹ ; Minh Quang Tran ¹ ; Konstantinos Avramidis ² ; Ioannis Pagonakis ² ; Jianbo Jin ² ; Stefan Illy ² ; Gerd Gantenbein ² ; John Jelonnek ² ; Manfred Thumm ² ; William Bin ³ ; Saul Garavaglia ³ ; Alessandro Moro ³ ; Virgile Hermann ⁴ ; Francois Legrand ⁴ ; Yoann Rozier ⁴ ¹ Ecole Polytechnique Fédérale de Lausanne, Switzerland; ² Karlsruhe Institute of Technology, Germany; ³ Institute of Plasma Physics, CNR-Milano, Italy, Italy; ⁴ Thales Electron Devices, France, France	
Transmission Test Of 300 GHz Band Gyrotron Power By Corrugated Waveguides	H5P.16.03
<u>Teruo Saito</u> ¹ ; Yuusuke Yamaguchi ¹ ; Yoshinori Tatematsu ¹ ; Takumi Hirobe ¹ ; Jun Kasa ¹ ; Kunizo Ohkubo ¹ ; Shin Kub ² ; Takashi	

Shimozuma ² ; Kenji Tanaka ² ; Masaki Nishiura ³ ; Masafumi Fukunari ¹ ¹ University of Fukui, Japan; ² National Institute for Fusion Science, Japan; ³ The University of Tokyo, Japan	
Tunable Graphene Surface Plasmon Waveguide With Efficient Interference Suppression	H5P.16.04
<u>Yan Liu</u> ; Renbin Zhong; Hong Ding; Shenggang Liu Terahertz Research Center, School of Physical Electronics, University of Electronic Science and Tech, China	
A Wide-Band Three-Dimensional Submillimeter-Wave Imaging System Based On Vector Network Analyzer	H5P.16.05
<u>Zive Wang</u> ; Lingbo Qiao; Yingxin Wang; Ziran Zhao Tsinghua University, China	
Phase Center Estimation And Correction Of Multi-path Effects For The Calibration Of Mm-wave Antennas	H5P.16.06
<u>Thomas Kleine-Ostmann</u> ; David Ulm; Thorsten Schrader Physikalisch-Technische Bundesanstalt, Germany	
THz Pulse Propagation According To Surface Conditions Of Curved Two-wire Lines	H5P.16.07
<u>Tae-In Jeon</u> ¹ ; Jingshu Zha ¹ ; Geun Kim ² ¹ Korea Maritime and Ocean University, Korea, Republic of; ² Korea Electrotechnology Research Institute, Korea, Republic of	
MM-Wave Dispersion Characteristics Of A Nonlinear Transmission Line Measured By Electrooptic Sampling	H5P.16.08
<u>Mehran Jamshidifar</u> ; Gunnar Spickermann; Peter Haring Bolivar Institute of High Frequency and Quantum Electronics, University of Siegen, Germany, Germany	
Calibration Of A Circularly Polarized Horn Antenna In The Frequency Range From 220 To 330 GHz	H5P.16.09
<u>Katsumi Fujii</u> ; Akifumi Kasamatsu National Institute of Information and Communications Technology, Japan	
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<u>Nannan Wang</u> ; Liqing Wang; Jinghui Qiu; Alexander Denisov Harbin Institute of Technology, China	
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<u>Sergey Mishakin</u> ; Sergey Samsonov; Alexander Bogdashov; Gregory Denisov Institute of Applied Physics, Russian Federation	
Terahertz Monolithic Integrated Circuits (TMICs) Array Antenna Technology On GaN-on-Low Resistivity Silicon Substrates	H5P.16.12
<u>Bhavana Benakaprasad</u> ¹ ; Abdalla Eblabla ¹ ; Xu Li ¹ ; Iain Thayne ¹ ; David Wallis ² ; Ivor Guiney ² ; Colin Humphreys ² ; Khaled Elgaied ¹ ; Bhavana Benakaprasad ¹ ¹ University of Glasgow, United Kingdom; ² University of Cambridge, United Kingdom	
Novel 50-70 GHz Compact PCB Leaky-Wave Antenna With High Broadside Efficiency And Low Return Loss	H5P.16.13
<u>Matthias Steeg</u> ; Beshar Khani; Vitaly Rymanov; Andreas Stöhr University of Duisburg-Essen, Germany	
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<u>Dong-Joon Lee</u> ; Seok Kim; Du-Ri Song; Young-Pyo Hong Korea Research Institute of Standards and Science, Korea, Republic of	
Corrugated Tapered Slot Antenna For The W Band	H5P.16.15
<u>Claudio Jarufe</u> ; Fausto Patricio Mena; Nicolas Reyes; Leonardo Bronfman Universidad de Chile, Chile	
Challenges Of WM164 S-Parameter Measurements Due To Flange Dimensional Tolerances	H5P.16.16
<u>Daniel Koller</u> ¹ ; Steven Durant ¹ ; Eric Bryerton ¹ ; Jeffrey Hesler ¹ ; Alex Arsenovic ² ¹ Virginia Diodes, Inc., United States; ² contractor, United States	
High Gaussicity Feedhorns For Sub- / Millimeter Wave Applications	H5P.16.17
<u>Duncan Robertson</u> ¹ ; Johannes McKay ² ; Robert Hunter ¹ ; Peter Speirs ³ ; Graham Smith ¹ ¹ University of St Andrews, United Kingdom; ² National High Magnetic Field Lab, United States; ³ Ecole Polytechnique de Lausanne, Switzerland	
Implications Of Polarization Impurity On Diversity For 5G Networks	H5P.16.18
<u>Nicholas Lawrence</u> ; Hedley Hansen; Derek Abbott University of Adelaide, Australia	
IR Fresnel Zone Plate Lenses Based On Quasi-Spiral THz Antennas	H5P.16.19
Inigo Ederra; <u>Alicia Elena Torres</u> Universidad Pública de Navarra, Spain	
Experimental Analysis Of THz Receiver Performance In 80 Gbit/s Communication System	H5P.17.02
Shi Jia ¹ ; <u>Xianbin Yu</u> ² ; Hao Hu ³ ; Jinlong Yu ⁴ ; Toshio Morioka ³ ; Peter Uhd Jepsen ³ ; Leif Oxenløwe ³ ¹ School of Electronic Information Engineering, Tianjin University, China; DTU Fotonik, Technical Univ, Denmark; ² DTU Fotonik, Technical University of Denmark; College of Information Science and Electronic Engineer, Denmark; ³ DTU Fotonik, Technical University of Denmark, DK-2800, Kgs. Lyngby, Denmark, Denmark; ⁴ School of Electronic Information Engineering, Tianjin University, Tianjin 300072, China, China	
Demonstration Of Short-Range Terahertz Radar Using High-Gain Leaky-Wave Antenna	H5P.17.03
<u>Kosuke Murano</u> ¹ ; Issei Watanabe ² ; Akifumi Kasamatsu ² ; Safumi Suzuki ³ ; Masahiro Asada ³ ; Withawat Withayachumnankul ⁴ ; Toshiyuki Tanaka ¹ ; Yasuaki Monnai ¹ ¹ Keio University, Japan; ² National Institute of Information and Communications Technology, Japan; ³ Tokyo Institute of Technology, Japan; ⁴ The University of Adelaide, Australia	
THz Pulse Propagation Through 910m Distance In Atmosphere	H5P.17.04
<u>Tae-In Jeon</u> ¹ ; Gyeong-Ryul Kim ¹ ; Daniel Grischkowsky ² ¹ Korea Maritime and Ocean University, Korea, Republic of; ² Oklahoma State University, United States	
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<u>Shunichi Futatsumori</u> ; Kazuyuki Morioka; Akiko Kohmura; Kunio Okada; Naruto Yonemoto	

Electronic Navigation Research Institute, Japan

- OFDM Millimeter-Wave Radar Experiment Combined With Radio Over Fiber Technology** H5P.17.06
Toshimasa Umezawa¹; Kunihisa Jitsuno²; Atsushi Kanno³; Kouichi Akahane³; Naokatsu Yamamoto¹; Tetsuya Kawanishi²
¹National Institute Information and Communications Technology, Japan; ²Waseda University, Japan; ³National Institute Information and Communications Technology,, Japan
- THz Sliced Broadband Continuum For Wireless Data Transfer With CdSe--CdS Modulator** H5P.17.07
Yaroslav Grachev¹; Xinrui Liu¹; Anton Tsyppin¹; Sergey Putilin¹; Victor Bespalov¹; Sergei Kozlov¹; Xi-Cheng Zhang²
¹ITMO University, Russian Federation; ²University of Rochester, United States
- Compact Direct Detection Schottky Receiver Modules For Sub-Terahertz Wireless Communications** H5P.17.08
Robinson Guzman¹; Guillaume Ducournau²; Luis Enrique Garcia¹; Daniel Segovia¹; Oleg Cojocari³; Guillermo Carpintero¹
¹UC3M, Spain; ²IEMN - Univ Lille 1, France; ³ACST, Germany
- Study Of Parasitic Oscillations In Gyrotron Beam Tunnels** H5P.21.01
George Latsas; Anastasios Zisis; Ioannis Chelis; Ioannis Tigelis
National and Kapodistrian University of Athens, Greece
- Gyrotron Output Frequency And Power Stabilization By PID Feedback Control On The Acceleration And Anode Voltages** H5P.21.02
Eduard Khutoryan¹; Toshitaka Idehara¹; Yoshinori Tatematsu¹; Yuusuke Yamaguchi¹; Aleksei Kuleshov²; Yoh Matsuki³; Toshimichi Fujiwara³
¹Research Center for Development of Far-Infrared Region, University of Fukui (FIR UF), Japan; ²O. Ya.Usikov Institute for Radiophysics and Electronics IRE NASU, Ukraine; ³Institute of Protein Research, Osaka University, Japan
- Start-up Scenario Of A High-power Pulsed Gyrotron For 300 GHz Band Collective Thomson Scattering Diagnostics In The Large Helical Device** H5P.21.03
Teruo Saito¹; Yoshinori Tatematsu¹; Yuusuke Yamaguchi¹; Olgerts Dumbrajs²
¹University of Fukui, Japan; ²Institute of Solid State Physics, University of Latvia, Latvia
- Initial Results Of 95 GHz Gyrotron With Water Cooled Magnet** H5P.21.04
Moritz Pilosof; Moshe Einat
Ariel University, Israel
- A High-Pass Filter System For Measuring The Spectrum Of Low-Repetition Rate Or Single Pulse THz Sources** H5P.21.05
Alexey Palitsin¹; Mikhail Glyavin¹; Mikhail Goykhan¹; Alexander Gromov¹; Alexander Panin²; Yuri Rodin¹; Sergey Fil'chenkov¹
¹Institute of Applied Physics of the Russian Academy of Sciences, Russian Federation; ²Institute of Physics of Microstructures of the Russian Academy of Sciences, Russian Federation
- High-Harmonic Terahertz Gyrotrons Based On The Use Of Quasi-Regular Cavities With Short Wave Phase Correctors** H5P.21.06
Andrey Savilov¹; Ilya Bandurkin¹; Yuriy Kalynov²; Ivan Osharin¹
¹Institute of Applied Physics, Russian Federation; ²Institute of Applied Physics, Russian Federation
- Silicon Field Emitters With Two-Layer Metal-Fullerene Coatings For Diagnostic Gyrotrons** H5P.21.08
Gennadi Sominski; Evgeny Taradaev; Tatiana Tumareva
Peter the Great Saint-Petersburg Polytechnic University, Russian Federation
- Measurement Of A High Gaussian-content Corrugated Horn For A W-band Gyro-TWA** H5P.21.09
Liang Zhang; Paul McElhinney; Craig W. Donaldson; Wenlong He; Alan D.R. Phelps; Adrian W. Cross
University of Strathclyde, United Kingdom
- Frequency-Tunable, Terahertz Gyrotron For The Direct Measurement Of The Transition Of Positronium** H5P.21.10
Tsun-Hsu Chang¹; Toshitaka Idehara²
¹National Tsing Hua University, Taiwan; ²University of Fukui, Japan
- Linear And Nonlinear Analysis Of TM Modes For Gyrotron Operation** H5P.21.11
Tsun-Hsu Chang; Bo-Yuan Su
National Tsing Hua University, Taiwan
- Influence Of Thermal-insulation Structure Of Thermionic Cathode On Oscillation Efficiency Of A Sub-THz Gyrotron** H5P.21.12
Yuusuke Yamaguchi; Yoshinori Tatematsu; Teruo Saito
FIR Center, University of Fukui, Japan
- Frequency Tunability In Both 200 And 400 GHz Bands Realized In Gyrotrons FU CW GIV And FU CW X** H5P.21.13
Yoshinori Tatematsu; Yuusuke Yamaguchi; Masaki Kotera; Teruo Saito
University of Fukui, Japan
- Investigation Of A Broadband Double-disc Diamond Window Unit** H5P.21.14
Alessandro Vaccaro¹; Andreas Meier¹; Joerg Stober²; Dietmar Wagner²; Theo Scherer¹
¹Karlsruhe Institute of Technology, Germany; ²Max-Planck-Institut fuer Plasmaphysik, Germany
- Endurance Of The Highly Heat-stressed Units Exposed To Cycling Loading In 1MW/170GHz CW Gyrotron For ITER** H5P.21.15
Leonid Popov; Vadim Miasnikov; Vadim Nichiporenko; Sergey Usachev; Yuri Yashnov
Gycom Ltd., Russian Federation
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Maria Melnikova¹; Andrey Rozhnev¹; Nikita Ryskin¹; Teruo Saito²; Yoshinori Tatematsu²; Yuusuke Yamaguchi²
¹Saratov State University, Russian Federation; ²University of Fukui, Japan
- Mutual Phase Locking Of Two Gyrotrons Coupled With Delay** H5P.21.17
Asel Adilova; Svetlana Gerasimova; Nikita Ryskin
Saratov State University, Russian Federation
- Simulations Of The Experimental Operation Of The EU 170 GHz, 1 MW Short-Pulse Prototype Gyrotron For ITER** H5P.21.18
Konstantinos Avramidis¹; Ioannis Pagonakis¹; Ioannis Chelis²; Gerd Gantenbein¹; Zisis Ioannidis¹; Dimitrios Peponis²; Tomasz Rzesnicki¹; John Jelonnek¹
¹Karlsruhe Institute of Technology, Germany; ²National and Kapodistrian University of Athens, Greece
- A New Microwave Diagnostics Of Electron Beam In Gyrotrons** H5P.21.19
Natalia Kolmakova; Oleg Louksha; Gennadi Sominski; Pavel Trofimov

Peter the Great St. Petersburg Polytechnic University, Russian Federation	
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<u>Oleg Louksha</u> ; Pavel Trofimov Peter the Great St. Petersburg Polytechnic University, Russian Federation	
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<u>Jason Garner</u> ; Liang Zhang; Craig Donaldson; Adrian Cross; Alan Phelps; Wenlong He University of Strathclyde, United Kingdom	
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<u>Qianzhong Xue</u> ; Gaofeng Liu; Wei Gu Key Laboratory of High Power Microwave Sources and Technologies, Institute of Electronics, Chinese, China	
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<u>Ioannis Tigelis</u> ¹ ; Dimitrios Peponis ¹ ; Zisis Ioannidis ² ; Konstantinos Avramidis ² ¹ Faculty of Physics, National and Kapodistrian University of Athens, Greece; ² Institute for Pulsed Power and Microwave Technology, Karlsruhe Institute of Technology, Germany	
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<u>Chien-Lun Hung</u> ; Deng-Ci Yang National Penghu University of Science and Technology, Taiwan	
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<u>Vladimir Zapevalov</u> IAP RAS, Russian Federation	
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<u>Ioannis Pagonakis</u> ; Guenter Dammertz; Gerd Gantenbein; Stefan Illy; Bernhard Piosczyk; Manfred Thumm; Jianghua Zhang; John Jelonnek Karlsruhe Institute of Technology, Germany	
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Eduard Khutoryan ¹ ; Toshitaka Idehara ¹ ; Maria Melnikova ² ; Andrey Rozhnev ² ; <u>Nikita Ryskin</u> ² ¹ FIR Fukui University, Japan; ² Saratov State University, Russian Federation	
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<u>Nikolai Peskov</u> ¹ ; Naum Ginzburg ¹ ; Andrey Savilov ¹ ; Vladislav Zaslavsky ¹ ; Giuseppe Dattoli ² ; Ivan Spassovskiy ² ; Mikhail Glyavin ¹ ; Emanuele Palma ² ; Silvio Ceccuzzi ² ; Francesco Mirizzi ² ; Gian Luca Ravera ² ¹ Institute of Applied Physics RAS, Russian Federation; ² ENEA, Italy	
Measurement Of Polarization Properties Of ECRH Polarizers At 170 GHz	H5P.21.30
<u>Sudheer Jawa</u> ¹ ; Hannah Hoffmann ¹ ; Michael Shapiro ¹ ; Richard J. Temkin ¹ ; Gregory Hanson ² ¹ Massachusetts Institute of Technology, United States; ² Oak Ridge National Laboratory, United States	
Effective Compression Of Photo-Injector Electron Bunches In The Negative-Mass Undulators	H5P.22.01
<u>Andrey Savilov</u> ; Ilya Bandurkin; Ilya Kurakin Institute of Applied Physics, Russian Federation	
Robust, High Quantum Efficiency, Long-life Photocathodes	H5P.22.02
<u>Lawrence Ives</u> ¹ ; Eric Montgomery ² ; Lou Falce ¹ ; George Collins ¹ ; David Marsden ¹ ; Rasul Karimov ¹ ; Thuc Bui ¹ ¹ Calabazas Creek Research, Inc., United States; ² University of Maryland, United States	
Full-wave Numerical Modeling Of An Infrared Free Electron Laser Using FDTD/PIC	H5P.22.03
<u>Arva Fallahi</u> ; Alireza Yahaghi; Franz X. Kärtner DESY-Center for Free Electron Laser Science, Germany	
Millimeter-Wave Receiver Design For Plasma Diagnostics	H5P.26.01
<u>Frank Leipold</u> ¹ ; Asger Schou Jacobsen ¹ ; Thomas Jensen ¹ ; Martin Jessen ¹ ; Søren Bang Korsholm ¹ ; Stefan Nielsen ¹ ; Jesper Rasmussen ¹ ; Mirko Salewski ¹ ; Morten Stejner ¹ ; Frank Leipold ² ; Soeren Hansen ¹ ¹ Danish Technical University, Denmark; ² Technical University of Denmark, Denmark	
Velocity-space Tomography Of Fusion Plasmas By Collective Thomson Scattering Of Gyrotron Radiation	H5P.26.02
<u>Mirko Salewski</u> ¹ ; Asger Schou Jacobsen ¹ ; Thomas Jensen ¹ ; Søren Bang Korsholm ¹ ; Frank Leipold ¹ ; Jens Madsen ¹ ; Dmitry Moseev ² ; Stefan Kragh Nielsen ² ; Jesper Rasmussen ² ; Morten Stejner ¹ ¹ Technical University of Denmark, Denmark; ² Max-Planck Institute for Plasma Physics, Greifswald, Germany	
From FIR And Millimeter Waves To THz Plasma Diagnostics Applications	H5P.26.03
<u>Marco Zerbin</u> ; Francesca Bombarda; Andrea Doria; Giuseppe Galatola-Teka; Emilio Giovenale ENEA Frascati, Italy	
Proof Of Principle Of Electron Cyclotron Emission As A Complementary Diagnostic For The Plasma Position	H5P.26.04
<u>Chris Rapson</u> ; Rainer Fischer; Anja Gude; Severin Denk; Matthias Willensdorfer; Wolfgang Treutterer; the ASDEX Upgrade Team; Louis Giannone Max Planck Institute of Plasma Physics, Germany	
High Power Microwave Diagnostic For The Fusion Energy Experiment ITER	H5P.26.05
<u>Søren Bang Korsholm</u> ¹ ; Frank Leipold ² ; Bruno Gonçalves ³ ; Heidi Gutierrez ² ; Thomas Jensen ² ; Martin Jessen ² ; Esben Klinkby ² ; Axel Larsen ² ; Volker Naulin ² ; Stefan Nielsen ² ; Erik Nonbøl ² ; Jesper Rasmussen ² ; Mirko Salewski ² ; Morten Stejner ² ; Arianna Taormina ² ; Paco Sanchez ⁴ ; Laura Sanchez ⁴ ; Johan Oosterbeek ⁵ ¹ Technical University of Denmark, Denmark; ² DTU, Denmark; ³ IST, Portugal; ⁴ Fusion for Energy, Spain; ⁵ Eindhoven University of Technology, Netherlands	
Measuring Main-ion Temperatures In ASDEX Upgrade Using Scattering Of ECRH Radiation	H5P.26.06
<u>Morten Steiner</u> ¹ ; Stefan Nielsen ¹ ; Asger Schou Jacobsen ¹ ; Søren Bang Korsholm ¹ ; Frank Leipold ¹ ; Rachael McDermott ² ; Jesper	

Rasmussen¹; Mirko Salewski¹; Martin Schubert²; Joerg Stober²; Dietmar Wagner²
¹Technical University of Denmark, Denmark; ²Max-Planck-Institut für Plasmaphysik, Germany

Friday, 30 September 2016

08:15 - 08:30	Closing Ceremony	Plenary Auditorium 10/11/12
08:30 - 10:00	Friday Plenary Session Session Chair: Gun-Sik Park, Seoul National University, Korea	Plenary Auditorium 10/11/12
08:30	Past, Present, And Future Of Infrared And THz Activities In China <u>Yiming Zhu</u> ; Songlin Zhuan University of Shanghai for Science and Technology, China	F1.1
09:15	Terahertz Driven Linear Accelerators And Photon Sources <u>Franz X. Kärtner</u> DESY and University of Hamburg, Germany	F1.2
11:00 - 12:30	Spectroscopy of Gases, Liquids and Solids II (F2A) Session Chair: Rohit Prasankumar, Los Alamos National Laboratory, USA	Auditorium 10
11:00	Vibrational Contrast Imaging And Nanospectroscopy Of Single Cell Membranes By Mid-IR Resonantly-enhanced Mechanical Photoexpansion (Keynote Talk) <u>Valeria Giliberti</u> ¹ ; Michela Badioli ² ; Leonetta Baldassarre ² ; Alessandro Nucara ² ; Paolo Calvani ² ; Eglof Ritter ³ ; Ljiljana Puskar ⁴ ; Peter Hegemann ³ ; Ulrich Schade ⁴ ; Michele Ortolani ² ¹ Istituto Italiano di Tecnologia, Italy; ² Department of Physics, Sapienza University of Rome, Italy; ³ Humboldt-Universität zu Berlin, Institut für Biologie, Germany; ⁴ Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Germany	F2A.1
11:30	THz-Induced Kerr Effect In Polar Liquids <u>Peter Zalden</u> ¹ ; Xiaojun Wu ² ; Liwei Song ² ; Haoyu Huang ² ; Oliver Mücke ² ; Christian Bressler ¹ ; Franz X. Kärtner ² ¹ XFEL, Germany; ² DESY, Germany	F2A.2
11:45	Dependence Of Water Relaxation Dynamics On Lipid Structure <u>Kihoon Eom</u> ; Jung-Min Jang; Jin-Young Jeong; Yuncheol Yang; Da-Hye Choi; Heyjin Son; In-Kyoung Park; Seonmyeong Kim; Gun-Sik Park Seoul National University, Korea, Republic of	F2A.3
12:00	A Cw-Terahertz Gas Analysis System With ppm Detection Limits <u>Christian Hepp</u> ¹ ; Stephan Luettjohann ¹ ; Axel Roggenbuck ² ; Anselm Deninger ² ; Simon Nellen ³ ; Thorsten Göbel ³ ; Michael Joerger ¹ ; Roland Harig ¹ ¹ Bruker Optik GmbH, Germany; ² TOPTICA Photonics AG, Germany; ³ Fraunhofer Heinrich-Hertz Institute, Germany	F2A.4
12:15	Red-Shift In THz Resonant Signatures Induced By Hydration Variation <u>W-D. Zhang</u> ; Elliott Brown Wright State University, United States	F2A.5
11:00 - 12:30	Protein Dynamics and Molecular Spectroscopy (F2B) Session Chair: Andrea Markelz, SUNY Buffalo, USA	Auditorium 11
11:00	Measuring Protein Elasticity With Terahertz Spectroscopy <u>Michael Ruggiero</u> ¹ ; <u>Timothy Korter</u> ² ¹ University of Cambridge, United Kingdom; ² Syracuse University, United States	F2B.1
11:15	THz Near-field Spectroscopy Of Proteins: Towards Detection Of Long-range Electrodynamic Interactions <u>Jeremie Torres</u> ¹ ; Mathias Lechellon ² ; Ilaria Nardecchia ² ; Luca Varani ³ ; Irene Donato ⁴ ; Matteo Gori ⁴ ; Marco Pettini ⁴ ¹ University of Montpellier, France; ² Centre d'Immunologie de Marseille-Luminy, INSERM-U1104 -- Universit'e Aix-Marseille -- 13288 Marsei, France; ³ Institut d'\electronique et des Syst\emes -- Universit'e de Montpellier, France; ⁴ Centre de Physique Théorique de Marseille, France	F2B.2
11:30	Anisotropic Absorption Measurements Reveal Protein Dynamical Transition In Intramolecular Vibrations (Keynote Talk) <u>Mengyang Xu</u> ¹ ; Katherine Niessen ¹ ; Yanting Deng ¹ ; Nigel Michki ¹ ; Edward Snell ² ; <u>Andrea Markelz</u> ¹ ¹ SUNY Buffalo, United States; ² Hauptman Woodward Medical Research Institute, United States	F2B.3
12:00	Time-Resolved Studies Using FTIR Spectrometers: Molecular Dynamics At Phase Transitions <u>Martin Dressel</u> ; Tobias Peterseim Universität Stuttgart, Germany	F2B.4
12:15	Structure Resonance Energy Transfer From EM Wave To Rod-like Virus <u>Chi-Kuang Sun</u> ¹ ; Yi-Chun Tsai ¹ ; Chuan-Liang Kao ¹ ; Han-Ching Wang ² ; Chu-Fang Lo ¹ ; Yi-Jan Chen ¹ ¹ National Taiwan University, Taiwan; ² National Cheng Kung University, Taiwan	F2B.5
11:00 - 12:30	Sources, Detectors, and Receivers VIII (F2C) Session Chair: Nuria Llombart-Juan, Delft University of Technology, the Netherlands	Auditorium 12
11:00	Broadband 0.03-1.032THz Signal Generation And Radiation Based On A Fully-Integrated 4x2 Impulse Radiating Array In 90nm SiGe BiCMOS M. Mahdi Assefzadeh; <u>Aydin Babakhani</u> Rice University, United States	F2C.1
11:15	Higher Power Multipliers For Terahertz Sources <u>Thomas Crowe</u> ; Jeffrey Hesler; David Kurtz; Steven Retzliff Virginia Diodes, Inc., United States	F2C.2
11:30	Bridging The Terahertz-Gap Using High-Tc Superconducting Emitters With Coherent And Continuous Electromagnetic Wave (EMW) Radiation (Keynote Talk) <u>Kazuo Kadowaki</u> ¹ ; Chiharu Watanabe ¹ ; Kurama Nakade ¹ ; Yoshihiko Saiwai ¹ ; Hiroyuki Kubo ¹ ; Kazuki Sakamoto ¹ ; Takanari Kashiwagi ¹ ; Takuya Katsuragawa ¹ ; Taiga Tanaka ¹ ; Takumi Yuasa ¹ ; Yuki Komori ¹ ; Manabu Tsujimoto ¹ ; Takanari Kashiwagi ¹ ; Hidetoshi Minami ¹ ; Takashi Yamamoto ² ; Richard Klemm ³ ¹ University of Tsukuba, Japan; ² Univ. of Ulm, Germany; ³ Univ. Central Florida, United States	F2C.3

12:00 **Developments Of The Pinned Photodiode Terahertz Rectifier** **F2C.4**
Fabrizio Palma¹; Vohla Varlamava¹; Giovanni De Amicis²; Andrea Del Monte²; Rosario Rao¹
¹Università di Roma La sapienza, Italy; ²LFoundry, Italy

12:15 **5.2-THz Single-Mode Lasing In Current-Injection Distributed-Feedback Dual-Gate Graphene-Channel Field-Effect Transistor** **F2C.5**
 Gen Tamamushi¹; Takayuki Watanabe¹; Alexander Dubinov²; Hiroyuki Wako¹; Akira Satou¹; Tetsuya Suemitsu¹; Maxim Ryzhii³; Victor Ryzhii¹; Taiichi Otsuji¹
¹Tohoku University, Japan; ²Institute for Physics of Microstructures, RAS, Russian Federation; ³University of Aizu, Japan

11:00 - 12:30 **MMW and submillimeter wave systems III (F2D)** **Room 20**
 Session Chair: Harish Krishnaswamy, Columbia University, USA

11:00 **Efficiency And Bandwidth Enhancement Of On-Chip Antennas By Using Connected Arrays And Artificial Dielectrics** **F2D.1**
Daniele Cavallo; Waqas H. Syed; Andrea Neto
 Delft University of Technology, Netherlands

11:15 **300-GHz-band Wireless Transmission At 50 Gbit/s Over 100 Meters** **F2D.2**
Tadao Nagatsuma¹; Kazuki Oogimoto¹; Yu Yasuda¹; Yusuke Fujita¹; Yuki Inubushi¹; Shintaro Hisatake¹; Gonzalo Crespo²; Aitor Martinez²
¹Osaka University, Japan; ²Anteral, Spain

11:30 **Fast THz Modulator Based On The HEMT-metamaterial** **F2D.3**
 Yuncheng Zhao¹; Yaxin Zhang¹; Shen Qiao¹; Shixiong Liang²; Zhihong Feng²; Ziqiang Yang¹
¹Terahertz Science Cooperative Innovation Center, University of Electronic Science and Technology of, China; ²National Key Laboratory of Application Specific Integrated Circuit, Hebei Semiconductor Research Ins, China

11:45 **THz Transmission Using QAM-16 And 32 Gbit/s On 25m** **F2D.4**
 Philipp Latzel¹; Fabio Pavanello¹; Sara Bretin¹; Pascal Szriftgiser²; Redha Kassi¹; Klaus Engenhardt³; Erwan Lecomte⁴; Emilien Peytavit¹; Jean-François Lampin¹; Mohammed Zakoune¹; Guillaume Ducournau⁵
¹IEMN - Univ Lille 1, France; ²PhLAM, France; ³Tektronix, Germany; ⁴Tektronix, France; ⁵IEMN, France

12:00 **Exploring THz Band For High Speed Wireless Communications (Keynote Talk)** **F2D.5**
Xianbin Yu
 Zhejiang University, China

11:00 - 12:30 **Free Electron Lasers and Synchrotron Radiation II (F2E)** **Room 19**
 Session Chair: Gian Piero Gallerano, ENEA-Frascati, Italy

11:00 **Powerful FEM-oscillators With Advanced Bragg Resonators Operating In A Single Mode Regime From Ka- To W-band** **F2E.1**
Nikolai Peskov¹; Naum Ginzburg¹; Alim Kaminsky²; Elkuno Perelstein²; Sergei Sedykh²; Vladislav Zaslavsky¹; Dmitry Padozhnikov¹
¹Institute of Applied Physics RAS, Russian Federation; ²Joint Institute for Nuclear Research, Russian Federation

11:15 **Present Status Of CAEP THz FEL Facility** **F2E.2**
Xiaoqian Shu¹; Yuhuan Dou¹; Xingfan Yang²; Ming Li²; Xiangyang Lu³
¹Institute of Applied Physics and Computational Mathematics, China; ²Institute of Applied Electronics, CAEP, China; ³Institute of Heavy Ion Physics, Peking University, China

11:30 **Powerful Broadband FEM-amplifier Operating Over Ka Frequency Range** **F2E.3**
 Ilya Bandurkin¹; Alim Kaminsky²; Sergey Kuzikov¹; Elkuno Perelstein²; Nikolai Peskov¹; Andrey Savilov¹; Denis Donets²; Sergei Sedykh²
¹Institute of Applied Physics RAS, Russian Federation; ²Joint Institute for Nuclear Research, Russian Federation

11:45 **Testing Of RF Source And Microwave Components Of The Millimeter-Wavelength Flying RF Undulators** **F2E.4**
Andrey Savilov; Eduard Abubakirov; Ilya Bandurkin; Yuri Danilov; Andrey Denisenko; Sergey Kuzikov; Alexander Vikharev
 Institute of Applied Physics, Russian Federation

12:00 **Tuning A Synchrotron Radiation Source For Nano-FTIR Spectroscopy** **F2E.5**
Bernd Kaestner¹; Peter Hermann¹; Arne Hoehl¹; Burkhard Beckhoff¹; Gerhard Ulm¹; Piotr Patoka²; Georg Ulrich²; Jörg Feikes³; Markus Ries³; Tobias Goetsch³; Godehard Wüstefeld³; Eckart Rühl²
¹Physikalisch-Technische Bundesanstalt, Germany; ²Freie Universität Berlin, Germany; ³HZB Berlin, Germany

12:15 **Present Status And Future Plan Of Infrared FEL Facility At Kyoto Univ.** **F2E.6**
Heishun Zen; Sikharin Suphakul; Toshiteru Kii; Kai Masuda; Hideaki Ohgaki
 Institute of Advanced Energy, Kyoto University, Japan