

TeraTech

2026

13th International Symposium on
Terahertz-Related Devices and Technologies



November 8-12, 2026

Institute of Science Tokyo, Tokyo, JAPAN

Access to the Digital Multipurpose Hall

West Bldg. 9, 2F



Access to the Banquet Venue

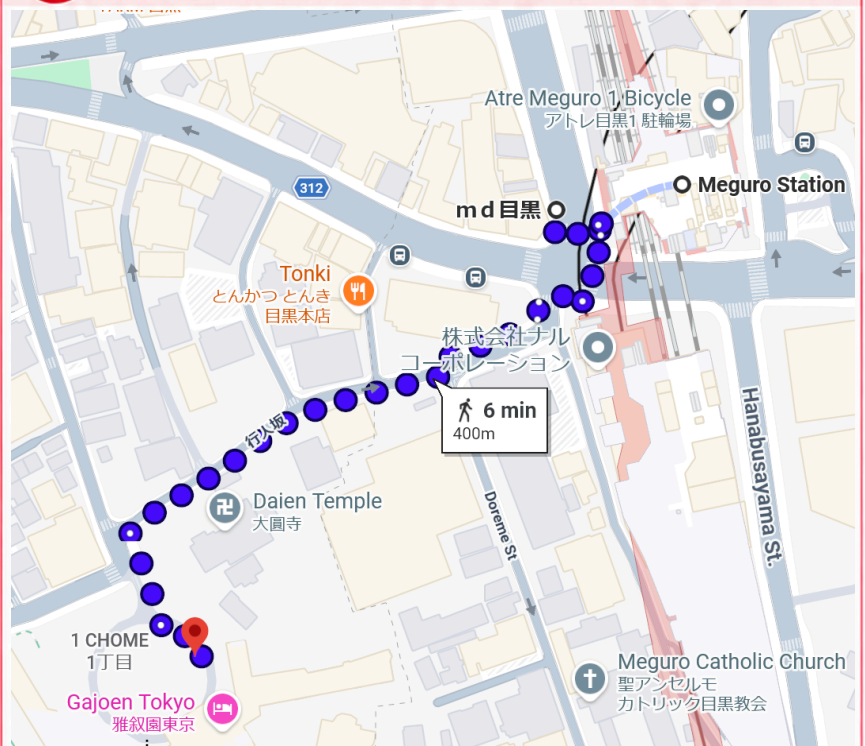
Hotel Gajoen Tokyo

- Take the Tokyu Meguro Line**
Please ride from Ookayama Station to Meguro Station.

Tokyu Meguro Line



- Walking Route from Meguro Station to Hotel Gajoen Tokyo**



ROHM THz RTDs

Enabling Practical THz Systems

RTD Technology Shrinks THz Systems from Lab-Scale to Chip-Scale

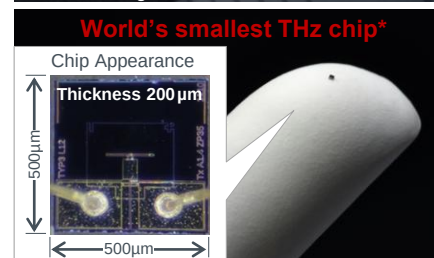
ROHM
SEMICONDUCTOR

■ Features

	2 nd Generation	1 st Generation
Package Size	4.0×4.3×3.25 mm	4.0×4.3×3.25 mm
Frequency	Typ. 320 GHz	Typ. 320 GHz
Oscillation Output	Max. 40 μW	Max. 10 μW
Power Consumption	Typ. 40 mW	Typ. 10 mW

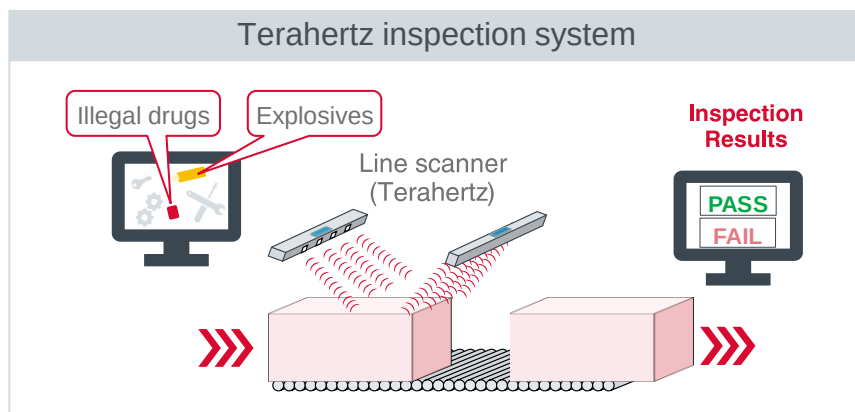
■ Why RTDs?

- Room-temperature operation
- Ultra-compact footprint
- Low DC power consumption
- Suitable for scalable THz system integration



*Based on ROHM research as of September 2026.

■ Ideal for Non-Destructive Testing (e.g., Moisture Detection and THz Imaging)



■ Evaluation Kit [RTD-EVK-G2] ^{*1}

- Ready-to-use THz Evaluation Platform
- Up to 4× Higher Output Power

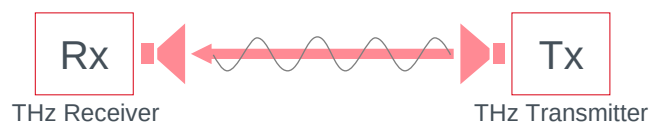
Enables easy evaluation when used with measurement tools.



*1: Not available for general commercial sales. For details, please contact a sales representative.

■ Terahertz-Band High-Speed Wireless Communication ^{*2}

THz Carrier + Wideband Modulation



- Short-range communication
- Data rate > 30Gbps

*2: Not supported by the RTD-EVK-G2 evaluation kit
Y. Nishida et al., Scientific Reports 9 (2019) 18125



Website



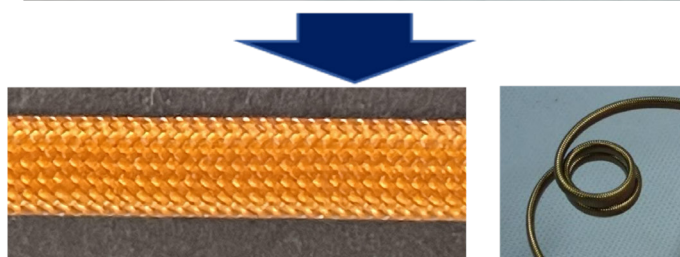
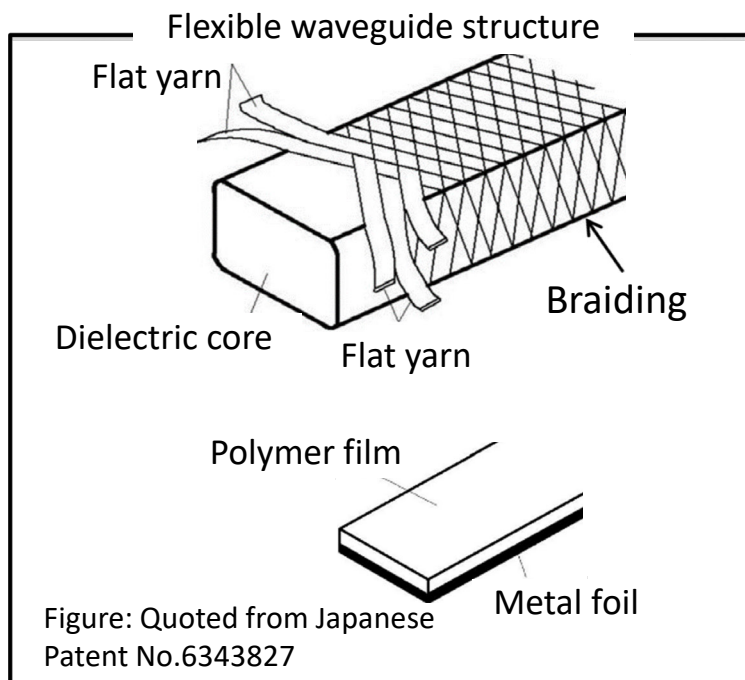
Promotion Video



Demo Kit Video

Flexible Waveguide Overview

A lightweight and bendable waveguide utilizing textile technologies developed in Fukui.



Product Lineup and Recommended Frequency Bands.

Product Name	Recommended Band	Typical Insertion Loss (S21) per meter
Flexible Waveguide for 28 GHz Band	21.7GHz-33GHz	-6dB~-4dB
Flexible Waveguide for V Band	51.5GHz-73GHz	-8dB~-7dB
Flexible Waveguide for E Band	62GHz-87GHz	-11dB~-9dB
Flexible Waveguide for W Band	80GHz-105GHz	-12dB~-10dB

Features of the Flexible Waveguide

- Highly flexible kumihimo structure, durable to 50,000 bends.
- Ultra-lightweight design (<10 g/m).
- High-precision alignment is not required for connection.
- Enables seamless RF signal transmission.

Future Development

- Further advancement toward higher-frequency operation.
- Ongoing development for F-band and D-band waveguides.

For inquiries and downloads:

Yonezawa Bussan Co., Ltd. <https://www.yonezawa-bussan.jp/flexible.html>

These research results were obtained from the commissioned research(No.JPJ012368C08901)by NICT , Japan.



Welcome

The TeraTech 2026 International Symposium aims to bring together researchers who tackle "Fundamental & Applied Problems in Terahertz-related Devices & Technologies", stimulate discussions on their state-of-the-art results and promote their collaborations. The Symposium will be held at Institute of Science Tokyo, Tokyo, JAPAN, on November 8-12, 2026.

Organizers

General Chair of the Organizing Committee:

Safumi SUZUKI (Institute of Science Tokyo, Japan)

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We wish to thank the following technical and financial sponsors listed on the TeraTech 2026 website.

- Technical Sponsors:
 - IEEE Electron Device Society
 - IEEE Japan Chapter, Sendai Section
- Financial Sponsors:
 - The Futaba Foundation, Japan
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 - Inoue Foundation for Science, Japan
 - Terahertz Science and Technology Promotion Fund, Japan
 - Aoba Foundation for the Promotion of Engineering, Japan

Instructions for Speakers

- For Plenary/Invited/Contributed Speakers

Time for each oral presentation (in minutes):

	Plenary	Invited	Contributed
Talk	55	25	10
Discussion	5	5	5

For speakers who will attend ONSITE, please bring your own laptop PC (Windows, Mac, or Unix). We will provide VGA (a.k.a RGB) and HDMI cables for connection to the projector. A USB type-C adaptor to those cables will be available, too. For other types, please bring your adaptor to VGA or HDMI connection. You are requested to check the connection to your laptop before the session starts. Laser pointers will be available.

- For Presenters of Poster Session

Please put up your poster before the poster session begins and take it down after the session. The size of a board is 113 cm in width and 166 cm in height (suited for an A0-sized poster). Poster boards and pushpins will be available.

Venue

The symposium will be held at Institute of Science Tokyo, Tokyo, Japan, on November 8-12, 2026. The Registration Desk and Session Rooms will be in the Digital Multi-Purpose Hall, 1st floor, West Bldg. 9, Ookayama West Area, Ookayama Campus.

Address and access information:

2-12-1, Ookayama, Meguro-ku, Tokyo 152-8550, Japan.

Access: <https://www.isct.ac.jp/en/001/access>

Campus map: <https://www.isct.ac.jp/en/001/about/campuses-and-offices/ookayama>

Symposium Website

<https://www.teratech-2026.riec.tohoku.ac.jp/>

Secretariat

teratech2026-secretariat [at] grp.tohoku.ac.jp

Timetable of TeraTech 2026

Time in JST Time Zone

8th, Nov. (SUN)	9th, Nov. (MON)	10th, Nov. (TUE)	11th, Nov. (WED)	12th, Nov. (THU)
	8:45 - 9:00 Opening			
	9:00 - 10:00 Session Mon1 THz Plasmonics Chair: Taiichi Otsuji	9:00 - 10:00 Session Tue1 2D Materials for THz Chair: Vladimir Mitin	9:00 - 10:00 Session Wed1 THz Photodiodes Chair: Kazutoshi Kato	9:00 - 10:00 Session Thu1 THz Communications Chair: Yahya Meziani
	Wojciech Knap (Plenary)	Victor Ryzhii (Plenary)	Tadao Ishibashi (Plenary)	Guillermo Carpintero (Plenary)
	10:00 - 10:30 Coffee Break	10:00 - 10:30 Coffee Break	10:00 - 10:30 Coffee Break	10:00 - 10:30 Coffee Break
	10:30 - 12:00 Session Mon2 2D Materials/Systems for THz Chair: Chao Tang	10:30 - 12:00 Session Tue2 THz Detectors Chair: Gintaras Valusis	10:30 - 12:00 Session Wed2 THz Biophysics and Chemistry Chair: Hiroaki Minamide	10:30 - 12:00 Session Thu2 Technologies for THz Communications and Sensing I Chair: Takashi Arikawa
	Frederic Teppe (Invited)	Yahya Meziani (Invited)	Jeremy Torres (Invited)	Shinsuke Hara (Invited)
	Pavlo Sai (Invited)	Abdelouahed El Fatimy (Invited)	Hiromichi Hoshina (Invited)	Ichiro Somada (Invited)
	Georgy Fedorov (Invited)	Yanko Todorov (Cont.) Sho Yoshinaka (Cont.)	Roman Sobolewski (Invited)	Nils Weimann (Invited)
	12:00 - 13:30 Lunch	12:00 - 13:30 Lunch	12:00 - 13:30 Lunch	12:00 - 13:30 Lunch
	13:30 - 15:30 Session Mon3 THz Quantum Optics/Electronics Chair: Itsuhiro Kakeya	13:30 - 15:00 Session Tue3 THz Devices I Chair: Chiko Otani	13:30 - 15:15 Session Wed3 THz Devices II Chair: Withawat Withayachumnankul	13:30 - 14:30 Session Thu3 Technologies for THz Communications and Sensing II Chair: Guillermo Carpintero
	Koichiro Tanaka (Invited)	Itsuhiro Kakeya (Invited)	Makoto Kasu (Invited)	Chao-Hsin Wu (Invited)
	Fabian Rotermund (Invited)	Yuto Yoneda (Cont.) Roman Adam (Cont.)	Takashi Arikawa (Invited)	Nguyen Hoai Ngo (Cont.) Yusuke Kondo (Cont.)
	Kazuyuki Kuroyama (Invited)	Ming Che (Cont.) Ryoji Genda (Cont.)	Gintaras Valusis (Invited)	14:30 - 15:00 Closing
15:00 - Registration at Inst. Science Tokyo	15:00 - 15:30 Coffee Break	15:00 - 15:30 Coffee Break	Takayuki Ishida (Cont.)	Plenary: 60 min. Invited: 30 min. Contributed: 15 min. (including 5 min. Q&A)
	15:30 - 16:00 Coffee Break	15:30 - 15:45 Session Tue4 Industrial Session Chair: Li Yi	15:15 - 15:25 Photo Session	
16:00 - 17:00 Session Sun1 IEEE Distinguished Lecture Chair: Safumi Suzuki	16:00 - 18:00 Session Mon4 THz Devices and Components for Communications and Sensing Chair: Frederic Teppe	15:50 - 17:20 Session Tue5 Poster Weijie Gao Jun Iwai Shuya Iwamatsu Sergio Rivera Lavado D. Čibiraite-Lukensienė Gan Minxia Ruchir Rawat Akira Satou Roman Sobolewski Elena Titova Yanko Todorov Koki Yabe Haruma Yata Feng Zhang		
	Withawat Withayachumnankul (Invited)			
17:05 - 17:35 Special Memorial Session for Late Prof. Michael Shur	Shihab Al-Daffaie (Invited)			
17:35 - 18:35 Session Sun2 Special Lecture Chair: Akira Satou	Masayuki Fujita (Invited)			
	Hidemasa Yamane (Cont.) Kazuya Yamamoto (Cont.)			
Vladimir Mitin				
18:40 - 20:40 Welcome Reception at Inst. Science Tokyo			18:00 - 20:00 Banquet at Gajoen Tokyo	

Technical Program of TeraTech-2026

SUNDAY November 8th, 2026

15:00 - Registration at Institute of Science Tokyo

Session Su1 IEEE Distinguished Lecture

16:00 - 17:00 Chair: Safumi Suzuki

16:00 - 17:00 **2D Plasmons in Topological Insulator and Dirac Materials for THz Lasers & Detectors**

Su1-1 **T. Otsuji**
ENSEMBLE3 Center of Excellence Ltd., Poland

Lecture

17:05 - 17:35 Special Memorial Session for Late Prof. Michael Shur

Session Su2 Special Lecture

17:35 - 18:35 Chair: Akira Satou

17:35 - 18:35 **Nonlinear THz and IR Photonics: Bypassing Scientific Dead Ends**

Su2-1 **V. Mitin**
University at Buffalo, USA

Lecture

18:40 - 20:40 Welcome Reception at Institute of Science Tokyo

Technical Program of TeraTech-2026

MONDAY November 9th, 2026

08:45 - 09:00 Opening

Session Mo1 THz Plasmonics

09:00 - 10:00 Chair: Taiichi Otsuji

09:00 - 10:00 Mo1-1 Terahertz Plasmonic Excitations in Semiconductor Nanostructures

Plenary

W. Knap

Inst. High Pressure Phys., PAN, Poland

10:00 - 10:30 Coffee Break

Session Mo2 2D Materials/Systems for THz

10:30 - 12:00 Chair: Chao Tang

10:30 - 11:00 Mo2-1 Nonlinear Terahertz Electroluminescence from Dirac–Landau Polaritons

Invited

B. Benhamou-Bui (1); C. Consejo (1); S. S. Krishtopenko (1); S. Petridis (2); X. Baudry (2); J.-M. Bethoux (2); C. Bray (1); L. Bonnet (1); S. Ruffenach (1); J. Torres (1); B. Jouault (1); P. Ballet (2); M. Orlita (3); C. Ciuti (4); F. Teppe (1)

1: Laboratoire Charles Coulomb, CNRS–Université de Montpellier, France

2: CEA-LETI, Grenoble, France

3: LNCMI-EMFL, Grenoble, France

4: Université Paris Cité, CNRS, MPQ, France

11:00 - 11:30 Mo2-2 Strong Terahertz Nonlinearity in Plasmonic Structures based on AlGaIn/GaN

Invited

P. Sai (1,2,3); V. Koroteyev (1,4); M. Mittendorff (3); W. Knap (1,2)

1: Institute of High Pressure Physics PAS, Warsaw, Poland

2: CENTERA, CEZAMAT, Warsaw University of Technology, Warsaw, Poland

3: Universität Duisburg-Essen, Fakultät für Physik, Duisburg, Germany

4: V. Ye. Lashkaryov Institute of Semiconductor Physics, NASU, Kyiv, Ukraine

11:30 - 12:00 Mo2-3 Active and passive terahertz optoelectronic components based on carbon nanotube films

Invited

A. Menon (1); M. Gorbun (1); M. Cojokari (1); A. Saushin (1); P. Kuzhir (1); I. Kašalynas (2); A. Urbanovič (2); V. Janonis (2); Z. Xu (3); E. Kaupinen (3); G. Fedorov (1)

1: Center for Photonics Sciences, University of Eastern Finland, Joensuu, Finland

2: Department of Optoelectronics, Center for Physical Sciences and Technology (FTMC), Vilnius, Lithuania

3: Department of Applied Physics, Aalto University School of Science, Espoo, Finland

12:00 - 13:30 Lunch

Session Mo3 THz Quantum Optics/Electronics	
13:30 - 15:30	Chair: Itsuhiro Kakeya
13:30 - 14:00 Mo3-1 Invited	Frequency Stabilization of a Terahertz UTC-PD Source Referenced to a Rotational Transition of Acetonitrile <u>K. Tanaka</u> <i>RIKEN, Japan</i>
14:00 - 14:30 Mo3-2 Invited	Efficient THz Wave Generation and Its Applications in Nonlinear Spectroscopy <u>F. Rotermund</u> <i>Department of Physics, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea</i>
14:30 - 15:00 Mo3-3 Invited	Coherent light-matter coupling between THz on-chip resonators and gate-defined quantum nanostructures <u>K. Kuroyama (1)</u> <i>1: Institute of Industrial Science, The University of Tokyo, Tokyo, Japan</i>
15:00 - 15:30 Mo3-4 Invited	Strong and Deep Strong Light-Matter Coupling in Landau-Polaritons <u>M. Białek</u> <i>Inst. High Pressure Physics of the Polish Academy of Sciences, Poland</i>

15:30 - 16:00 Coffee Break

Session Mo4 THz Devices and Components for Sensing	
16:00 - 18:00	Chair: Frederic Teppe
16:00 - 16:30 Mo4-1 Invited	Computational 3D Terahertz Imaging: Eliminating Optics and Coherence Requirements E. E. Yildiz (1); T. Kubiczek (1); H. Lees (2); L. Häring (1); J. C. Balzer (1); <u>W. Withayachumnankul (2)</u> <i>1: Nachrichtentechnische Systeme (NTS), University of Duisburg-Essen, Duisburg, Germany</i> <i>2: Terahertz Engineering Laboratory, Adelaide University, Adelaide, South Australia, Australia</i>
16:30 - 17:00 Mo4-2 Invited	Fundamental & Applied Problems in Terahertz Devices & Technologies for Sensing Applications <u>S. Al-Daffaie (1)</u> ; A. J. Jumaah (1); L. Cao (2,3); F. Meng (3); E. Özdemir (4); Y. Loth (4); M. Richter (4); A. K. Wigger (4); P. H. Bolívar (4); H. G. Roskos (3) <i>1: Department of Electrical Engineering, Eindhoven University of Technology, 5612 AE Eindhoven, The Netherlands</i> <i>2: State Key Laboratory of Advanced Electromagnetic Technology, Huazhong University of Science and Technology, Wuhan 430074, China</i> <i>3: Physikalisches Institut, Johann Wolfgang Goethe-Universität, Frankfurt am Main, Germany</i> <i>4: University of Siegen, Institute for High Frequency and Quantum Electronics, Siegen, Germany</i>

17:00 - 17:30 Mo4-3	Advancement of Terahertz Silicon Photonics Towards Science and Technology Empowered by Photonic-Electronic Emergent Revolutionary-Device Systems: PEERS
Invited	<u>M. Fujita</u> (1,2) <i>1: Research Institute of Electrical Communication, Tohoku University, Sendai, Japan</i> <i>2: Graduate School of Engineering Science, The University of Osaka, Toyonaka, Japan</i>
17:30 - 17:45 Mo4-4	Bendable Terahertz Waveguides Based on Microstructured Flexible Silicon
Contributed	<u>H. Yamane</u> (1); Y. Yamada (1); Y. Kondo (1); D. Ichikawa (2); W. Gao (2); N. H. Ngo (2); Y. Morita (2); M. Fujita (2); S. Murakami (1) <i>1: Osaka Research Institute of Industrial Science and Technology, Osaka, Japan</i> <i>2: Graduate School of Engineering Science, The University of Osaka, Osaka, Japan</i>
17:45 - 18:00 Mo4-5	Terahertz-wave homodyne imaging with IQ demodulation using a single detector
Contributed	<u>K. Yamamoto</u> (1); A. Dobroiu (2); K. Fushinobu (1); S. Suzuki (2) <i>1: Department of Mechanical Engineering, Institute of Science Tokyo, Tokyo, Japan</i> <i>2: Laboratory for Future Interdisciplinary Research in Science and Technology, Institute of Science Tokyo, Tokyo, Japan</i>

Technical Program of TeraTech-2026

TUESDAY November 10th, 2026

Session Tu1	2D Materials for THz
09:00 - 10:00	Chair: Vladimir Mitin
09:00 - 10:00 Tu1-1 Plenary	Double-Edge Plasmonic Resonances in Graphene Metastructures and Their Effect on Rectification and Bolometric Terahertz Detection <u>V. Ryzhii</u> (1,2); M. Ryzhii (3); C. Tang (1,2); R. Rawat (1); V. Mitin (4); T. Otsuji (5,6) 1: <i>Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, Sendai, Japan</i> 2: <i>Research Institute of Electrical Communication, Tohoku University, Sendai, Japan</i> 3: <i>School of Computer Science and Engineering, University of Aizu, Aizu-Wakamatsu, Japan</i> 4: <i>Department of Electrical Engineering, University at Buffalo, Buffalo, USA</i> 5: <i>ENSEMBLE3 Center of Excellence Ltd., Warsaw, Poland</i> 6: <i>UNIPRESS Institute of High Pressure Physics of the Polish Academy of Sciences, Warsaw, Poland</i>
10:00 - 10:30	Coffee Break
Session Tu2	THz Detectors
10:30 - 12:00	Chair: Gintaras Valusis
10:30 - 11:00 Tu2-1 Invited	Bias-Enhanced Terahertz Detection in Asymmetric Dual-Grating-Gate Graphene Field-Effect Transistors E. Abidi (1); V. Clericó (1); J. Calvo-Gallego (1); T. Taniguchi (2); K. Watanabe (2); A. Satou (3); T. Otsuji (4); J. E. Velázquez Pérez (1); <u>Y. M. Meziani</u> (1) 1: <i>Universidad de Salamanca, Facultad de Ciencias, Salamanca, Spain</i> 2: <i>National Institute of Material Sciences, Tsukuba, Japan</i> 3: <i>Research Institute of Electrical Communication, Tohoku University, Sendai, Japan</i> 4: <i>Photonic Elements Group, ENSEMBLE3 Ltd., Warsaw, Poland</i>
11:00 - 11:30 Tu2-2 Invited	Deposition of Single-Molecule Magnets on Black Phosphorus: Towards Hybrid Molecular Spintronic Platforms P. V. Djaba (1); M. A. Rhanbouri (1); P. Neugebauer (2); I. Nemec (3); E. M. Feddi (1); <u>A. El Fatimy</u> (1*) 1: <i>College of Physical Sciences and Engineering, Mohammed VI Polytechnic University, Ben Guerir, Morocco</i> 2: <i>Central European Institute of Technology, CEITEC BUT, Brno, Czech Republic</i> 3: <i>Department of Inorganic Chemistry, Faculty of Science, Palacký University, Olomouc, Czech Republic</i>
11:30 - 11:45 Tu2-3	THz Quantum Photodetector based on LO-phonon scattering-assisted extraction

	Contributed	Pérez-Urquiza (1); D. Gacemi (1); Z. Z. Zhang (2); B. B. Liu (2); D. B. But (3); D. Yavorskiy (3); J. Łusakowski (4); W. Knap (3); H. Li (2); <u>Y. Todorov</u> (5) <i>1: Laboratoire de Physique de l'École Normale Supérieure ENS, Université PSL, CNRS, Sorbonne Université, Université de Paris, F-75005 Paris, France</i> <i>2: Key Laboratory of Terahertz Solid State Technology, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, Shanghai, China</i> <i>3: CENTERA Laboratories, Institute of High Pressure Physics PAS, Warsaw, Poland</i> <i>4: Faculty of Physics, University of Warsaw, Warsaw, Poland</i> <i>5: Laboratoire de Physique et d'Etude des Matériaux, LPEM, UMR 8213, ESPCI Paris, Université PSL, CNRS, Sorbonne Université, Paris, France</i>
	11:45 - 12:00 Tu2-4 Contributed	Grating-Gate HEMT THz Plasmonic Detector with an InP Barrier Layer <u>S. Yoshinaka</u> (1,2); M. Nagatsu (1,2); Y. Takida (3); H. Minamide (3); T.-T. Lin (1); A. Satou (1) <i>1: Research Institute of Electrical Communication, Tohoku University, Japan</i> <i>2: Graduate School of Engineering, Tohoku University, Japan</i> <i>3: RIKEN Center for Advanced Photonics, RIKEN, Japan</i>

12:00 - 13:30 Lunch

Session Tu3 THz Devices I		
13:30 - 15:00		Chair: Chiko Otani
	13:30 - 14:00 Tu3-1 Invited	Frequency-modulated terahertz radiation from superconducting Josephson junctions <u>I. Kakeya</u> (1) <i>1: Department of Electronic Science and Engineering, Kyoto University, Kyoto, Japan</i>
	14:00 - 14:15 Tu3-2 Contributed	THz-Optical Phase Interference Mediated by Backward Parametric Oscillation <u>Y. Yoneda</u> (1,2); Y. Takida (2); A. De Los Reyes (2); H. Kobayashi (3); H. Minamide (2) <i>1: Chiba University, Chiba, Japan</i> <i>2: RIKEN Center for Advanced Photonics, RIKEN, Sendai, Japan</i> <i>3: Kochi University of Technology, Kochi, Japan</i>
	14:15 - 14:30 Tu3-3 Contributed	Coupled Spintronic Emitters for THz Intensity and Polarization Control <u>R. Adam</u> (1); D. Cao (1,2); D. E. Bürgler (1); M. S. Sasikala (1); I. Komissarov (3,4); H. Hardtdegen (5); M. Mikulics (5); M. Büscher (1,6); R. Sobolewski (3,4); C. M. Schneider (1,7)

- 1: Peter Grünberg Institute (PGI-6), Research Centre Jülich, Jülich, Germany
 2: College of Physics, Qingdao University, Qingdao, China
 3: Laboratory for Laser Energetics, University of Rochester, Rochester, NY, USA
 4: Department of Electrical and Computer Engineering, University of Rochester, Rochester, NY, USA
 5: Ernst Ruska Centre, Research Centre Jülich, Jülich, Germany
 6: Institut für Laser- und Plasmaphysik, Heinrich-Heine Universität Düsseldorf, Düsseldorf, Germany
 7: Faculty of Physics, University Duisburg-Essen, Duisburg, Germany

14:30 - 14:45
 Tu3-4

Contributed

Laser-Tuned 300-GHz Beam Steering by a SMF/DCF-Based OBFN

M. Che (1); B. Li (1); S. Ye (1); K. Kato (1)

1: Department of ISEE, Kyushu University, Fukuoka, Japan

14:45 - 15:00
 Tu3-5

Contributed

A terahertz comb generator using two series-connected resonant tunneling diodes

R. Genda (1); S. Nagayama (1); S. Suzuki (2)

1: Department of Electrical and Electronic Engineering, Institute of Science Tokyo, Tokyo, Japan

2: Laboratory for Future Interdisciplinary Research in Science and Technology, Institute of Science Tokyo, Tokyo, Japan

15:00 - 15:30 Coffee Break

Session Tu4 Industrial Session

15:30 - 15:45 Chair: Li Yi

Hamamatsu Photonics, Rohm, Sevensix

Session Tu5 Poster Session (90 min)

15:50 - 17:20

Tu5-1 – Tu5-17; see Poster Session

Technical Program of TeraTech-2026

POSTER Session — TUESDAY November 10th, 2026

Session Tu5	Poster (90 min)	
15:50 - 17:20		
	Tu5-1 Poster	Patch-antenna enhanced charge sensitive infrared phototransistors Authors: M. Bahremand (1); F. Pisani (2); B. Fix (3); D. Gacemi (1); W. Wan (4); Z. Zhang (4); H. Li (4); <u>Y. Todorov</u> (2) <i>1: Laboratoire de Physique de l'École Normale Supérieure ENS, Université PSL, CNRS, Sorbonne Université, Université de Paris, France</i> <i>2: Laboratoire de Physique et d'Etude des Matériaux, LPEM, UMR 8213, ESPCI Paris, Université PSL, CNRS, Sorbonne Université, France</i> <i>3: DOTA, ONERA, Université Paris-Saclay, Palaiseau, France</i> <i>4: Key Laboratory of Terahertz Solid State Technology, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, Shanghai, China</i>
	Tu5-2 Poster	Temperature and Layer Dependent Compensation of Plasmonic Resonance Detuning in Few Layer Graphene Quantum Barrier THz Detectors Authors: <u>R. Rawat</u> (1,2); C. Tang (1,3); V. Ryzhii (1,3) <i>1: Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, Sendai, Japan</i> <i>2: Department of Pure and Applied Physics, Waseda University, Tokyo, Japan</i> <i>3: Research Institute of Electrical Communication, Tohoku University, Sendai, Japan</i>
	Tu5-3 Poster	Ultrafast Antenna-Coupled Graphene Terahertz Detector Authors: <u>E. Titova</u> (1,2); A. Titchenko (3); K. Shein (3); M. Titova (2); A. Kuksov (2); A. Sobolev (1); G. Goltsman (3); I. Gayduchenko (3); A. Svintsov (1) <i>1: Center for Advanced Studies, Moscow, Russia</i> <i>2: Programmable Functional Materials Lab, CNNT, Moscow, Russia</i> <i>3: HSE University, Moscow, Russia</i>
	Tu5-4 Poster	Characterization of Bias-Voltage Dependence of S-Parameters in InP-Based Triple-Barrier Resonant Tunneling Diodes Down to 6 K Toward Quantum Transport Modeling in Cryogenic Environments Authors: <u>J. Iwai</u> (1); K. Sudo (1); R. Goto (1); K. Maekawa (1); K. Nagai (1); A. Kik (1); M. Suhara (1); K. Asakawa (2); I. Watanabe (3); R. Machida (3); K. Akahane (3) <i>1: Tokyo Metropolitan University, Tokyo, Japan</i> <i>2: Tokyo Metropolitan College of Industrial Technology, Tokyo, Japan</i> <i>3: National Institute of Information and Communications Technology, Tokyo, Japan</i>

Tu5-5	Nanometer-Scale Ag Thin-Film Sensing Using a Terahertz RTD Self-Mixing Phase Response
Poster	Authors: <u>Yata Haruma</u> (1); S. Ito (1); S. Shoda; C. Tang (2); L. Yi (1,3) 1: Graduate School of Science and Engineering, Ibaraki University, Hitachi, Japan 2: Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, Sendai, Japan 3: Department of Electrical Engineering and Information Systems, The University of Tokyo, Tokyo, Japan
Tu5-6	Appropriate Design of GaN-Based THz Quantum Cascade Lasers over a Wide Frequency Range Considering High-Lying Levels
Poster	Authors: <u>K. Yabe</u> (1,2); K. Nonaka (1,2); T. Ishida (1); S. Fujikawa (2,1); H. Yaguchi (2); H. Hirayama (1) 1: RIKEN, Wako, Saitama, Japan 2: Saitama University, Saitama, Japan
Tu5-7	Analysis of Highly Doped GaAs/AlGaAs Terahertz Quantum Cascade Lasers for obtaining High Power and Low Current Density Operation
Poster	Authors: <u>K. Yabe</u> (1,2); T. Ishida (1); S. Fujikawa (2,1); Y. Tsuda (3); K. Miyagawa (3); Y. Suzuki (3); K. Akiyama (3); T. T. Lin (4,1); H. Yaguchi (2); H. Hirayama (1) 1: RIKEN, Wako, Saitama, Japan 2: Saitama University, Saitama, Japan 3: Mitsubishi Electric Corporation (MELCO), Amagasaki, Japan 4: Tohoku University, Sendai, Japan
Tu5-8	High-Efficient 1D Photoconductive Antenna Array With Enhanced Conversion
Poster	Authors: D. V. Lavrukhin (1); A. E. Yachmenev (1); R. R. Galiev (1); R. A. Khabibullin (1); K. I. Zaytsev (2); I. E. Spektor (2); A. Satou (3); <u>D. S. Ponomarev</u> (1) 1: UHF Department, NRC Kurchatov Institute, Moscow, Russia 2: Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia 3: RIEC, Tohoku University, Sendai, Japan
Tu5-9	3D Radiation Pattern Characterization of a THz Antenna with an Ultra-Fast Port Feed
Poster	Authors: <u>S. Rivera</u> (1); A. Piroutiniya (2); A. Rivera-Lavado (2); J. César-Cuello (1); D. Gallego (2); G. Carpintero (1,2) 1: Department of Electrical Engineering, UC3M, Leganés, Spain 2: Leapwave, Campus Tecnológico, Leganés, Spain
Tu5-10	Terahertz Integrated Beam Steering Based on Silicon Photonics: From Passive Phased Arrays to Active and Multifunctional Beam Control
Poster	Authors: <u>W. Gao</u> ; N. H. Ngo; D. Ichikawa; Y. Inose; M. Fujita Graduate School of Engineering Science, The University of Osaka, Osaka, Japan

Tu5-11	Photonics-Assisted Ultra-Wideband Terahertz Device Testing Covering Multiple WR Bands
Poster	Authors: <u>S. Iwamatsu</u> (1,2); M. Grzeslo (2); J. Tebart (2); T. Kaji (1); A. Stöhr (2) 1: <i>Advanced ICT Research Institute, National Institute of Information and Communications Technology, Kobe, Japan</i> 2: <i>Department of Optoelectronics, ZHO, University of Duisburg-Essen, Duisburg, Germany</i>
Tu5-12	Withdrawn
Poster	Authors: <u>M. Missoum</u> (1); J. Treuttel (1); P. Hartogh (2); A. Schulz-Ravanbakhsh (2); M. Olberg (3) 1: <i>LIRA, Observatoire de Paris - PSL, Paris, France</i> 2: <i>Max-Planck Institute for Solar System Research, Göttingen, Germany</i> 3: <i>Chalmers University of Technology, Göteborg, Sweden</i>
Tu5-13	Prism-Free Terahertz s-wave Attenuated Total Reflection Based on the Brewster Effect for Characterizing a Thin Doped Layer on 4H-SiC
Poster	Authors: <u>M. Gan</u> (1); H. Hanafusa (1); Y. Kadoya (1) 1: <i>Graduate School of Advanced Science and Engineering, Hiroshima University, Higashi-Hiroshima, Japan</i>
Tu5-14	Towards Developing Terahertz Crystallography for Crystal-structure Determination
Poster	Authors: <u>F. Zhang</u> (1,2); T. Sasaki (2); M. Hayashi (2,3); K. Tominaga (1) 1: <i>Xinjiang Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Urumqi, China</i> 2: <i>Institute of Electronics, Shizuoka University, Hamamatsu, Japan</i> 3: <i>Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan</i> 4: <i>Molecular Photoscience Research Center, Kobe University, Kobe, Japan</i>
Tu5-15	Terahertz Time-Domain Spectroscopy of Pancreatic Ductal Adenocarcinoma: Parametric Imaging and Treatment-Response Assessment
Poster	Authors: D. Chakraborty (1); B. N. Mills (2); J. Twardowski (2); N. Numbere (3); S. A. Gerber (2); M. Doyley (4); <u>R. Sobolewski</u> (1,4) 1: <i>Materials Science Graduate Program, University of Rochester, Rochester, NY, USA</i> 2: <i>Department of Surgery, University of Rochester Medical Center, Rochester, NY, USA</i> 3: <i>Department of Pathology, West Virginia University, Morgantown, WV, USA</i> 4: <i>Department of Electrical and Computer Engineering, University of Rochester, Rochester, NY, USA</i>
Tu5-16	Room-Temperature Continuous-Wave Spectroscopy System for 2–5.5 THz Operating in Broadband and High-Resolution Tuning Modes

Poster

D. Čibiraite-Lukenskiene (1,2); J. H. Krakofsky (3); J. Holstein (4); M. Rieder (3); G. Böhm (3); A. Lisauskas (1,2,3); H. G. Roskos (4); M. A. Belkin (3)

1: Center for Physical Sciences and Technology (FTMC), Vilnius, Lithuania

2: Institute of Applied Electrodynamics and Telecommunications, Vilnius University, Vilnius, Lithuania

3: Walter Schottky Institute, Technical University of Munich, Garching, Germany

4: Physikalisches Institut, Goethe University Frankfurt am Main, Frankfurt am Main, Germany

Tu5-17

Analysis of terahertz mode tuning and emission intensity of quantum cascade laser at different RF injection powers

Poster

Authors: S. S. Pushkarev (1,2); D. A. Belov (3); A. V. Ikonnikov (3); A. Yu. Pavlov (1); I. A. Glinskiy (2); A. V. Zuev (1); D. L. Gnatyuk (1); D. S. Ponomarev (1,2); A. Satou (4); R. A. Khabibullin (1,2)

1: UHF Department, NRC Kurchatov Institute, Moscow, Russia

2: Moscow Institute of Physics and Technology, Dolgoprudny, Russia

3: Lomonosov Moscow State University, Moscow, Russia

4: RIEC, Tohoku University, Sendai, Japan

Technical Program of TeraTech-2026

WEDNESDAY November 11th, 2026

Session We1 THz Photodiodes

09:00 - 10:00

Chair: Kazutoshi Kato

09:00 - 10:00

Design Considerations for Terahertz UTC Photomixers

We1-1

Plenary

T. Ishibashi

Wavepackets LLC, Naka-gun, Kanagawa, Japan

10:00 - 10:30

Coffee Break

Session We2 THz Biophysics and Chemistry

10:30 - 12:00

Chair: Hiroaki Minamide

10:30 - 11:00

Room-Temperature THz Cavity Hybridization of Nonequilibrium Collective Vibrations in a Photosynthetic Protein

We2-1

Invited

E. Pérez-Martin (1,2); L. Bonnet (1); C. Bray (1); E. Vouvre (3); F. Teppe (1); E. Strupiechonski (4); Z. Zhang (5); J. Torrès (1)

1: Laboratoire Charles Coulomb (L2C), Université de Montpellier, CNRS, Montpellier, France

2: Applied Physics Department and USAL-NANOLAB, Universidad de Salamanca, Salamanca, Spain

3: Micronit BV, Enschede, The Netherlands

4: Centro de Ingeniería y Desarrollo Industrial, Queretaro Arteaga, Mexico

5: Department of Physics, City University of Hong Kong, Hong Kong SAR

11:00 - 11:30

Non-thermal Interactions of THz Waves with Biological Membranes

We2-2

Invited

H. Hoshina (1)

1: RAP RIKEN, Sendai, Japan

11:30 - 12:00

Terahertz Radiation Transients Emitted from Spintronic Nanostructures

We2-3

Invited

R. Sobolewski

Departments of Electrical and Computer Engineering and Physics and Astronomy, and Materials Science Graduate Program, University of Rochester, Rochester, NY, USA

12:00 - 13:30

Lunch

Session We3 THz Devices II

13:30 - 15:15

Chair: Withawat Withayachumnankul

13:30 - 14:00

High Power Gain Cut-off Frequency (f_{MAX}) > 120 GHz of a 157-nm T-shaped Gated Diamond MOSFET with NO₂ p-type Doping

We3-1

Invited

M. Kasu (1,2*); N. C. Saha (1); M. Eguchi (3)

1: Department of Electrical and Electronic Engineering, Saga University, Saga, Japan
 2: Diamond Semiconductor Co. Ltd., Saga, Japan
 3: Synchrotron Light Application Center, Saga University, Saga, Japan

14:00 - 14:30 **Novel Functionalities in Resonant Tunneling Diode Terahertz Sources**

We3-2

Invited

T. Arikawa (1)

1: Department of Applied Physics, The University of Osaka, Suita, Japan

14:30 - 15:00 **Multifrequency gain in quantum semiconductor superlattices**

We3-3

Invited

G. Valušis (1); V. Čižas (1,2); L. Subačius (2); D. Seliuta (2); N. V. Alexeeva (2); K. N. Alekseev (2)

1: Institute of Photonics and Nanotechnology, Department of Physics, Vilnius University, Vilnius, Lithuania

2: Department of Optoelectronics, Center for Physical Sciences and Technology, Vilnius, Lithuania

15:00 - 15:15 **Experimental Progress Toward High-Power and High-Temperature Operation of GaAs/AlGaAs THz-QCLs with Optimized Active Regions**

We3-4

Contributed

T. Ishida (1*); K. Yabe (2,1); K. Miyagawa (3); Y. Tsuda (3); K. Akiyama (3); Y. Suzuki (3); T.-T. Lin (4,1); S. Fujikawa (2,1); H. Yaguchi (2); H. Hirayama (1)

1: RIKEN, Wako, Saitama, Japan

2: Saitama University, Saitama, Japan

3: Mitsubishi Electric Corporation (MELCO), Amagasaki, Japan

4: Tohoku University, Sendai, Japan

15:15 - 15:25 **Photo Session**

15:25 - 15:45 **Coffee Break**

18:00 - 20:00 **Banquet at Gajoen Tokyo**

Technical Program of TeraTech-2026

THURSDAY November 12th, 2026

Session Th1	THz Communications	
09:00 - 10:00		Chair: Yahya Meziani
	09:00 - 10:00	Advanced assembly and packaging interconnects for ultra-wideband components
	Th1-1	<u>G. Carpintero</u> (1,2); Y. Kawamoto (2); A. Kumar (1); D. C. Gallego (2); J. A. Jaraba (1); A. Rivera (2); E. Falcon (1); T. Ishibashi (3); T. Nagatsuma
	Plenary	<i>1: Departamento de Tecnología Electrónica, Universidad Carlos III de Madrid, Leganés, Spain</i>
		<i>2: Leapwave Technologies, Leganés, Spain</i>
		<i>3: Wavepackets LLC, Naka-gun, Japan</i>
		<i>4: Graduate School of Science, The University of Tokyo, Tokyo, Japan</i>
10:00 - 10:30	Coffee Break	
Session Th2	Technologies for THz Communications and Sensing I	
10:30 - 12:00		Chair: Takashi Arikawa
	10:30 - 11:00	CMOS-Based RF Front-End Technologies for 300-GHz band Wireless Communication
	Th2-1	<u>S. Hara</u> (1,2); S. Tanaka (2); K. Takano (2,3); M. H. Mubarak (1); Y. Sugimoto (4); K. Sakakibara (4); K. Katayama (5); S. Kubo (6); S. Tanoi (1); L. Zhou (1); K. Kondo (1); Y. Shoji (1); N. Sekine (1); A. Kasamatsu (1); T. Yoshida (2); S. Amakawa (2); M. Fujishima (2)
	Invited	<i>1: National Institute of Information and Communications Technology, Tokyo, Japan</i>
		<i>2: Hiroshima University, Japan</i>
		<i>3: Tokyo University of Science, Japan</i>
		<i>4: Nagoya Institute of Technology, Japan</i>
		<i>5: National Institute of Technology, Tokuyama College, Japan</i>
		<i>6: THine Electronics, Inc., Japan</i>
	11:00 - 11:30	Terahertz Sensing Using a Box Type Arrayed Antenna Based on CMOS-RFIC
	Th2-2	<u>I. Somada</u>
	Invited	<i>Mitsubishi Electric</i>
	11:30 - 12:00	Resonant Tunneling Diode in Self-Injection Locked Radar Application
	Th2-3	<u>N. G. Weimann</u> (1,2); J. Watermann (1); F. van Essen (1); K. Müller (1)
	Invited	<i>1: Department of Components for High Frequency Electronics, University of Duisburg-Essen, Duisburg, Germany</i>
		<i>2: CENIDE, University of Duisburg-Essen, Duisburg, Germany</i>
12:00 - 13:30	Lunch	
Session Th3	Technologies for THz Communications and Sensing II	

13:30 - 15:00		Chair: Guillermo Carpintero
	13:30 - 14:00 Th3-1 Invited	Stable Continuous-Wave THz Source Enabled by a Monolithic Dual-Wavelength DFB Laser <u>C.-H. Wu</u> (1,2,3) <i>1: Graduate School of Advanced Technology, National Taiwan University, Taipei, Taiwan</i> <i>2: Graduate Institute of Photonics and Optoelectronics, National Taiwan University, Taipei, Taiwan</i> <i>3: Graduate Institute of Electronics Engineering, National Taiwan University, Taipei, Taiwan</i>
	Th3-2 Invited	Withdrawn <u>C.-S. Yang</u> <i>National Taiwan Normal Univ., Taiwan</i>
	14:00 - 14:15 Th3-3 Contributed	Terahertz Spikeless Waveguide Module for Communications and Sensing <u>N. H. Ngo</u> ; W. Gao; D. Ichikawa; M. Fujita <i>Graduate School of Engineering Science, The University of Osaka, Osaka, Japan</i>
	14:15 - 14:30 Th3-4 Contributed	Twisted Bilayer Silicon Photonic Crystals for High-Q Tunable Terahertz Filters <u>Y. Kondo</u> (1); H. Yamane (1); K. Shibata (2); M. Fujita (3); S. Murakami (1) <i>1: Osaka Research Institute of Science and Technology, Izumi, Osaka, Japan</i> <i>2: Institute of Laser Engineering, The University of Osaka, Suita, Osaka, Japan</i> <i>3: Graduate School of Engineering Science, The University of Osaka, Toyonaka, Osaka, Japan</i>
15:00 - 15:30		Closing