

2018 43rd International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz 2018)

**Nagoya, Japan
9-14 September 2018**

Pages 578-1320



**IEEE Catalog Number: CFP18IMM-POD
ISBN: 978-1-5386-3810-1**

**Copyright © 2018 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP18IMM-POD
ISBN (Print-On-Demand):	978-1-5386-3810-1
ISBN (Online):	978-1-5386-3809-5
ISSN:	2162-2027

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

TAILORED NANO-ELECTRONICS AND PHOTONICS WITH 2D MATERIALS	1
<i>Miriam Serena Vitiello</i>	
A NOVEL 300–520 GHZ TRIPIER WITH 50 % BANDWIDTH FOR MULTI-PIXEL HETERODYNE SIS ARRAY LOCAL OSCILLATOR SIGNAL GENERATION	2
<i>J. Treuttel ; C. Lee ; J. Kooi ; I. Mehdi</i>	
A HIGH HARMONIC TERAHERTZ FREQUENCY MULTIPLIER BASED ON PLASMONIC GRATING	4
<i>Juan-Feng Zhu ; Chao-Hai Du ; Lu-Yao Bao ; Zi-Chao Gao ; Shi Pan ; Pu-Kun Liu</i>	
THE ENHANCED THIRD HARMONIC SUPERRADIATION OF SMITH PURCELL TERAHERTZ RADIATION SOURCE.....	6
<i>Zhenhua Wu ; Pengfei Hu ; Min Hu ; Yueheng Cao ; Xiaoqiuyan Zhang ; Sen Gong ; Tao Zhao ; Shenggang Liu</i>	
A IMAGING SYSTEM BASED ON TWO BANDS RF MIXER AND OUTPUT MULTIPLIER IN ONE STAGE AT 340GHZ AND 170GHZ.....	8
<i>Jiang Jun ; An Jianfei ; He Yue ; Miao Li ; Tian Yao-Ling ; Chen Peng ; Hao Hai-Long</i>	
EXCITATION-WAVELENGTH DEPENDENT TERAHERTZ WAVE POLARIZATION CONTROL IN LASER-INDUCED FILAMENT	10
<i>L.L. Zhang ; C.L. Zhang ; X.M. Yu ; M. Liu ; Y.J. Zhao ; X.-C. Zhang</i>	
FREE ELECTRON LASER BASED ON A MULTI-STAGE SYSTEM OF RF WIGGLERS	13
<i>S.V. Kuzikov ; A.V. Savilov</i>	
POWERFUL TWO-STAGE THZ-RANGE FEL BASED ON INTENSE PARALLEL SHEET BEAMS: DESIGN, SIMULATIONS AND RECENT RESULTS	16
<i>Andrey V. Arzhannikov ; Naum S. Ginzburg ; Peter V. Kalinin ; Sergey A. Kuznetsov ; Nikolai Yu. Peskov ; Alexander S. Sergeev ; Stanislav L. Sinitsky ; Vasilii D. Stenonov ; Vladislav Yu. Zaslavsky</i>	
NOVOFEL AS SOURCE OF POWERFUL ULTRAMONOCROMATIC TUNABLE TERAHERTZ RADIATION	18
<i>Vitaly V. Kubarev ; Yaroslav V. Getmanov</i>	
LONG-TERM TUM-BY- TUM MEASUREMENTS OF ELECTRON BUNCH PROFILES AT MHZ REPETITION RATES IN A STORAGE RING WITH SINGLE-SHOT ELECTRO-OPTICAL SAMPLING.....	20
<i>Stefan Funkner ; Miriam Brosi ; Erik Briindermann ; Michele Caselle ; Michael J. Nasse ; Gudrun Niehues ; Lorenzo Rota ; Patrik Schonfeldr ; Marc Weber ; Anke-Susanne Müller</i>	
LASE INDUCED FINE STRUCTURE ON SI BY THZ-FEL IRRADIATION.....	22
<i>A. Irizawa ; S. Suga ; T. Nagashima ; A. Higashiya ; M. Hashida ; S. Sakabe</i>	
LINEAR DETECTION OF COHERENT SYNCHROTRON RADIATION EMITTED BY SINGLE ELECTRON BUNCHES USING ZERO-BIASED INGAAS SCHOTTKY DIODE DETECTORS.....	24
<i>N.S. Daghestani ; K. Parow-Souchon ; D. Pardo ; F. Cahill ; M. D. Frogley ; J. Langston ; B.E.J. Alderman ; G. Cinque ; P. G. Huggard</i>	
TURNING THZ COMMUNICATIONS INTO REALITY: STATUS ON TECHNOLOGY, STANDARDIZATION AND REGULATION	25
<i>Thomas Kütner</i>	
CHANNEL CHARACTERISTICS FOR TERAHERTZ WIRELESS COMMUNICATIONS	28
<i>J. Ma ; R. Shrestha ; L. Moeller ; D. M. Mittleman</i>	
SINGLE CHANNEL L00 GBIT/S LINK IN THE 300 GHZ BAND.....	29
<i>V.K. Chinni ; P. Latzel ; M. Zegaoui ; C. Coinon ; X. Wallart ; E. Peytavit ; J.F. Lampin ; K. Engenhardt ; P. Szriftgiser ; M. Zaknounge ; G. Ducournau</i>	
A HIGH-SPEED QPSK/16-QAM 1-M WIRELESS LINK WITH A TUNABLE 220–260 GHZ LO CARRIER IN SIGE HBT TECHNOLOGY	31
<i>J. Grzyb ; P. R. Vazquez ; Bernd Heinemann ; U. R. Pfeiffer</i>	
CONSIDERATIONS ON LOCAL OSCILLATOR ISOLATION IN A TERAHERTZ WIRELESS LINK USED FOR FUTURE COMMUNICATION SYSTEMS.....	33
<i>Iulia Dan ; Christopher M. Grotsch ; Shoichi Shiba ; Ingmar Kallfass</i>	
COMPACT J-BAND OSCILLATORS WITH LM RF OUTPUT POWER AND OVER 110 GHZ MODULATION BANDWIDTH.....	35
<i>Abdullah Al-Khalidi ; Jue Wang ; Edward Wasige</i>	
ULTRAFAST DYNAMICS AND CONTROL IN HIGH-TEMPERATURE SUPERCONDUCTORS.....	37
<i>R.D. Averitt</i>	

COHERENT AND INCOHERENT DYNAMICS OF CHARGE-TRANSFER EXCITONS	38
<i>P.-H. Richter ; M. Stein ; C. Lammers ; C. Fuchs ; W. Stolz ; M. Koehl ; O. Vanska ; M. J. Weseloh ; M. Kira ; S. W. Koeh</i>	
FIELD CORRELATION MEASUREMENTS OF PHOTON MODES WITH SUB-UNITY PHOTON OCCUPATION PER MODE INSIDE A FABRY-PEROT CAVITY	41
<i>Ileana-Cristina Benca-Chelmus ; Francesca Fabiana Settembrini ; Giacomo Scalari ; Jérôme Faist</i>	
TERAHERTZ NANO-STREAKING: RESOLVING NEARFIELDS AND PLASMON PROPAGATION	42
<i>Lara Wimmer ; Georg Herink ; Claus Ropers</i>	
RESPONSIBILITY OF PLASMA CURRENT FOR THE GENERATION OF THE HIGHEST FREQUENCY PART OF ULTRABROADBAND COHERENT INFRARED PULSES WITH 200-THZ BANDWIDTH	44
<i>Eiichi Matsubara ; Masaya Nagai ; Masaaki Ashida</i>	
NANOTHERMOMETRY OF ELECTRONS AND PHONONS	46
<i>Qianchun Weng ; Robb Puttock ; Craig Barton ; Vishal Panchal ; Le Yang ; Zhenghua An ; Yusuke Kajihara ; Wei Lu ; Alexander Tzalenchuk ; Susumu Komiyama</i>	
FREQUENCY NOISE POWER SPECTRAL DENSITY OF A MOLECULAR THZ-LASER USING A FS- FIBRE LASER COMB WITH 1 GHZ REPETITION RATE	49
<i>A. Pagies ; S. Eliet ; J-F. Lampin ; G. Santarelli ; W. Hansel ; R. Holzwarth ; S. Barbieri</i>	
ALL-OPTICAL VECTOR NETWORK ANALYZER WITH 500 GHZ BANDWIDTH AND 76 MHZ FREQUENCY RESOLUTION	52
<i>Paul Struszewski ; Mark Bieler</i>	
TOTAL INTERNAL REFLECTION GEOMETRY FOR SENSITIVE THZ MATERIAL CHARACTERIZATION	54
<i>Xudong Liu ; Qiushuo Sun ; Yiwen Sun ; Emma Pickwell-Macpherson</i>	
TIME-UNRESOLVABLE THIN FILM CHARACTERIZATION USING A GENETIC ALGORITHM	56
<i>Xuequan Chen ; Emma Pickwell-Macpherson</i>	
A REFERENCE MATERIAL FOR ACCURATE THZ MEASUREMENTS	58
<i>A. Steiger ; M. Kehrt ; A. Deninger</i>	
INTEGRATED MICROWAVE-PHOTONICS (IMWP) FOR MOBILE TERAHERTZ SYSTEMS	60
<i>Andreas Stöhr</i>	
OPTIMIZING AND EXPERIMENTAL INVESTIGATION OF A KA-BAND RELATIVISTIC BACKWARD WAVE OSCILLATOR OPERATING AT TM02MODE	63
<i>Dongyang Wang ; Yan Teng ; Shuang Li ; Yanchao Shi ; Yibing Cao ; Guangshuai Zhang ; Xiaoling Wu ; Jun Sun</i>	
THE MULTI-FREQUENCY ECRH SYSTEM AT ASDEX UPGRADE - CURRENT STATUS AND PLANS -	65
<i>D. Wagner ; J. Stober ; M. Kircher ; F. Leuterer ; F. Monaco ; M. Munich ; M. Schubert ; H. Zohm ; G. Gantenbein ; J. Jelonnek ; M. Thumm ; A. Meier ; T. Scherer ; D. Strauss ; W. Kasperek ; C. Lechte ; B. Plaum ; A. Zach ; A.G. Litvak ; G.G. Denisov ; A. Chirkov ; V. Malygin ; L.G. Popov ; V.O. Nichiporenko ; V.E. Myasnikov ; E.M. Tai ; E.A. Solyanova</i>	
ELECTRON BERNSTEIN WAVE DETECTION BY SUB-TERA-HZ SCATTERING IN THE QUEST	67
<i>S. Kubo ; H. Idei ; Y. Tatematsu ; T. Saito ; M. Iizawa</i>	
FREQUENCY DEPENDENCE OF ATMOSPHERIC MILLIMETER WAVE BREAKDOWN PLASMA	69
<i>Yasuhisa Oda ; Masayuki Takahashi ; Kuniyoshi Tabata ; Naofumi Ohnishi ; Kimiya Komurasaki ; Keishi Sakamoto</i>	
THZ AQUEOUS PHOTONICS AND BEYOND	71
<i>Q. Jin ; Y.W. E ; L.L. Zhang ; C.L. Zhang ; A. Tcytkin ; S. Kozlov ; X.-C. Zhang</i>	
THE LONG JOURNEY FROM FAR-INFRARED TO THZ	75
<i>Qing Hu</i>	
IN-SITU MONITORING OF POWDER DENSITY USING TERAHERTZ PULSED IMAGING	76
<i>Daniel Markl ; Runqiao Dong ; Jingyi Li ; J Axel Zeitler</i>	
QUANTIFICATION OF LIQUIDS WITH TERAHERTZ WAVES	79
<i>Andreas Keil ; Fabian Friederich</i>	
THICKNESS MEASUREMENTS WITH MULTISTATIC SPARSE ARRAYS	82
<i>Andreas Keil ; Nina S. Schreiner ; Fabian Friederich</i>	
ALL-ELECTRONIC HIGH-RESOLUTION TERAHERTZ THICKNESS MEASUREMENTS	84
<i>Nina S. Schreiner ; Wolfgang Sauer-Greff ; Ralph Urbansky ; Fabian Friederich</i>	

TERAHERTZ QUASIPARTICLE ACCELERATION: FROM ELECTRON-HOLE COLLISIONS TO LIGHTWAVE VALLEYTRONICS.....	86
<i>F. Langer ; C. P. Schmid ; S. Schlauderer ; P. Nagler ; C. Schüller ; T. Korn ; M. Gmitra ; J. Fabian ; P. G. Hawkins ; J. T. Steiner ; U. Huttner ; S. W. Koch ; M. Kira ; R. Huber</i>	
INFLUENCE OF PUMP LASER PHASE AND AMPLITUDE DISTORTIONS ON TERAHERTZ GENERATION EFFICIENCY	89
<i>Lu Wang ; Arya Fallahi ; Koustuban Ravi ; Franz X. Kärtner</i>	
MASS SPECTROMETRY FOR THE ORGANIC SOLIDS USING AN INTENSE THZ FREE ELECTRON LASER PULSE.....	91
<i>Masaya Nagai ; Eiichi Matsubara ; Masaaki Ashida ; Masanori Fuyuki ; Keigo Kawase ; Akinori Irizawa ; Goro Isoyama ; Tun Aoki ; Michisato Tovoda</i>	
NARROWBAND THZ GENERATION BY COLLIDING PLASMA WAVES WITH DIFFERENT TRANSVERSE SIZES	93
<i>Vladimir V. Annenkov ; Igor V. Timofeev ; Evgeniia P. Volchok ; Vadim K. Khudyakov</i>	
GENERATION OF HIGH-POWER CHERENKOV SUPERRADIANCE PULSES USING OVERSIZED 2D SLOW-WAVE STRUCTURES.....	95
<i>V. Zaslavsky ; N. Ginzburg ; A. Malkin ; A. Sergeev ; I. Zotova</i>	
INCOHERENT, SPATIALLY-MAPPED THZ SPECTRAL ANALYSIS.....	97
<i>Daniel Headland ; Philipp Hillger ; Robin Zatta ; Ullrich Pfeiffer</i>	
BROADBAND LOW-PERMITTIVITY ELLIPTICAL LENS FED BY A LEAKY-WAVE ANTENNA FOR COMMUNICATIONS APPLICATIONS.....	99
<i>Darwin Blanco Montero ; Marta Arias Campo ; Nuria Llobat</i>	
EVOLUTION OF ROD ANTENNAS FOR INTEGRATED TERAHERTZ PHOTONICS.....	101
<i>Withawat Withayachumnankul ; Ryoumei Yamada ; Masayuki Fujita ; Tadao Nagatsuma</i>	
TERAHERTZ APPLICATIONS INSPIRED BY PHOTONICS	103
<i>Tadao Nagatsuma</i>	
TERAHERTZ SPECTROSCOPY OF 2D MATERIALS.....	106
<i>Guangjiang Li ; Kateryna Kushnir ; Mengjing Wang ; Yongchang Dong ; Sergii Chertopalov ; Apparao M. Rao ; Vadym N. Mochalin ; Ramakrishna Podila ; Kristie Koski ; Lyubov V. Titova</i>	
CHANGED GRAPHENE THZ CONDUCTIVITY MAPPING UNDER E-BEAM EXCITATION.....	109
<i>Xiaodong Feng ; Zhuocheng Zhang ; Sen Gong ; Min Hu ; Jun Zhou ; Shenggang Liu</i>	
PROBING PHOTO-INDUCED VIBRATIONAL KINETICS IN PEROVSKITE THIN FILMS.....	111
<i>Qiushuo Sun ; Xudong Liu ; Jie Cao ; Rayko I. Stantchev ; Yang Zhou ; Xuequan Chen ; Edward P.J. Parrott ; Ni Zhao ; Emma Pickwell-Macpherson</i>	
STRONG TERAHERTZ PLASMONIC RESONANCES IN THIN-FILM CD₃AS₂: A THREE-DIMENSIONAL DIRAC SEMIMETAL.....	113
<i>Ashish Chanana ; Joshua Winger ; Prashanth Gopalan ; Neda Lotfizadeh ; Vikram Deshpande ; Ajay Nahata ; Michael Scarpulla ; Berardi Sensale-Rodriguez</i>	
REAL TIME THICKNESS MEASUREMENT BASED ON TERAHERTZ TIME-DOMAIN SPECTROSCOPY FOR CHIP-TOP EPOXY MOLDING COMPOUND IN SEMICONDUCTOR PACKAGE	114
<i>Gyung-Hwan Oh ; Dong-Woon Park ; Dug-Joong Kim ; Hak-Sung Kim</i>	
VISUALIZATION OF THE INTERNAL FIELD IN THE GAAS-BASED SOLAR CELL UNDER ITS OPERATING CONDITION WITH TERAHERTZ RADIATION	115
<i>K. Miyagawa ; M. Nagai ; C. Kim ; H. Akiyama ; Y. Kanemitsu ; M. Ashida</i>	
EVALUATION OF LI-ION BATTERY USING A TERAHERTZ CHEMICAL MICROSCOPE	117
<i>Yuki Akiwa ; Kentarou Fujiwara ; Yumi Yoshikawa ; Takashi Teranishi ; Kenji Sakai ; Toshihiko Kiwa ; Keiji Tsukada</i>	
MILLIMETER-WAVE DISCHARGE BELOW CRITICAL INTENSITY USING A 28 GHZ GYROTRON.....	119
<i>Kuniyoshi Tabata ; Yusuke Nakamura ; Kimiya Komurasaki ; Tsuyoshi Kariya ; Ryutaro Minami</i>	
INTERFEROMETRY-AIDED TERAHERTZ TIME-DOMAIN SPECTROSCOPY FOR ROBUST MEASUREMENTS IN REFLECTION.....	121
<i>Daniel Molter ; Stefan Weber ; Tobias Pfeiffer ; Jens Klier ; Sebastian Bachtler ; Frank Ellrich ; Joachim Jonuscheit ; Georg Von Freymann</i>	
EXTREMELY FAST THICKNESS MEASUREMENTS WITH AN ECOPS-BASED TD-THZ SYSTEM.....	123
<i>M. Yahyapour ; K. Dutzi ; B. Schmauss ; P. Leisching ; N. Vieweg ; A. Deninger</i>	
DEMONSTRATION OF A TILTED-PULSE-FRONT PUMPED PLANE-PARALLEL SLAB TERAHERTZ SOURCE.....	125
<i>Jozsef A. Fiilopl ; Priyo S. Nugraha ; Laszlo Palfalvi ; Gergo Krizsarr ; Csaba Lornbosi ; Gyorgy Toth ; Gábor Almasi ; Janos Hebling</i>	

ELECTRICAL SWITCHING BETWEEN TERAHERTZ SECOND AND THIRD HARMONIC GENERATION IN PHOTO-DOPED GAAS	127
<i>Kanghee Lee ; Jagang Park ; Bong Joo Kang ; Won Tae Kim ; Hyeon-Don Kim ; Soo-Jeong Baek ; Kwang Jun Ahn ; Bumki Min ; Fabian Rotermund</i>	
DAMAGE AND MICROPATTERN FORMATION IN GE-SB-TE PHASE CHANGE MATERIALS INDUCED BY INTENSE TERAHERTZ PULSE TRAIN	129
<i>Kotaro Makino ; Kosaku Kato ; Keisuke Takano ; Yuta Saito ; Junji Tominaga ; Takashi Nakano ; Goro Isoyama ; Makoto Nakajima</i>	
COMPACT THZ ACCELERATORS: FROM FICTION TO REALITY	131
<i>F. X. Kärtner ; D. Zhang ; A. Fallahi ; M. Hemmer ; M. Fakhari ; Y. Hua ; H. Cankaya ; A.-L. Calendron ; L. E. Zapata ; N. H. Matlis</i>	
SPIN-CURRENT RELATED TERAHERTZ EMISSION FROM THE CO/PT HETEROSTRUCTURE.....	134
<i>Hongsong Qiu ; Kosaku Kato ; Kazumasa Hirota ; Nobuhiko Sarukura</i>	
COHERENT CONTROL OF FEMTOSECOND SPIN CURRENT INVESTIGATED BY POLARIZATION DEPENDENT TERAHERTZ EMISSION SPECTROSCOPY IN FERROMAGNETIC HETEROSTRUCTURES	136
<i>Yang Gao ; Deyin Kong ; Bo Wang ; Xiaojun Wu ; Tianxiao Nie ; Li Wang ; Cunjun Ruan ; Weisheng Zhao ; Jungang Miao</i>	
SINGLE-LASER POLARIZATION-CONTROLLED OPTICAL SAMPLING SYSTEM FOR THZ-TDS	138
<i>Michael Kolano ; Oliver Boidol ; Stefan Weber ; Daniel Molter ; Georg V. Freymann</i>	
ENHANCEMENT OF THZ GENERATION USING MULTILAYER SPINTRONIC EMITTERS	141
<i>L. Scheuer ; G. Torosyan ; S. Keller ; E. Th. Pappaioannou ; R. Beigang</i>	
PROPERTIES OF AN OPTIMIZED FE/PT-BASED SPINTRONIC TERAHERTZ EMITTER: EXCITATION POWER AND WAVELENGTH DEPENDENCES	142
<i>Valynn Katrine Mag-Usara ; Garik Torosyan ; Jessica Afalla ; Joselito Muldera ; Dmitry Bulgarevich ; Hideaki Kitahara ; Mary Clare Sison Escañó ; Sascha Keller ; Laura Scheuer ; Johannes L'Huillier ; René Beigang ; Evangelos Th. Papaioannou ; Masahiko Tani</i>	
ELECTRICALLY TUNABLE TERAHERTZ LIQUID CRYSTAL SPATIAL PHASE SHIFTER.....	144
<i>Kaidi Lil ; Rui Zhang ; Zefeng Chen ; Abhishek K. Srivastava ; Tao Xin ; Cunlin Zhang ; Vladimir G. Chigrinov ; Hon Ki Tsang ; Emma Pickwell-Macpherson</i>	
A NEAR-PERFECT THZ MODULATOR ENABLED BY IMPEDANCE MATCHING METHOD WITH VO₂ THIN FILMS	146
<i>Liang-Hui Du ; Hong-Fu Zhu ; Jiang Li ; Qi-Wu Shi ; Li-Guo Zhu</i>	
TRANSMISSION LOSS IN COPLANAR WAVEGUIDE AND PLANAR GOURBAU LINE BETWEEN 0.75 THZ AND 1.1 THZ	148
<i>J. Cabello-Sánchez ; H. Rodilla ; V. Drakinskiy ; J. Stake</i>	
COMPARATIVE STUDY OF TERAHERTZ WAVEGUIDE IN REFLECTIVE MODE CONFIGURATION	150
<i>M. Pan ; J.P. Guillet ; G. Humbert ; F. Fauquet ; D. Lewis ; P. Mounaix</i>	
CHARACTERIZING A TERAHERTZ-DRIVEN DIELECTRIC-LINED WAVEGUIDE FOR ELECTRON BEAM MANIPULATION	152
<i>V. Georgiadis ; A. Healy ; M.T. Hibberd ; G. Burt ; S.P. Jamison ; D.M. Graham</i>	
ULTRAVIOLET LIGHT-INDUCED TERAHERTZ MODULATION OF AN INDIUM OXIDE FILM.....	154
<i>Hongyu Ji ; Bo Zhang ; Wei Wang ; Longfeng Lv ; Jingling Shen</i>	
ULTRAFast CHARGE CARRIER DYNAMICS IN DIKETOPYRROLOPYRROLE-LINKED TETRABENZOPORPHYRIN FILMS STUDIED BY TIME-RESOLVED TERAHERTZ SPECTROSCOPY	156
<i>Kaoru Ohta ; Yuichi Hiramatsu ; Kohtaro Takahashi ; Mitsuharu Suzuki ; Hiroko Yamada ; Keisuke Tominaga</i>	
TERAHERTZ TIME DOMAIN SPECTROSCOPY FOR SPIN REORIENTATION PHASE TRANSITION IN SMFeO₃ AT HIGH TEMPERATURE	158
<i>M. Nakajima ; K. Hirota ; H. Qiu ; K. Kato ; M. Yoshimura</i>	
TERAHERTZ-INFRARED ELECTRODYNAMICS OF LEAD-DOPED SINGLE CRYSTALLINE Ba_{1-x}Pb_xFe₁₂O₁₉ M-TYPE HEXAGONAL FERRITE	161
<i>Liudmila Alyabyeva ; Alexander Chechetkin ; Victor Torgashev ; Elena Zhukova ; Denis Vinnik ; Anatoly Prokhorov ; Svetlana Gudkova ; Boris Gorshunov</i>	
POLAR SOFT MODE IN TITANIUM-DOPED SINGLE CRYSTALLINE BaFe_{12-x}Ti_xO₁₉ M-TYPE HEXAFERRITE	163
<i>Liudmila Alyabyeva ; Samvel Yeghyan ; Victor Torgashev ; Elena Zhukova ; Denis Vinnik ; Anatoly Prokhorov ; Svetlana Gudkova ; Boris Gorshunov</i>	

THE 2018 YOUNG SCIENTIST AWARD LECTURE: TERAHERTZ DIAGNOSTICS IN MULTIDISCIPLINARY FIELDS	165
<i>E. Castro-Camus</i>	
THREE-COLOR SPECTROSCOPIC TERAHERTZ IMAGES AS AN INDICATOR FOR DIABETIC FOOT SYNDROME DETERIORATION	166
<i>G.G. Hernandez-Cardoso ; M. Alfaro-Gomez ; S.C. Rojas-Landeros ; I. Salas-Gutierrez ; E. Castro-Camus</i>	
STUDIES ON PCA FOR BREAST TISSUE SEGMENTATION	168
<i>Q. Cassar ; A. Al-Ibadi ; L. Mavarani ; P. Hillger ; J. Grzyb ; G. Macgrogan ; U.R. Pfeiffer ; T. Zimmer ; J.P. Guillet ; P. Mounaix</i>	
NEW TERAHERTZ SECURITY BODY SCANNER	170
<i>Gombo E. Tsydynzhapov ; Pavel A. Gusikhin ; Vyacheslav M. Muravev ; Ivan V. Andreev ; Igor V. Kukushkin</i>	
VOLUME INSPECTION OF COMPOSITE STRUCTURES IN AIRCRAFT RADOMES WITH FMCW TERAHERTZ RADAR AT 100 AND 150 GHZ	171
<i>Maris Bauer ; Andreas Keil ; Carsten Matheis ; Joachim Jonuscheit ; Michael Moor ; David Denman ; Jamie Bramble ; Nick Savage ; Fabian Friederich</i>	
STUDY OF 3D IMAGING USING A CW DIODE TERAHERTZ SOURCE FOR PRACTICAL APPLICATIONS	174
<i>Homare Momivama ; Yoshiaki Sasaki ; Isao Yosbimine ; Shigenori Nagano ; Tetsuya Yuasa ; Chiko Otani</i>	
MONITORING SOYBEAN LEAF WATER STATUS USING TERAHERTZ SPECTROSCOPY	176
<i>Bin Li ; Xuting Zhao</i>	
OPTICAL RESPONSE CHANGE OF BLACK RUBBERS UNDER CYCLIC DEFORMATION INVESTIGATED BY TERAHERTZ POLARIZATION SPECTROSCOPY	177
<i>T. Tsujimoto ; A. Moriwaki ; M. Fujii ; M. Okano ; S. Watanabe</i>	
IN SITU OBSERVATION OF LIPSS FORMATION ON SI WAFERS UNDER THZ-FEL IRRADIATION	179
<i>T. Nagashima ; A. Irizawa ; M. Hashida ; A. Higashiya ; S. Suga ; S. Sakabe</i>	
GAIN RECOVERY DYNAMICS IN BROADBAND TERAHERTZ QUANTUM CASCADE LASERS	181
<i>Christian G. Demtl ; Giacomo Scalari ; Mattias Beck ; Jérôme Faist ; Karl Unterrainer ; Juraj Darmo</i>	
THIRD HARMONIC GENERATION FROM INSB EXCITED BY FREE ELECTRON LASER	183
<i>Thanh Nhat Khoa Phan ; Kosaku Kato ; Goro Isoyama ; Masashi Yoshimura ; Shinsuke Fujioka ; Makoto Nakajima</i>	
DUAL-MODE TUNABLE TERAHERTZ GENERATION IN LITHIUM NIOBATE DRIVEN BY SPATIALLY SHAPED FEMTOSECOND LASER	185
<i>Sen-Cheng Zhong ; Yu Zhu ; Liang- Hui Du ; Zhao-Hui Zhai ; Jiang Li ; Jian-Heng Zhao ; Ze-Ren Li ; Li-Guo Zhu</i>	
TERAHERTZ RECTIFICATION IN A TRIANGULAR RING OF QUANTUM BARRIERS	187
<i>Dai-Sik Kim</i>	
MAGNETIC-FIELD PATTERNING OF A SPINTRONIC SOURCE FOR ARBITRARY TERAHERTZ POLARIZATION CONTROL	188
<i>M.T. Hibberd ; D.S. Lake ; N.A.B. Johansson ; T. Thomson ; S.P. Jamison ; D.M. Graham</i>	
CONTINUOUS WAVE GENERATION UP TO 1.3 THZ USING ANTENNA-COUPLED SILICON INTEGRATED GE PHOTODIODES	190
<i>Peter Offermans ; Lei Zhang ; Peter De Heyn ; Soije Janssen ; Sadhishkumar Balakrishnan ; Xavier Rottenberg ; Joris Van Campenhour</i>	
IMPROVING EFFICIENCY OF TERAHERTZ PHOTOCONDUCTIVE ANTENNA USING DIELECTRIC NANO-LAYER ENCAPSULATION	192
<i>Abhishek Gupta ; Goutam Rana ; Arkabrata Bhattacharya ; Abhishek Singh ; Ravikumar Jain ; Rudheer D. Bapat ; S.P. Duttagupta ; S.S. Prabhu</i>	
TERAHERTZ- WAVE GENERATION DEVICES USING ELECTRO-OPTIC POLYMER WAVEGUIDES AND TERAHERTZ-WAVE LOW-LOSS CLADDING MATERIALS	194
<i>Takahiro Kaji ; Yukihiro Tominari ; Toshiki Yamada ; Shingo Saito ; Isao Morohashi ; Akira Otomo</i>	
HIGH-EFFICIENCY SUB-SINGLE-CYCLE THZ WAVE GENERATION BY THREE-COLOR AIR PLASMA	196
<i>Binbin Zhou ; Yazhou Wang ; Lujun Hong ; Daena Madhi ; Peter Uhd Jepsen</i>	
RESULTS FROM MM-WAVE ACCELERATING STRUCTURE HIGH-GRADIENT TESTS	197
<i>E. A. Nanni ; V. Dolgashev ; S. Jawla ; J. Neilson ; M. Othman ; J. Picard ; S. Schaub ; B. Spataro ; S. Tantawi ; R. J. Temkin</i>	
PSEUDOSPARK-SOURCED SHEET ELECTRON BEAM FOR APPLICATION IN HIGH POWER MILLIMETER WAVE RADIATION GENERATION	199
<i>H. Yin ; G. Shu ; L. Zhang ; W. Rej ; J. Zhao ; A.D.R. Phelps ; A.W. Cross</i>	

NANO-STRUCTURED TOP CONTACT WITH LOW OPTICAL POLARIZATION DEPENDENCE FOR THZ GENERATION USING PHOTODIODES	201
<i>S. Bretin ; M. Billet ; E. Peytavit ; F. Vaurette ; C. Coinon ; X. Wallart ; J-F. Lampin ; M. Zegaoui ; G. Ducournau ; M. Zaknounge</i>	
GRAPHENE BALLISTIC RECTIFIERS FOR THZ DETECTION AND IMAGING	203
<i>G. Auton ; D. But ; J. Zhang ; E. Hill ; D. Coquillat ; C. Consejo ; P. Nouvel ; W. Knap ; L. Varani ; F. Teppe ; J. Torres ; A. Song</i>	
PLANAR ASYMMETRIC SEMICONDUCTOR NANODIODES FOR THZ DETECTION.....	205
<i>J. Mateos ; I. Íñiguez-De-La-Torre ; S. Pérez ; H. Sánchez-Mírtin ; J. A. Novoa ; G. Ducournau ; C. Gaquiere ; T. González</i>	
HIGH-T_C SUPERCONDUCTING METASURFACES FOR ULTRA-STRONG COUPLING EXPERIMENTS AT THZ FREQUENCIES.....	207
<i>Janine Keller ; Giacomo Scalari ; Felice Appugliese ; Eleni Mavrona ; Martin Süess ; Mattias Beck ; Jérôme Faist</i>	
TERAHERTZ PHOTOCONDUCTIVITY IN OPTIMALLY AND UNDERDOPED YBA₂CU₃O₇-D	210
<i>Alexandra V. Galeeva ; Alexey E. Parafin ; Dmitry V. Masterov ; Sergey A. Pavlov ; Andrey L. Pankratov ; Sergey N. Danilov ; Ludmila I. Ryabova ; Dmitry R. Khokhlov</i>	
PICOSECONDS ION MOTIONS IN MATERIALS FOR SOLID OXIDE FUEL CELL.....	212
<i>Tomohide Morimoto ; Masaya Nagai ; Masaaki Ashida ; Yoichiro Yokotani ; Yuji Okuyama ; Yukimune Kani</i>	
CHARACTERIZATION OF MATERIALS IN THE 50–750 GHZ RANGE USING A SCATTEROMETER.....	214
<i>Tonny Rubrek ; Per H. Nielsen ; Cecilia Cappellin ; Roger Appleby ; Richard Wylde ; Phil Atkin ; E. Saenz</i>	
PHASE DELAY OF TERAHERTZ FABRY-PEROT RESONATOR CHARACTERIZED BY A PHOTONIC TWO-TONE SPECTROSCOPY SYSTEM WITH SELF-HETERODYNE RECEIVER.....	216
<i>S. Dülme ; N. Schirnski ; M. Steeg ; P. Lu ; B. Khani ; C. Brenner ; M. R. Hofmann ; A. Stöhr</i>	
INTENSITY-SUPPRESSION OF CALCIUM SIGNALING IN HUMAN SKIN TISSUE MODELS INDUCED BY INTENSE THZ PULSES	218
<i>Cameron M. Hough ; David N. Purschke ; Chenxi Huang ; Lyubov V. Titova ; Olga Kovalchuk ; Brad J. Warkentin ; Frank A. Hegmann</i>	
LABEL-FREE MONITORING OF CELL DEATH INDUCED BY OXIDATIVE STRESS IN LIVING HUMAN CELLS USING TERAHERTZ ATR SPECTROSCOPY.....	221
<i>Yi Zou ; Qiaou Liu ; Jianheng Zhao ; Liguao Zhu</i>	
THE EFFECT OF PRESSURE ON TERAHERTZ IN VIVO SPECTROSCOPIC IMAGING	223
<i>Jiarui Wang ; Rayko I. Stantchev ; Qiushuo Sun ; Emma Pickwell-Macpherson</i>	
DETECTION OF VOLATILE ORGANIC COMPOUNDS IN EXHALED HUMAN BREATH BY MILLIMETER- WAVE/TERAHERTZ SPECTROSCOPY.....	225
<i>N. Rothbart ; K. Schmalz ; J. Borngräber ; D. Kissinger ; H.-W. Hübers</i>	
COLLAGEN AND MUSCLE FIBROUS TISSUE AS A CONTRAST MECHANISM IN THE THZ REGION.....	227
<i>Shuting Fan ; Zhengfang Qian ; Vincent P. Wallace</i>	
INVESTIGATION INTO POLYMORPHISM OF LAMIVUDINE USING TERAHERTZ TIME- DOMAIN SPECTROSCOPY	229
<i>Dan Qin ; Huili Zhang ; Zhi Hong ; Yong Du</i>	
TERAHERTZ IRRADIATION STIMULATES ACTIN POLYMERIZATION.....	231
<i>Shota Yamazaki ; Masahiko Harata ; Toshitaka Idehara ; Keiji Konagaya ; Ginji Yokoyama ; Hiromichi Hoshina ; Yuichi Ogawa</i>	
EPIGENETIC MODIFICATIONS INDUCED BY SUBMILLIMETER WAVE EXPOSURE	233
<i>Jody C. Cantu ; Xomalin G. Peralta ; Cesario Z. Cerna ; Ibtissam Echchgadda</i>	
IMPACT OF SUB-MILLIMETER WAVES ON THE ASSEMBLY KINETICS OF MICROTUBULES	235
<i>Xomalin G. Peralta ; Jody C. Cantu ; Cesario Z. Cerna ; Ibtissam Echchgadda</i>	
INVESTIGATION OF GLYCATION PRODUCTS BY THZ TIME-DOMAIN SPECTROSCOPY.....	236
<i>O. P. Cherkasova ; M.M. Nazarov ; Yu.V. Kistenev ; A.P. Shkurinov ; A. V. Borisov ; E.E. Ilyasova ; A.I. Knyazkova</i>	
EVALUATION OF PENETRATION OF COSMETIC LIQUIDS USING TERAHERTZ TIME OF FLIGHT METHOD	238
<i>T. Kuroda ; T. Morimoto ; K. Sakai ; T. Kiwa ; K. Tsukada</i>	
STUDY ON DIFFERENCE AMONG THE THZ SPECTRA OBTAINED FROM COMMERCIAL CAFFEINE AND SODIUM BENZOATE (CSB) ON THE MARKET.....	240
<i>Tomoaki Sakamoto ; Tetsuo Sasaki ; Yasuto Fujimaki ; Toshiyuki Chikuma ; Yukihiro Goda</i>	
TERAHERTZ PULSE DATA DIMENSIONAL REDUCTION AND CLASSIFICATION FOR HEPATIC TISSUE SAMPLES	242
<i>Zhenwei Zhang ; Haishun Liu ; Cunlin Zhang</i>	

TERAHERTZ POLARIMETRIC SENSING FOR LINEAR ENCODER.....	245
<i>K. Sadamoto ; W. Tsujita ; Y. Sawa ; B. Wang ; R. Ma ; P. Wang ; K. H. Teo ; P. V. Orlik ; K. Kato ; M. Nakajima</i>	
MANNED SPACECRAFT SAFELY NONDESTRUCTIVE INSPECTION WITH TERAHERTZ	247
<i>Xuling Lin ; Zhi Zhang ; Xiaoli Ji ; Zhongbo Zhu ; Jianbing Zhang</i>	
TERAHERTZ TIME DOMAIN SPECTROSCOPY FOR PLASTIC FILMS USING A TAPERED PARALLEL PLATE WAVEGUIDE	249
<i>Ayano Kitamura ; Ayato Iba ; Makoto Ikeda ; Makoto Nakajima</i>	
TERAHERTZ IMAGING OF MULTI-LEVEL PSEUDO-RANDOM REFLECTANCE.....	251
<i>H. Fu ; P. Wang ; T. Koike-Akino ; R. Ma ; B. Wang ; P. V. Orlik ; W. Tsujita ; K. Sadamoto ; Y. Sawa ; K. Kato ; M. Nakajima</i>	
QUALITY EVALUATION OF ENGINEERED WOOD BY THZ-TDS	253
<i>Moe Kashima ; Satoru Tsuchikawa ; Tetsuya Inagaki</i>	
INSPECTION OF MICROFIBRIL ANGLE OF SUGI WOOD BY THZ- TDS	255
<i>H. Wang ; S. Tsuchikawa ; T. Inagaki</i>	
INFRARED MODULATORS BASED ON LIQUID CRYSTALS.....	257
<i>Urszula Chodorow ; Rafal Mazur ; Przemyslaw Morawiak ; Wiktor Piecek ; Przemyslaw Kula ; Piotr Harmata ; Piotr Martyniuk</i>	
FOUR-CHANNEL TERAHERTZ TIME-DOMAIN SPECTROSCOPY SYSTEM FOR INDUSTRIAL PIPE INSPECTION.....	259
<i>Jens Klier ; Dmytro Kharik ; Wladimir Zwetow ; Dominic Gundacker ; Stefan Weber ; Daniel Molter ; Frank Ellrich ; Joachim Jonuscheit ; Georg Von Freymann</i>	
NEUTRON GENERATOR BASED ON A PLASMA SOURCE WITH GYROTRON HEATING.....	261
<i>A.V. Sidorov ; S.V. Golubev ; I.V. Izotov ; R.L. Lapin ; S.V. Razin ; R.A. Shaposhnikov ; V.A. Skalyga ; A.F. Bokhanov ; M.Yu. Kazakox ; S.P. Shlepnev ; M.Yu. Glyavin ; A.I. Tsvetkov ; M.V. Morozkin ; M.D. Proyavin ; I. V. Plotnikov</i>	
PHARMACEUTICAL ANALYSIS USING BROADBAND TERAHERTZ QUANTUM CASCADE LASER SOURCES BASED ON DIFFERENCE FREQUENCY GENERATION	263
<i>Kazuki Horita ; Atsushi Nakanishi ; Kazuue Fujita ; Koichiro Akiyama ; Tomoaki Sakamoto ; Yukihiko Goda ; Hironori Takahashi</i>	
QUANTITATIVE ANALYSIS AND INSPECTION FOR PHARMACEUTICAL POLYMORPHISM WITH INJECTION-SEEDED TERAHERTZ PARAMETRIC GENERATION TECHNIQUE.....	265
<i>Mizuki Mohara ; Kenji Aiko ; Kei Shimura ; Touya Ono</i>	
ULTRA-BROADBAND THZ SPECTROSCOPY FOR SENSING AND IDENTIFICATION FOR SECURITY APPLICATIONS.....	267
<i>Korbinian Kaltenecker ; Binbin Zhou ; Kai-Henning Tybussek ; Sebastian Engelbrecht ; Roy Lehmann ; Stewart Walker ; P. U. Jepsen ; B. M. Fischer</i>	
NUMERICAL STUDY OF MILLIMETER-WAVE DISCHARGE AND APPLICATION TO LAUNCHING SYSTEM FOR SMALL SATELLITES	269
<i>Masayuki Takahashi ; Naofumi Ohnishi</i>	
A NON-COOPERATIVE FAST MILLIMETER-WAVE IMAGING METHOD BY USING MIMO LINEAR ARRAY	271
<i>Yang Yu ; Lingbo Qiao ; Ziran Zhao</i>	
NUMERICAL STUDY OF DISCHARGE PHYSICS INDUCED BY SUBCRITICAL MILLIMETER WAVE.....	273
<i>Kanta Hamasaki ; Masayuki Takahashi ; Naofumi Ohnishi</i>	
MICROWAVE PYROLYSIS OF PEAT: SIMULATIONS AND EXPERIMENTAL RESULTS.....	275
<i>Tatiana O. Krapivnitckaia ; Alexander A. Bogdashov ; Andrei N. Denisenko ; Mikhail Yu. Glyavin ; Nikolai Yu. Peskov ; Ludmila L. Semenycheva ; Dmitry L. Vorozhtcov</i>	
TERAHERTZ RESONATOR DIAGNOSTICS OF FILAMENTARY DIELECTRIC OBJECTS	277
<i>A.V. Badin ; V.V. Bessonov ; K.V. Dorozhkin ; I.O. Dorofeev ; Le Ba Hui ; G. E. Dunaevskii</i>	
NON-DESTRUCTIVE EVALUATION OF SOFT BODY ARMOUR CONDITION USING FOURIER TRANSFORM INFRARED SPECTROSCOPY	279
<i>S. Alsallal ; M. Tunnicliffe ; E. Avci</i>	
INSULATOR-METAL TRANSITION IN PRYCACO₀₃ THIN FILMS STUDIED BY TERAHERTZ SPECTROSCOPY	281
<i>Christelle Kadlec ; Hynek Nemec ; Karel Knfzek ; Nrr Hejmanek ; Veronika Goian ; Josef Bursfk</i>	
THE PREDICTION OF LAMINATE STACKING SEQUENCE OF E-GLASS/EPOXY LAMINATED COMPOSITES USING ELECTROMAGNETIC BEHAVIOR OF TERAHERTZ WAVE.....	283
<i>Dong-Woon Park ; Gyung-Hwan Oh ; Hak-Sung Kim</i>	
CHARGE CARRIER DYNAMICS IN BULK HETEROJUNCTION ORGANIC SEMICONDUCTOR BY OPTICAL-PUMP TERAHERTZ-PROBE SPECTROSCOPY	284
<i>Yuichi Hiramatsu ; Kaoru Ohta ; Kohtaro Takahashi ; Mitsuharu Suzuki ; Hiroko Yamada ; Keisuke Tominaga</i>	

ANISOTROPY OF ELECTRICAL PROPERTIES OF 3D-PRINTING MWCNT COMPOSITES AT THE THZ FREQUENCY RANGE	286
<i>A. V. Badin ; G. E. Kuleshov ; K. V. Dorozhkin ; G. E. Dunaevskii ; V. I. Suslyayev ; V. A. Zhuravlev</i>	
AN DIFFERENT OPTICAL PATH SCHEME TO IMPROVE PARAMETERS EXTRACTION IN TERAHERTZ FREQUENCY	288
<i>Li Dehua ; Ji Beibei ; Zhou Wei ; Li Zhaoxin ; Song Binbin ; Guo Xiangshuai</i>	
VARNISHES OF PAINTING MATERIAL STUDIED BY TERAHERTZ SPECTROSCOPY	290
<i>Q. Cassar ; C.L. Koch-Dandolo ; J.P. Guillet ; M. Roux ; F. Fauquet ; P. Mounaix</i>	
LOW-DIMENSIONAL NARROW-GAP SEMICONDUCTORS STUDIED BY PHOTOLUMINESCENCE SPECTROSCOPY	292
<i>Jun Shao ; Xiren Chen ; Liangqing Zhu</i>	
PHOTOLUMINESCENCE AND TERAHERTZ TIME-DOMAIN SPECTROSCOPY OF MBE-GROWN SINGLE-LAYERED INAS/GAAS QUANTUM DOTS.....	293
<i>Alexander E. De Los Reyes ; John Daniel E. Vasquez ; Lorenzo P. Lopez ; Hannah R. Bardolaza ; Che-Yung Chang ; Der-Jun Jang ; Armando S. Somintac ; Arnel A. Salvador ; Elmer S. Estacio</i>	
TEMPERATURE DEPENDENCE OF THZ CONDUCTIVITIES OF POLYANILINE EMERALDINE SALT/BENTONITE PELLETS	295
<i>Alvin Karlo G. Tapia ; Lou Serafin M. Lozada ; Keisuke Tominaga</i>	
β-BBO: OPTICAL PROPERTIES AND PHASE-MATCHING FOR THZ WAVE GENERATION	297
<i>A. A. Mamrashev ; N. A. Nikolaev ; V. D. Antsygin ; T. B. Bekker ; A. E. Kokh ; K. A. Kokh ; G. V. Lanskii ; V. A. Svetlichny ; Yu. M. Andreev</i>	
TERAHERTZ TIME-DOMAIN SPECTROSCOPY OF PROTEIN MYOGLOBIN: DETECTION OF BOSON PEAK AND FRACTON.....	299
<i>Leona Motoji ; Tatsuya Mori ; Yasuhiro Fujii ; Akitoshi Koreeda ; Kentaro Shiraki ; Yohei Yamamoto ; Seiji Kojima</i>	
ANISOTROPY IN THE LOW ENERGY DYNAMICS OF SEMI METALLIC CAIRO₃ THIN FILM.....	301
<i>K Santhosh Kumar ; D. S. Rana</i>	
DEMONSTRATION OF MAGNETOPLASMON POLARITON AT INSB/DIELECTRIC INTERFACE.....	303
<i>Jan Chochol ; Martin Micica ; Kamil Postava ; Mathias Vanwolleghem ; Jean-François Lampin ; Michael Cada ; Jaromír Pištora</i>	
DEVELOPMENT OF NBN POLARIZATION SENSITIVE KID FOR FUSION APPLICATIONS.....	305
<i>F. Mazzocchi ; E.F.C. Driessen ; S. Shu ; G. Grossetti ; D. Strauß ; T. Scherer</i>	
BASIC PERFORMANCE OF RECTANGULAR WAVEGUIDE TYPE LIQUID CRYSTAL PHASE SHIFTER DRIVEN BY MAGNETIC FIELD	307
<i>Toshiaki Nose ; Tomoya Ito ; Ryota Ito ; Michinori Honma</i>	
HIGH TERAHERTZ TRANSMITTANCE AND BLOCKING IR BACKGROUND NOISE PACKAGE WINDOW DESIGN FOR TERAHERTZ FOCAL PLANE ARRAY DETECTORS	309
<i>Jun Wang ; Jun Gou ; Wenchao Mou ; Zhiming Wu</i>	
WAVEGUIDE COUPLING OF RESONANT-TUNNELING DIODE TERAHERTZ OSCILLATOR.....	311
<i>Hironori Matsumoto ; Safumi Suzuki ; Masahiro Asada ; Yasuaki Monnai</i>	
DESIGN OF 0.27-0.37THZ WIDEBAND COAXIAL LINE TO DOUBLE-RIDGE WAVEGUIDE WINDOW FOR TRAVELING-WAVE TUBE AMPLIFIER.....	312
<i>Gangxiong Wu ; Hairong Yin ; Fan Wang ; Ruichao Yang ; Qian Li ; Xia Lei ; Chong Ding ; Shuanzhu Fang ; Xuebin Jiang ; Pengcheng Yin ; Lingna Yue ; Jin Xu ; Wenxiang Wang ; Zhun Xu ; Daxi Ji ; Yun Chen ; Yanyu Wei</i>	
LIQUID CRYSTAL BASED TERAHERTZ PHASE SHIFTER WITH BI-LAYER STRUCTURE	314
<i>Anup Kumar Sahoo ; Chan-Shan Yang ; Chun-Ling Yen ; Hung Chun Lin ; Yu-Jen Wang ; Yi-Hsin Lin ; Osamu Wada ; Ci-Ling Pan</i>	
INP-BASED GROUNDED COPLANAR WAVEGUIDE TO WR3 TRANSITION FOR MONOLITHIC INTEGRATION WITH THZ PHOTODIODES	316
<i>B. Khani ; S. Makhlof ; S. Diilme ; A. Stohr</i>	
GRAPHENE BASED ORGANIC OPTICAL TERAHERTZ MODULATOR.....	318
<i>Bo Zhang ; Guocui Wang ; Hongyu Ji ; Bin Li ; Jingling Shen</i>	
ACTIVE OPTICALLY-CONTROLLED BROADBAND TERAHERTZ MODULATOR BASED ON FE₃O₄NANOPARTICLES.....	320
<i>Bo Zhang ; Luyao Xiong ; Jingling Shen</i>	
MODELLING AND STUDY OF A THZ HOLLOW PHOTONIC CRYSTAL INTEGRATED WAVEGUIDE.....	322
<i>Binbin Hong ; Nutapong Somjit ; John Cunningham ; Ian Robertson</i>	
A 0.55 THZ ON-CHIP SUBSTRATE INTEGRATED WAVEGUIDE ANTENNA.....	324
<i>Kirti Dhawaj ; Yan Zhao ; Richard Al Hadi ; Xiaoqiang Li ; Frank M.-C. Chang ; Tatsuo Itoh</i>	

LIQUID CRYSTAL BASED TERAHERTZ DEVICES	326
<i>L. Wang ; M. Nakajima ; Y. Q. Lu</i>	
PARALLEL ARCHITECTURE OF A SINE WAVEGUIDE TRAVELING WAVE TUBE AMPLIFIER	328
<i>Giacomo Ulisse ; Viktor Krozer</i>	
VERSATILE PHOTONIC INTEGRATED OPTICAL FREQUENCY COMBS GENERATORS FOR MILLIMETER-WAVE GENERATION.....	330
<i>Mu Chieh Lo ; Alberto Zarzuelo ; Robinson C. Guzman ; Horacio Lamela ; Guillermo Carpintero</i>	
DEVELOPMENT OF TERAHERTZ RADIATION SOURCE WITH SLIT-ARRAY STRUCTURE	332
<i>D. Li ; T. N. K. Phan ; K. Kato ; M. Nakajima ; M. R. Asakawa ; M. Hashida ; M. Tani ; W. Liu ; Y. Wei</i>	
AN ADVANCED TERAHERTZ EIO OPERATING WITH TM₃₁ MODE	334
<i>Shuang Li ; Dongyang Wang ; Yan Teng ; Guangqiang Wang</i>	
SHEET BEAM ELECTRON GUN WITH HIGH CURRENT FOR 220 GHZ TWT	336
<i>Shengkun Jiang ; Zhaoyun Duan ; Guang Yang ; Leidong Jin ; Xirui Zhan ; Hanwen Tian ; Zhanliang Wang ; Huarong Gong ; Yubin Gong</i>	
ENHANCEMENT OF ELECTRIC FIELD IN E-PLANE SECTORAL HORN ANTENNAS RECONSIDERED BY PLASMONIC THEORY	338
<i>Kazuyoshi Kurihara ; Kiwamu Kusama ; Fumiyoshi Kuwashima ; Osamu Morikawa ; Kohji Yamamoto ; Hideaki Kitahara ; Masahiko Tani</i>	
TERAHERTZ WAVE PARAMETRIC AMPLIFIER WITH AN AMPLIFICATION FACTOR OF TWO BILLION	339
<i>Yunzhuo Guo ; Kosuke Murate ; Kazuki Maeda ; Kodo Kawase</i>	
OPTICAL GENERATION OF HIGH-POWER TERAHERTZ PULSES FOR TUNABLE WAVE SOURCE	341
<i>Isao Yoshimine ; Masatsugu Yamashita ; Hiromichi Hoshina ; Mikiko Saito ; Hiroaki Minamide ; Chiko Otani</i>	
ENHANCEMENT OF THZ EO SAMPLING SIGNAL BY POLARIZATION FILTERING	343
<i>Hiroyuki Kato ; Hideaki Kitahara ; Daiki Goto ; Takuro Yasumoto ; Masaki Shihara ; Jessica Afalla ; Valynn Mag-Usara ; Dmitry Bulgarevich ; Clare Escafio ; Kohji Yamamoto ; Takashi Furuya ; Michael Bakunov ; Elmer Estacio ; Masahiko Tani</i>	
TERAHERTZ EMISSION ENHANCEMENT OF I-N-GALLIUM ARSENIDE THIN FILM ON A POROUS SILICON DISTRIBUTED BRAGG REFLECTOR DESIGNED AT 800NM.....	345
<i>Ameera Jose ; Anthony Montecillo ; Joybelle Lopez ; Alexander De Los Rcyes ; Miguel Bacaoco ; Maria Angela Faustino ; Arven Cafe ; John Daniel Vasquez ; Karl Cedric Gonzales ; Gerald Angelo Catindig ; Armando Somintac ; Arnel Salvador ; Elmer Estacio</i>	
PHYSICAL DESIGN OF THE PRE-BUNCHED THZ FEL AT NSRL*.....	347
<i>Ruixuan Huang ; Zhouyu Zhao ; Weihao Liu ; Weiwei Li ; Heting Li ; Zhigang He ; Qika Jia ; Lin Wang ; Yalin Lu</i>	
FINITE-DIFFERENCE TIME-DOMAIN SIMULATION OF TERAHERTZ PULSE GENERATION BY NON-COLLINEAR PHASE MATCHING USING OBLIQUELY CROSSED OPTICAL PULSES.....	349
<i>Ken Morita ; Yuta Osurmi ; Yoshihiro Ishitani</i>	
ENHANCEMENT OF THZ-QTDS PERFORMANCE BY PULSED LASER OPERATION	351
<i>Arno Rehn ; Mikhail Mikerov ; Sascha Preu ; Martin Koch ; Jan C. Balzer</i>	
A COMPACT TERAHERTZ CW HCN DUAL LASER AND ITS STABILITY CONTROL.....	353
<i>J.X. Xie ; H.Q. Liu ; J. J. Shen ; X.C. Wei ; Y. X. Jie</i>	
PROPERTIES OF TERAHERTZ WAVE EMISSION FROM NANO-POROUS GOLD EXCITED BY FEMTOSECOND LASER PULSES	355
<i>Kosaku Kato ; Takashi Kashihara ; Thanh Nhat Khoa Phan ; Keisuke Takano ; Marjan Akbari ; Teruya Ishihara ; Masashi Yoshimura ; Makoto Nakajima</i>	
DEVELOPMENT OF THE CYCLOTRON RADIATION SOURCE WITH VORTEX PROPERTY	357
<i>Yuki. Goto ; Shin. Kubo ; Toru II. Tsujimura</i>	
MONOCYCLE TERAHERTZ VORTEX GENERATION BY TSURUPICA SPIRAL PHASE PLATE.....	359
<i>K. Miyamoto ; B.J. Kang ; Y. Sasakr ; W. T. Kim ; T. Miyakawa ; F. Rotermund ; T. Omatsu</i>	
THEORY FOR HIGH-FIELD NARROWBAND THZ GENERATION VIA COLLIDING AT AN OBLIQUE ANGLE PLASMA WAKEFIELDS.....	361
<i>Evgeniia P. Volchok ; Igor V. Timofeev ; Vladimir V. Annenkov</i>	
DEVELOPMENT OF AN HIGHLY DISTRIBUTED PHOTOCONDUCTOR FOR CW THZ GENERATION.....	363
<i>F. Bavedila ; V. Magnin ; J. Harari ; D. Yarekha ; D. Troadec ; S. Lepilliet ; V. Avramovic ; G. Ducournau ; J-F. Lampin ; E. Peytavit</i>	
RECENT DEVELOPMENTS AND APPLICATIONS OF MULTI-EXTREME THZ ESR.....	365
<i>Hitoshi Ohta ; Susumu Okubo ; Eiji Ohmichi ; Takahiro Sakurai ; Hideyuki Takahashi ; Shigeo Hara</i>	

LIGHT-INDUCED CONFORMATIONAL CHANGES OF PROTEIN RECEPTORS PROBED BY DIFFERENCE MID-IR MICROSPECTROSCOPY	367
<i>V. Giliberti ; R. Polito ; E. Ritter ; A. Nucara ; P. Calvani ; M. Broser ; P. Hegemann ; L. Puskar ; U. Schade ; L. Baldassarre ; M. Ortolani</i>	
VERIFICATION OF THE NON-THERMAL EFFECTS OF THZ-WAVE ON HUMAN CELLS.....	369
<i>Noriko Yaekashiwa ; Sato Otsuki ; Hisa Yoshida ; Shin'ichiro Hayashi ; Kodo Kawase</i>	
TWO DECADES OF TERAHERTZ TRANSIENT PHOTOCONDUCTIVITY SPECTROSCOPY: WHERE DO WE STAND AND WHERE ARE WE GOING?.....	371
<i>Charles A. Schmuttermaier</i>	
TOWARD CANCER TREATMENT USING TERAHERTZ RADIATION: DEMETHYLATION OF CANCER DNA	372
<i>Joo-Hiuk Son ; Hwayeong Cheon</i>	
VACUUM BLOCH-SIEGERT SHIFT IN CYCLOTRON RESONANCE	374
<i>Motoaki Bamba ; Xinwei Li ; Junichiro Kono</i>	
EFFECT OF MAGNETIC FIELD ON TERAHERTZ PHOTOCONDUCTIVITY IN $Hg_{1-x}Cd_xTe$-BASED STRUCTURES	377
<i>A. V. Galeeva ; A.I. Artamkin ; A.S. Kazakov ; S.A. Dvoretzskii ; N.N. Mikhailov ; S.N. Danilov ; L.I. Ryabova ; D.R. Khokhlov</i>	
BI-RELAXOR BEHAVIOR AND Fe^{2+} FINE STRUCTURE IN SINGLE CRYSTALLINE $BA_{0.3}PB_{0.7}Fe_{12}O_{19}$-M-TYPE HEXAFERRITE.....	379
<i>Liudmila Alyabyeva ; Victor Torgashev ; Elena Zhukova ; Denis Vinnik ; Anatoly Prokhorov ; Svetlana Gudkova ; David Rivas Góngora ; Tomislav Ivek ; Silvia Tomic ; Nikolina Novosel ; Damir Starešinić ; Damir Dominko ; Zvonko Jaglicic ; Martin Dressel ; Boris Gorshunov</i>	
ELECTROMAGNETISM IN THE Y-TYPE HEXAFERRITE $BaSrCoZnFe_{11}AlO_{22}$	381
<i>Filip Kadlec ; Jakub Vít ; Christelle Kadlec ; Fedir Borodavka ; Yi Sheng Chai ; Kun Zhai ; Young Surr ; Stanislav Kamba</i>	
STRUCTURAL AND MECHANICAL PROPERTIES OF METAL-ORGANIC FRAMEWORKS PROBED WITH TERAHERTZ TIME-DOMAIN SPECTROSCOPY	383
<i>M. T. Ruggiero ; Q. Li ; W. Zhang ; J. Maul ; A. Erba ; D. M. Mittleman ; J. A. Zeitler</i>	
THZ MODULATORS BASED ON THE ACTIVE GAN-HEMT METASURFACE	385
<i>Yuncheng Zhao ; Yaxin Zhan ; Shixiong Liang ; Zhihong Feng ; Ziqiang Yang</i>	
TERAHERTZ QUADRUPLE-BAND SWITCHING POLARIZATION CONVERTER BASED ON HEMT - EMBEDDED NET-GRID METASURFACE	388
<i>Luyang Wang ; Feng Lan ; Hongxin Zeng ; Ziqiang Yang ; Pinaki Mazumder ; Feng Luo ; Abdur Rauf Khan ; Zongjun Shi</i>	
“REVERSE FABRICATION” TECHNIQUE TO DEVELOP MECHANICALLY TUNABLE THZ METASURFACES USING A FLEXIBLE POLYDIMETHYLSILOXANE SUBSTRATE.....	390
<i>S. C. Ambhure ; S. Palkhivala ; A. Agrawal ; A. Gupta ; G. Rana ; R. Mehta ; A. Bhattacharya ; A. Venugopal ; S. S. Prabhu</i>	
TERAHERTZ ARTIFICIAL MATERIAL BASED ON INTEGRATED METAL-ROD-ARRAY FOR PHASE SENSITIVE FLUID DETECTION.....	392
<i>Borwen You ; Ja-Yu Lu</i>	
NARROWBAND ULTRA-THIN METASURFACE ABSORBERS FOR SUBTHZ BAND AND THEIR APPLICATION IN SPECTROMETRIC PYROELECTRIC DETECTORS	394
<i>Sergei A. Kuznetsov ; Andrey V. Arzhannikov ; Victor N. Fedorin</i>	
VECTORIAL PROPERTIES OF A TERAHERTZ BESSEL BEAM.....	396
<i>Xinke Wang ; Zhen Wu ; Yan Zhang</i>	
CHARACTERIZATION OF VORTEX BEAMS USING INTERFERENCE AND DIFFRACTION TECHNIQUES.....	399
<i>Yu. Yu. Choporova ; B. A. Knyazev ; N. D. Osintseva ; V.S. Pavelyev</i>	
HOLOGRAPHY AS AN ATR THZ IMAGING TECHNIQUE.....	401
<i>Yulia Yu. Choporova ; Boris A. Knyazev</i>	
OBJECT FEATURE EXTRACTION WITH FOCUSED TERAHERTZ PLENOPTIC IMAGING	402
<i>Ritesh Jain ; Frank Landskron ; Janusz Grzyb ; Ullrich R. Pfeiffer</i>	
SHAPE FROM FOCUS APPLIED TO REAL- TIME TERAHERTZ IMAGING	404
<i>J-B Perraud ; J-P Guillet ; M. Hamdi ; O. Redon ; J. Meilhan ; F. Simoens ; P. Mounaix</i>	
RECENT RESULTS IN IAP/GYCOM DEVELOPMENT OF MEGAWATT GYROTRONS	406
<i>G. Denisov</i>	
OPTIMIZED VERTICAL COLLECTOR SWEEPING FOR HIGH POWER CW GYROTRONS USING ADVANCED CURRENT WAVEFORMS.....	408
<i>Stefan Illy ; Konstantinos A. Avramidis ; Lukas Jackowski ; Walid Kdous ; John Jelonnek</i>	
DESIGN AND EXPERIMENT OF A 140 GHZ 50KW GYROTRON	410
<i>Linlin Hu ; Guowu Ma ; Dimin Sun ; Tingting Zhuo ; Hongbin Chen ; Fanbao Meng</i>	

EXPERIMENTAL STUDY OF TERAHERTZ RADIATION SOURCES BASED ON A PLANAR SLOW WAVE STRUCTURE AND A PSEUDOSPARK-SOURCED SHEET ELECTRON BEAM	412
<i>Guoxiang Shu ; Liang Zhang ; Huabi Yin ; Junping Zhao ; Guo Liu ; Zhengfang Qian ; Alan D. R. Phelps ; Adrian W. Cross ; Wenlong He</i>	
STUDYING SOLVATION BY NON-LINEAR THZ SPECTROSCOPY	414
<i>C. Hoberg ; T. Ockelmann ; P. Balzerowski ; F. Novelli ; M. Havenith</i>	
STRUCTURE ANALYSIS OF DISORDER IN A MOLECULAR CRYSTAL WITH TERAHERTZ SPECTROSCOPY AND SOLID-STATE DENSITY FUNCTIONAL THEORY	416
<i>Feng Zhang ; Houng-Wei Wang ; Keisuke Tominaza ; Michitoshi Havashi ; Tetsuo Sasaki</i>	
MOLECULAR SPECTROSCOPY WITH A TERAHERTZ QUANTUM-CASCADE LASER BY ILLUMINATION-INDUCED FREQUENCY TUNING	418
<i>Tasmim Alam ; Martin Wienold ; Heinz-Wilhelm Hubers</i>	
DIFFERENTIAL FREQUENCY-DOMAIN ABSORPTION SPECTROMETER IN THE TERAHERTZ REGION (DI-FASTER) FOR FAST GAS SENSING	420
<i>Yuma Takida ; Toshiyuki Ikeo ; Kouji Nawata ; Yasuhiro Higashi ; Hiroaki Minamide</i>	
COHERENT THZ LIGHT SOURCE FOR HIGH PRECISION SPECTROSCOPIC MEASUREMENT	422
<i>D. Fukuoka ; K. Muroa ; K. Noda</i>	
ULTRAFAST TERAHERTZ MODULATOR BASED ON METAMATERIAL-INTEGRATED WSE₂ THIN-FILMS	424
<i>Prashanth Gopalan ; Ashish Chanana ; Sriram Krishnamoorthy ; Ajay Nahata ; Michael Scarpulla ; Berardi Sensale-Rodriguez</i>	
THZ BAND GAP IN ENCAPSULATED GRAPHENE QUANTUM DOTS.....	425
<i>S. Massabeau ; E. Riccardi ; M. Rosticher ; F. Valmorra ; P. Huang ; J. Tignon ; T. Kontos ; S. Dhillon ; R. Ferreira ; J. Mangeney</i>	
GRAPHENE ENHANCED 2-D NANO-ELECTRODE FOR CONTINUOUS WAVE TERAHERTZ PHOTOMIXERS	427
<i>Alaa Jumaah ; Shihab Al-Daffaie ; Oktay Yilmazoglu ; Franko Küppers</i>	
HGTE/CDTE QUANTUM WELL HETEROSTRUCTURES FOR FAR AND MID IR LASERS.....	429
<i>Sergey Morozov ; Vladimir Rumyantsev ; Vladimir Gavrilenko ; Aleksander Kadykov ; Mikhail Fadcev ; Frederic Teppe</i>	
TERAHERTZ LIGHT AMPLIFICATION BY INSTABILITY-DRIVEN STIMULATED EMISSION OF GRAPHENE PLASMON POLARITONS	431
<i>Stephane A. Boubanga-Tombet ; Deepika Y Adav ; Wojciech Knap ; Vyacheslav V. Popov ; Taiichi Otsuji</i>	
ENHANCING THE THZ EMISSION THROUGH SURFACE PATTERNING IN PHOTO-CONDUCTIVE ANTENNA	433
<i>Goutam Rana ; Abhishek Gupta ; Arkabrata Bhattacharya ; Ravikumar Jain ; S. P. Duttagupta ; S.S. Prabhu</i>	
TERAHERTZ GENERATION FROM DIRAC SEMIMETALS SURFACE PLASMON POLARITONS EXCITED BY AN ELECTRON BEAM.....	435
<i>Tao Zhao ; Min Hu ; Renbin Zhong ; Sen Gong ; Chao Zhang ; Shenggang Liu</i>	
HIGH POWER CONTINUOUSLY FREQUENCY-TUNABLE TERAHERTZ RADIATION SOURCES AND TRANSMISSION LINES FOR DNP-ENHANCED NMR SYSTEM	437
<i>Diwei Liu ; Tao Song ; Hao Shen ; Jie Huang ; Ning Zhang ; Chenghai Wang ; Wei Wang ; Shenggang Liu</i>	
ENHANCE OF IMPURITY RELATED TERAHERTZ EMISSION IN OPTICALLY PUMPED GAAS/ALGAAS QUANTUM WELL STRUCTURES	439
<i>D. A. Firsov ; I. S. Makhov ; V. Yu. Panevin ; M. Ya. Virmichenko ; L. E. Vorobjev ; A. P. Vasil'ev ; N. A. Maleev</i>	
LEAKY LENS ANTENNA AS OPTICALLY PUMPED PULSED THZ EMITTER	441
<i>Alessandro Garufo ; Paolo Sberna ; Giorgio Carluccio ; Juan Bueno ; Joshua R. Freeman ; Nuria Llombart ; Edmund H. Linfield ; Alexander G. Davies ; Andrea Neto</i>	
LOCAL OSCILLATOR ARRAYS AT 1.46 THZ & 1.9 THZ FOR GUSTO.....	442
<i>Jeffrey L. Hesler ; Steven Retzliff ; Cliff Rowland ; Daniel Koller ; Thomas W. Crowe</i>	
TERAHERTZ RADIATION FROM GRAPHENE BASED HYPERBOLIC MEDIUM.....	443
<i>Sen Gong ; Fenxiao Dongi ; Hu Min ; Renbin Zhong ; Shenggang Liu</i>	
QUANTUM THEORY OF SURFACE POLARITON CHERENKOV LIGHT RADIATION SOURCE	445
<i>Chengpeng Yu ; Shenggang Liu</i>	
ALL-OPTICAL PHASE CONTROL OF THZ WAVEFORMS	447
<i>Lauren Gingras ; Wei Cui ; Aidan W. Schiff-Kearn ; Jean-Michel Ménard ; David G. Cooke</i>	
THZ-FIELD-DRIVEN ELECTRON TUNNELING ON THE NANOSCALE	449
<i>Jun Takeda ; Katsumasa Yoshioka ; Yasuo Minami ; Yusuke Arashida ; Ikufumi Katayama</i>	
PROGRESS AND CHALLENGES IN TERAHERTZ SCANNING TUNNELING MICROSCOPY	452
<i>Frank A. Hegmann</i>	

OBSERVATION OF THE DISCHARGE STRUCTURE IN 303 GHZ MILLIMETER-WAVE AIR BREAKDOWN	453
<i>Masafumi Fukunari ; Tetsuo Yokoyama ; Shunsuke Tanaka ; Ryuji Shinbayashi ; Takumi Hirobe ; Yuusuke Yamaguchi ; Yoshinori Tatematsu ; Teruo Saito</i>	
TOWARDS SINGLE-PULSE SPECTRAL ANALYSIS OF MHZ-REPETITION RATE SOURCES	455
<i>Gudrun Niehues ; Miriam Brosi ; Erik Brundermann ; Michele Caselle ; Stefan Funkner ; Benjamin Kehrer ; Michael J. Nasse ; Meghana Patil ; Lorenzo Rota ; Johannes L. Steinmann ; Marc Weber ; Anke-Susanne Muller</i>	
MODELING OF UNDER-CRITICAL MILLIMETER-WAVE DISCHARGE INDUCED BY HIGH EXCITATION TEMPERATURE	457
<i>Yusuke Nakamura ; Kimiya Komurasaki ; Hiroyuki Koizumi</i>	
INVESTIGATION OF METAL-ROD-ARRAY BASED HYBRID PLASMONIC TERAHERTZ FIELD	459
<i>Deiun Liu ; Borwen You ; Ja-Yu Lu ; Toshiaki Hattori</i>	
PREDICTING THE DRY THICKNESS OF A WET PAINT LAYER	461
<i>J. L. M. Van Mechelen</i>	
RETRIEVING MATERIAL AND METAMATERIAL PARAMETERS DIRECTLY FROM TIME-DOMAIN SPECTROSCOPY TIME TRACE	463
<i>Romain Peretti ; Sergey Mitryukovskiy ; Froberger Kevin ; Jean-Francois Lampin</i>	
TERAHERTZ SPECTRAL DECOMPOSITION METHOD FOR MIXTURE USING INDEPENDENT COMPONENT ANALYSIS	465
<i>Zhijie Li ; Xiaojiao Deng ; Xiaoping Zheng</i>	
TERAHERTZ DETECTION IN MOS-FET: A NEW MODEL BY THE SELF-MIXING	467
<i>Fabrizio Palma ; Rosario Rao</i>	
TOWARDS A TUNABLE SUB-THZ GYROTRON FOR SPECTROSCOPY OF POSITRONIUM	470
<i>A. E. Fedotov ; M. Yu. Glyavin ; T. Idehara ; R. M. Rozental ; A. S. Sergeev ; N. S. Ginzburg ; V. N. Manuilov ; I. V. Zotova</i>	
OBSERVATION OF FID ON BDPA BY PULSED ESR USING A GYROTRON AS HIGH-POWER MILLIMETER WAVE SOURCE	471
<i>S. Mitsudo ; I K. Hiiragi ; K. Kono ; K. Dono ; Y. Ishikawa ; Y. Fujii</i>	
DESIGN OF A GRIDDED CUSP GUN FOR A W-BAND GYRO-TWA	472
<i>Liang Zhang ; Craig R. Donaldson ; Adrian W. Cross ; Alan D. R. Phelps ; Wenlong He</i>	
INFLUENCE OF ELECTRON BEAM MISALIGNMENT ON THE PERFORMANCE OF A 0.24 THZ, 1.5 MW HOLLOW-CAVITY GYROTRON DESIGN FOR DEMO	474
<i>P. C. Kalaria ; K. A. Avramidis ; G. Gantenbein ; S. Illy ; I. Gr. Pagonakis ; M. Thumm ; J. Jelonnek</i>	
PROGRESS IN THE DEVELOPMENT OF A MULTISTAGE DEPRESSED COLLECTOR SYSTEM FOR HIGH POWER GYROTRONS	475
<i>Ioannis Gr. Pagonakis ; Chuanren Wu ; Benjamin Ell ; Konstantinos A. Avramidis ; Gerd Gantenbein ; Stefan Illy ; Manfred Thumm ; John Jelonnek</i>	
RADIAL BRAGG RESONATORS FOR THZ GYROTRONS	477
<i>S. Antipov ; S.V. Kuzikov ; A.V. Savilov ; A.A. Vikharev</i>	
AMPLIFICATION OF W-BAND MULTI-FREQUENCY SIGNALS USING A GYRO-TWA	479
<i>W. He ; C. R. Donaldson ; L. Zhang ; P. Cain ; H. Yin ; K. Ronald ; A. W. Cross ; A. D. R. Phelps</i>	
TERAHERTZ HYDRATION DYNAMICS IN AQUEOUS POLYSACCHARIDES	481
<i>Abhishek K. Singh ; Jose Antonio Morales ; Nancy Abril Estrada ; Socorro J. Villanueva Rodriguez ; Enrique Castro-Camus</i>	
TRACE GAS MEASUREMENT FOR SECURITY APPLICATIONS WITH INJECTION-SEEDED TERAHERTZ-WAVE PARAMETRIC GENERATION	483
<i>Kouji Nawata ; Yuma Takida ; Yu. Tokizane ; Takashi Notake ; Zhengli Han ; Andreas Karsaklian Dal Bosco ; Mio Koyama ; Hiroaki Minamide</i>	
TERAHERTZ SPECTROSCOPY AND QUANTUM MECHANICAL SIMULATIONS OF CRYSTALLINE HISTORICAL PIGMENTS	485
<i>Elyse M. Kleist ; Corinna L. Koch Dandolo ; Timothy M. Korter ; Patrick Mounaix</i>	
USING LOW-FREQUENCY VIBRATIONAL DYNAMICS TO PROBE DISORDER IN ORGANIC MOLECULAR MATERIALS	486
<i>J. Axel Zeitler</i>	
DETECTION OF ORGANIC CRYSTALLITES IN ICE USING TERAHERTZ TIME-DOMAIN SPECTROSCOPY	489
<i>Sergey Mitryukovskiy ; Jean-François Lampin ; Romain Peretti</i>	
IDENTIFYING STRUCTURE WITH THZ SPECTROSCOPY	491
<i>Jens Neu ; Ayaka S. Hatano ; Elizabeth A. Stone ; Golo Storch ; Jacob A. Spies ; Scott J. Miller ; Charles A. Schmuttenmaer</i>	

THE LOW PROTEIN CONCENTRATION STUDY IN AN EXTENDED THZ FREQUENCY RANGE.....	493
<i>O. P. Cherkasova ; M.M. Nazarov ; P.M. Solyankin ; A. P. Shkurinov</i>	
ENHANCEMENT OF TERAHERTZ-INDUCED PHOTOTHERMOELECTRIC EFFECT IN A CARBON NANOTUBE FIBER BY 3D POROUS GRAPHENE	495
<i>Yingxin Wang ; Meng Chen ; Fei Fan ; Yi Huang ; Ziran Zhao</i>	
LOW-FREQUENCY NOISE CHARACTERIZATION OF GRAPHENE FET THZ DETECTORS.....	497
<i>Xinxin Yang ; Andrei Vorobiev ; Kjell Jeppson ; Jan Stake ; Luca Banszerus ; Christoph Stampfer ; Martin Otto ; Daniel Neumaier</i>	
HIGHLY SENSITIVE, ULTRAFAST PHOTO-THERMOELECTRIC GRAPHENE THZ DETECTOR.....	499
<i>Klaas-Jan Tielrooij ; Sebastian Castilla ; Bernat Terres ; Marta Autore ; Leonardo Viti ; Jian Li ; Alexey Nikitin ; Miriam S. Vitiello ; Rainer Hillenbrand ; Frank H.L. Koppens</i>	
AN INTEGRATED 200-GHZ GRAPHENE FET BASED RECEIVER.....	502
<i>Marlene Bonmann ; Michael A. Andersson ; Yaxin Zhang ; Xinxin Yang ; Andrei Vorobiev ; Jan Stake</i>	
OPTIMIZED BENDING STABLE CARBON NANOTUBE - POLYMER COMPOSITE FOR ROOM TEMPERATURE THERMAL DETECTION	505
<i>Mingyu Zhang ; John T.W. Yeow</i>	
IN-LINE MEDICINE INSPECTION BY CARBON NANOTUBE TERAHERTZ SCANNERS	507
<i>M. Sun ; D. Suzuki ; Y. Ochiai ; Y. Kawano</i>	
STRAIN TUNING IN MEMS BEAM RESONATORS FOR TERAHERTZ BOLOMETER APPLICATIONS	508
<i>Boqi Qiu ; Ya Zhang ; Kouichi Akahane ; Naomi Nagai ; Kazuhiko Hirakawa</i>	
PERFORMANCE IMPROVEMENTS OF THZ IMAGERS BASED ON UNCOOLED ANTENNA-COUPLED BOLOMETER.....	510
<i>J. Meilhan ; G. T. Ayenew ; L. Dusopt ; M. Hamdi ; A. Hamelin ; B. Hiberty ; J. Lalanne-Dera ; A. Minasyarr ; O. Redon ; F. Simoens</i>	
NEAR-QUANTUM-LIMITED DOUBLE-SIDEBAND NOISE TEMPERATURES THROUGH ROOM-TEMPERATURE PLASMONIC HETERODYNE TERAHERTZ SPECTROMETERS	512
<i>Ning Wang ; Semih Cakmakypaan ; Yen-Ju Lin ; Mona Jarrahi</i>	
NOVEL BOLOMETRIC THZ DETECTION BY MEMS RESONATORS	514
<i>Ya Zhang ; Suguru Hosono ; Naomi Nagai ; Kazuhiko Hirakawa</i>	
PRESENT STATUS OF INFRARED FEL FACILITY AT KYOTO UNIVERSITY	516
<i>Heishun Zen ; Siriwan Krainara ; Shuya Chatani ; Toshiteru Kii ; Kai Masuda ; Hideaki Ohgaki</i>	
TERAHERTZ ACTIVITIES AT KAERI ULTRAFAST ELECTRON DIFFRACTION FACILITY	518
<i>I. H. Baek ; H. W. Kim ; Y. C. Kim ; M. Kim ; S. J. Park ; K. Y. Oang ; K. Jang ; K. Lee ; Y. U. Jeong ; N. Vinokurov ; T. Feurer</i>	
FELBE -UPGRADES AND STATUS OF THE IRLTHZ FEL USER FACILITY AT HZDR.....	520
<i>J. Michael Klopff ; Manfred Helm ; Susanne C. Kehr ; Ulf Lehnert ; Peter Michell ; Alexej Pashkin ; Harald Schneider ; Wolfgang Seide ; Stephan Winnerl ; Sergei Zvyagin</i>	
HIGH POWER THZ FREE ELECTRON LASER IN CHINA ACADEMY OF ENGINEERING PHYSICS.....	522
<i>Dai Wu ; Ming Li ; Xinfan Yang ; Hanbin Wang ; Dexin Xiao ; Xiaojian Shu ; Xiangyang Lu ; Wenhui Huang ; Yuhuan Dou</i>	
LASING AND SATURATION OF CAEP THZ FEL FACILITY	524
<i>Yuhuan Dou ; Xiaojian Shu ; Xingfan Yang ; Ming Li ; Dai Wu ; Derong Deng ; Hanbin Wang ; Xiangyang Lu ; Zhou Xu</i>	
TERAHERTZ FOCUSING REFLECTARRAY WITH ENHANCED BANDWIDTH	527
<i>Xiaolong You ; Christophe Fumeaux ; Withawat Withayachumnankul</i>	
AN ACTIVE MULTIPLIER-BY-SIX S-MMIC FOR 500 GHZ	529
<i>Christopher M. Grötsch ; Hermann Mabler ; Arnulf Leuther ; Ingmar Kallfass</i>	
SIMULTANEOUS DOA ESTIMATION AND RANGING OF MULTIPLE OBJECTS USING AN FMCW RADAR WITH 60 GHZ LEAKY-WAVE ANTENNAS	531
<i>Matthias Steeg ; Asmaa Al Assad ; Andreas Stöhr</i>	
SUB-SAMPLING OF RF AND THZ WAVES USING LT-GAAS FABRY-P ÉROT CAVITY PHOTOCONDUCTORS UNDER 1550 NM LIGHT EXCITATION.....	533
<i>M. Billet ; Y. Desmet ; F. Bavedila ; S. Barbieri ; W. Hänsel ; R. Holzwarth ; G. Ducournau ; J-F. Lampin ; E. Peytavit</i>	
PHASE-RESOLVED TERAHERTZ NEAR-FIELD NANOSCOPY OF A TOPOLOGICAL INSULATOR PHONON-POLARITON MODE.....	535
<i>M.C. Giordano ; L. Viti ; L. Columbo ; M. Brambilla ; G. Scamarcio ; M.S. Vitiello</i>	

ANALYSIS OF A PLASMONIC GRAPHENE ANTENNA FOR MICROELECTRONIC APPLICATIONS	537
<i>Christoph Suessrneider ; Felix Thiel ; Anna Katharina Wigger ; Peter Haring Bolívar ; Sergi Abadal ; Eduard Alarcón ; Albert Cabellos-Aparicio ; Luca Banszerus ; Christoph Stampfer ; Max Lemme</i>	
MILLIMETER WAVE PHASE SHIFTER BASED ON OPTICALLY CONTROLLED CARBON NANOTUBE LAYERS	539
<i>Serguei Smirnov ; Ilya V. Anoshkin ; Dmitri V. Lioubtchenko ; Joachim Oberhammer</i>	
MILLIMETER WAVE BEAM STEERING BASED ON OPTICALLY CONTROLLED CARBON NANOTUBE LAYERS	541
<i>Dmitri V. Lioubtchenko ; Serguei Smirnov ; Ilya V. Anoshkin ; Joachim Oberhammer</i>	
2D MATERIALS COUPLED TO HYBRID METAL-DIELECTRIC WAVEGUIDES FOR THZ TECHNOLOGY	543
<i>P. Huang ; S. Massabeau ; J. Tignon ; S. Dhillon ; J. Mangeney ; A. Degiron</i>	
INFLUENCE OF OPTICAL PUMPING ON PROPERTIES OF CARBON NANOTUBES WITH DIFFERENT GEOMETRIC PARAMETERS IN THZ FREQUENCY RANGE	544
<i>P Demchenko ; D Gomon ; I Anoshkin ; D Lioubtchenko ; M Khodzitsky</i>	
POROUS POLYMERS AS A SUBSTRATE FOR TERAHERTZ SPECTROSCOPY.....	546
<i>Anwen Smith ; Andreas K. Klein ; Claudio Balocco ; Natasha Shirshova</i>	
HYDRATION OF AQUEOUS POLYMERS INVESTIGATED BY TERAHERTZ SPECTROSCOPY AND PRINCIPAL COMPONENT ANALYSIS	548
<i>Katsuyoshi Aoki ; Ryusuke Hata ; Junya F. Kaneyasu ; Gerhard Schwaab ; Kentaro Shiraki ; Toshiaki Hattori</i>	
THEORETICAL INVESTIGATION ON THE TERAHERTZ VIBRATIONAL SPECTROSCOPY OF AMINO ACID CRYSTAL	550
<i>Ling Jiang ; Qi Yu ; Tianying Li ; Long Zhang ; Yan Zhang</i>	
MASSIVELY PARALLEL SENSING OF TRACE MOLECULES AND ISOTOPOLOGUES WITH SUBHARMONIC MID-IR FREQUENCY COMBS.....	552
<i>Konstantin L. Vodopyanov</i>	
DEVELOPMENTS OF MILLIMETER WAVE BACKSCATTERING SYSTEMS FOR FUSION PLASMA TURBULENCE MEASUREMENTS	554
<i>T. Tokuzawa ; K. Ozuri ; S. Kubo ; K. Tanaka ; H. Yamada ; K. Y. Watanabe ; A. Ejiri ; S. Inagaki ; J. Kohagura ; T. Saito</i>	
REDUCING LOSSES OF TERAHERTZ SURFACE PLASMONS BY SUBMICRON DIELECTRIC COATINGS.....	556
<i>Vasily V. Gerasimov ; Alexey K. Nikitin ; Boris A. Knyazev ; Alexey G. Lemzyakov ; Ivan A Azarov</i>	
A PHOTONICS ENABLED MILLIMETRE WAVE FREQUENCY DOMAIN SPECTROMETER FOR GLUCOSE CONCENTRATION SENSING	558
<i>J.P. Seddon ; K. Balakier ; X. Lin ; C. Graham ; A.J. Seeds ; C.C. Renaud</i>	
OPTICALLY PUMPED MIXING IN PHOTONICALLY INTEGRATED UNI- TRAVELLING CARRIER PHOTODIODE	560
<i>Ahmad W. Mohammad ; Andrzej Jankowski ; Frederic Van Dijk ; Cyril C. Renaud</i>	
SENSITIVE MILLIMETER-WAVE/TERAHERTZ GAS SPECTROSCOPY BASED ON SIGE BICMOS TECHNOLOGY	562
<i>D. Kissinger ; N. Rothbart ; K. Schmalz ; J. Borngraber ; H.-W. Hübers</i>	
TERAHERTZ PUMP-TERAHERTZ PROBE SPECTROSCOPY OF MULTILAYER GRAPHENE	565
<i>Kosaku Kato ; Junki Asai ; Thanh Nhat Khoa Phan ; Masashi Yoshimura ; Makoto Nakajima</i>	
THE DATA ANALYSIS OF CONTINUOUS WAVE TERAHERTZ SPECTROMETER IN TIME DOMAIN	567
<i>Deyin Kong ; Xiaqiun Wu ; Jun Dai ; Cunjun Ruan</i>	
THZ-TDS STUDY ON TETRABUTYLAMMONIUM BROMIDE HYDRATE.....	569
<i>Yasuhiro Miwa ; Keisuke Matsumura ; Kei Takeya ; Atsushi Tani</i>	
ULTRAFAST PHOTOCARRIER DYNAMICS IN CD₃AS₂ FILM IN TERAHERTZ BAND	571
<i>Wenjie Zhang ; Gang Chen ; Zuanming Jin ; Xian Lin ; Guohong Ma</i>	
THZ- TDS TRANSMISSION MEASUREMENTS OF SPECTROSCOPIC LAMPS PLASMA.....	572
<i>G. Galatola Teka ; M. Zerbinì ; F. Bombarda ; D. Damry</i>	
MICROWAVE SPECTROSCOPY OF HIGHLY EXCITED 5SNF1F3RYDBERG STATES OF SR ATOM.....	574
<i>Rio Ito ; Kentaro Tsurui ; Tetsuya Sugawara ; Yusuke Kazama ; Kenta Kitano ; H. Maeda</i>	
ULTRAFAST SOLVATION DYNAMICS PROBED BY OPTICAL-PUMP THZ-PROBE SPECTROSCOPY	576
<i>Claudius Hoberg ; Patrick Balzerowski ; Thorsten Ockelmann ; Martina Havenith</i>	
N₂O GAS DETECTION AWAY FROM 93 M USING THZ TIME-DOMAIN SPECTROSCOPY	578
<i>Gyeong-Ryul Kim ; Hyeon-Sang Bark ; Hwa-Bin Lee ; Seng-Bo Lee ; Tae-In Jeon</i>	

THZ TIME-DOMAIN COHERENT RAMAN SPECTROSCOPY OF AQUEOUS NaCl SOLUTIONS	580
<i>Shoji Hayashi ; Kunii Takemura ; Shun Nakae ; Stefan Funkner ; Hideaki Kitahara ; Takashi Furuya ; Kohji Yamamoto ; Jessica Afalla ; Valynn Mag-Usara ; Dmitry Bulgarevich ; Masahiko Tani</i>	
ORIGINS OF HEAT EVOLUTION IN MIXING WATER AND DIMETHYL SULFOXIDE.....	582
<i>Kazuko Mizuno ; Takashi Sumikama ; Yoshinori Tarnai ; Masahiko Tani</i>	
EXPERIMENTAL BINARY OPTIMIZATION OF RESONANT DIPOLE ANTENNAS FOR REMOTE SENSING BELOW 2THZ.....	583
<i>Christian B. Sorensen ; Thomas Sondergaard ; Esben Skovsen</i>	
CASCADE ENHANCED JUNCTIONLESS FIELD EFFECT TRANSISTOR THZ DETECTOR	585
<i>M. Zaborowski ; P. Zagrajek ; D. Tomaszewski ; J. Zajac ; J. Marczewski</i>	
BLOCH OSCILLATIONS SIGNATURE OF THZ ELECTROLUMINESCENCE FROM SiC NATURAL SUPERLATTICES	587
<i>Vladimir I. Sankin ; Alexander V. Andrianov ; Alexey G. Petrov ; Alexey O. Zakhar'in ; Pavel P. Shkrebly ; Sergey S. Nagalyuk</i>	
MULTI-BAND INTEGRATED QUANTUM WELL INFRARED PHOTODETECTORS	589
<i>Zhifeng Li ; Youliang Jing ; Yuwei Zhou ; Ning Li ; Xiaoshuang Chen ; Wei Lu ; Xuechu Shen</i>	
2D PLASMONIC TERAHERTZ DETECTION UNDER STATIC MAGNETIC FIELD.....	591
<i>L. Cao ; J. Ding ; Q. Fu ; B. Wu</i>	
DEVELOPMENT AND MODELING OF FOLDED-WAVEGUIDE SLOW-WAVE STRUCTURES FOR MILLIMETER-BAND TRAVELING-WAVE TUBES	593
<i>Artem G. Terentvuk ; Andrey G. Rozhnev ; Nikita M. Rvskin ; Andrey V. Starodubov ; Viktor V. Galushka ; Anton M. Pavlov</i>	
GENERATION OF QUANTUM CORRELATED OPTICAL - TERAHERTZ PHOTON PAIRS AND CALIBRATION OF NONLINEAR-OPTICAL DETECTORS VIA PARAMETRIC DOWN-CONVERSION	594
<i>Vladimir V. Kornienko ; Kirill A. Kuznetsov ; Andrey A. Leontyev ; Tatiana I. Novikova ; Galiya Kh. Kitaeva</i>	
INVESTIGATION ON STABILITY OF THE BEAM-WAVE INTERACTIONS FOR G-BAND STAGGERED DOUBLE VANE TWT	596
<i>Cunjun Ruan ; Huafeng Zhang ; Jian Tao ; Yanbin He</i>	
REAL-TIME DETECTION OF TERAHERTZ WAVE FROM QUANTUM CASCADE LASER BY FREQUENCY UP-CONVERSION IN A NONLINEAR CRYSTAL	598
<i>Shingo Saito ; Shin'ichiro Hayashi ; Yoshinori Uzawa ; Norihiko Sekine ; Kouji Nawata ; Hiroaki Minamide</i>	
SENSITIVITY IMPROVEMENT OF HETERODYNE ELECTRO-OPTIC SAMPLING.....	600
<i>Hideaki Kitahara ; Takuro Yasumoto ; Daiki Goto ; Hiroyuki Kato ; Masaki Shiihara ; Jessica Afalla ; Valynn Mag-Usara ; Kohji Yamamoto ; Takashi Furuya ; Masahiko Tani ; Elmer Estacio ; Michael Bakunov</i>	
COMPACT ELECTRO-OPTICAL FREQUENCY TUNABLE SENSORS FOR ACCELERATOR DIAGNOSTICS BASED ON TELECOMMUNICATION TECHNOLOGY	601
<i>E. Bründermann ; A.-S. Müller ; I. Morohashi ; S. Nakajima ; S. Saito ; N. Sekine ; I. Hosako</i>	
AlGaN/GaN FIELD EFFECT TRANSISTORS BASED ON LATERAL SCHOTTKY BARRIER GATES AS MILLIMETER WAVE DETECTORS	603
<i>P. Sai ; D. B. But ; K. Nowakowski-Szkudlarek ; J. Przybytek ; P. Prystawko ; I. Yahniuk ; P. Wisniewski ; B. Stonio ; M. Slowikowski ; S. L. Romyantsev ; W. Knap ; G. Cywinski</i>	
TERAHERTZ PULSES EMITTERS WITH FULL ELECTRICAL CONTROL ON POLARIZATION FOR THZ-TDS	605
<i>K. Maussang ; J. Palomo ; J. Mangeney ; S. S. Dhillon ; J. Tignon</i>	
A COMPACT SCHOTTKY HETERODYNE RECEIVER FOR 2.06 THz NEUTRAL OXYGEN [OI].....	606
<i>D. Hayton ; J. Treuttel ; J.-V. Siles ; C. P. Chen ; R. Lin ; C. Lee ; E. Schlecht ; I. Mehdi</i>	
RELIABILITY IMPROVEMENT OF HIGH-POWER THz GaN Gunn SOURCES FOR ACTIVE IMAGING SYSTEMS.....	608
<i>Ahid S. Hajo ; Oktay Yilmazoglu ; Franko Küppers ; Armin Dadgar</i>	
RESEARCH PROGRESS ON HIGH GAIN GaAs TERAHERTZ EMITTER	610
<i>Hong Liu ; Wei Shi ; Lei Hou ; Cheng Ma ; Chengang Dong ; Lei Yang ; Shaoqiang Wang</i>	
45 T PULSED MAGNETS FOR THE THz GYROTRONS	611
<i>Houxiu Xiao ; Xianfei Chen ; Donghui Xia ; Pengbo Wang ; Xin Qi ; Xiaofeng Li</i>	
DOUBLE-BEAM MILLIMETER-WAVE BAND BWT AND TWT ON A SPIRALLY BENT RECTANGULAR WAVEGUIDE.....	613
<i>A.A. Kurayev ; A. O. Rak ; A.A. Badarin ; S.A. Kurkin ; A.A. Koronovskii ; A.E. Hramov</i>	
FIRST DEMONSTRATION OF CONTINUOUS WAVE TERAHERTZ RADIATION FROM SEMI-INSULATING GaAs PHOTOMIXER WITH NANOWIRE	615
<i>Shihab Al-Daffaie ; Oktay Yilmazoglu ; Alaa Jumaah ; Franko Küppers</i>	

A ROBUST AND FAST ALGORITHM FOR ALMA LOCAL OSCILLATOR POWER AMPLIFIERS OPTIMIZATION.....	617
<i>Giorgio Siringo</i>	
COMPACT ANTENNAS PATTERN MEASUREMENT SETUP AT 240 GHZ	619
<i>C. Belem Gonçalves ; E. Lacombe ; Carlos Del Rio ; F. Gianesello ; C. Luxey ; G. Ducournau</i>	
THE STUDY OF Q-BAND SHEET BEAM BACKWARD WAVE OSCILLATOR BASED ON A PLANAR U-SHAPED SLOT-LINE SLOW-WAVE STRUCTURE.....	621
<i>Ruichao Yang ; Chong Ding ; Gangxiong Wu ; Lingna Yue ; Jin Xu ; Qian Li ; Xia Lei ; Xuebin Jiang ; Shuanzhu Fang ; Hairong Yin ; Guoqing Zhao ; Zhanliang Wang ; Yubin Gong ; Wenxiang Wang ; Yanyu Wei ; Yang Liu ; Hailong Wang</i>	
220 GHZ DUAL BEAM PHOTONIC CRYSTAL FOLDED WAVEGUIDE TWT	623
<i>Ningjie Shi ; Duo Xu ; Hexin Wang ; Zhanliang Wang ; Huarong Gong ; Zhaoyun Duan ; Zhigang Lu ; Yanyu Wei ; Yubin Gong ; Jinjun Feng</i>	
CORRUGATED DIAMOND WINDOW FOR ECRH TRANSMISSION LINE.....	625
<i>S. Antipov ; S.V. Kuzikov ; N.Yu. Peskov ; A.A. Vikharev</i>	
PHOTONIC WIRELESS TERAHERTZ WAVE SYSTEM FOR SPACE EXPLORATION.....	627
<i>Christine P. Chen ; Darren Hayton ; Lorene Samoska ; Robert Dengler ; Imran Mehdi</i>	
INVESTIGATION OF STAGGERED DOUBLE GRATING SLOW WAVE STRUCTURE LOADED BY PHOTONIC CRYSTALS.....	629
<i>Duo Xu ; Ningjie Shi ; Hexin Wang ; Zhanliang Wang ; Zhaoyun Duan ; Huarong Gong ; Yubin Gong</i>	
MILLIMETER WAVE, 1 MW, CW WATER LOAD	631
<i>S. Antipov ; S.V. Kuzikov ; N.Yu. Pcskov ; A.A. Vikharev</i>	
DESIGN OF THE OPTICAL COMPONENTS IN THE ITER EQUATORIAL EC H& CD LAUNCHER	633
<i>K. Kajiwarra ; G. Abe ; N. Kobayashi ; R. Ikeda ; Y. Oda ; T. Kobayashi ; K. Takahashi</i>	
IMPROVED ESD PROTECTION DESIGN FOR HIGH-FREQUENCY APPLICATIONS IN CMOS TECHNOLOGY	635
<i>Meng-Ting Lin ; Chun-Yu Lin</i>	
0.22THZ RIDGED SINE WAVEGUIDE BWO AND SHEET BEAM ELECTRON OPTICAL SYSTEM.....	637
<i>Pengcheng Yin ; Jin Xu ; Shuanzhu Fang ; Ningjie Shi ; Guoqing Zhao ; Wenxiang Wang ; Hairong Yin ; Linna Yue ; Yanyu Wei ; Dazhi Li ; Luqi Zhang</i>	
MAGNETRON INJECTION GUN FOR 203GHZ REFLECTIVE GYRO-BWO SYSTEM	639
<i>Cheng-Hung Tsai ; Tsun-Hsu Chang ; Toshitaka Idehara</i>	
GYROTRON OPERATION IN THE ‘NO-START-CURRENT’ ZONE	641
<i>Olgierd Dumbrajs ; Gregory S. Nusinovich</i>	
GENERATION OF POWERFUL PULSES IN A GYROTRON WITH RADIATION OUTPUT IN THE DIRECTION OF THE CATHODE END.....	643
<i>I.V. Osharin ; A.V. Savilov</i>	
HIGH-HARMONIC-GYROTRON CAVITIES WITH SHORT IRREGULARITIES.....	645
<i>I.V. Bandurkin ; Yu.K. Kalynov ; N.A. Zavolsky ; Yu.S. Oparina ; I.V. Osharin ; A.V. Savilov</i>	
MAGNETRON INJECTION GUN FOR THE 2 MW 170 GHZ MODULAR COAXIAL CAVITY GYROTRON.....	647
<i>Ioannis Gr. Pagonakis ; Konstantinos A. Avramidis ; Gerd Gantenbein ; Stefan Illy ; Zisis Ioannidis ; Francois Legrand ; Sebastian Ruess ; Tobias Ruess ; Tomasz Rzesnicki ; Manfred Thumm ; John Jelonnek</i>	
DESIGN OF A 140 GHZ, 1MW GYROTRON AT UESTC	649
<i>Ying-Hui Liu ; Xin-Jian Niu ; Hui Wang ; Guo Guo ; Jian-Wei Liu ; Li Hongfu ; Chao-Jun Lei ; Zhang Shuangshi</i>	
WIDEBAND CHAOTIC SUB- THZ GENERATION BASED ON EXCITATION OF ROGUE WAVES IN GYROTRON.....	651
<i>R.M. Rozental ; I.V. Zotova ; N.S. Ginzburg ; A.S. Sergeev ; M.V. Morozkin ; V.P. Tarakanov</i>	
A SIMPLE APPROACH TO WIDEBAND FREQUENCY TUNING IN GYROTRON: PROOF-OF-PRINCIPLE DEMONSTRATION	652
<i>I.V. Bandurkin ; A.E. Fedotov ; M.Yu. Glyavin ; A.G. Luchinin ; M.D. Proyavin ; R.M. Rozental ; M.V. Morozkin ; I.V. Zotova</i>	
SPONTANEOUS COHERENT CYCLOTRON THZ SUPER-RADIATION FROM A DENSE ELECTRON BUNCH	654
<i>Yu.S. Oparina ; A.V. Savilov</i>	
PROJECT OF AN INTENSE TERAHERTZ-WAVE SOURCE BASED ON COHERENT CHERENKOV RADIATION MATCHED TO CIRCLE PLANE WAVE.....	656
<i>N. Sei ; T. Sakai ; T. Tanaka ; Y. Hayakawa ; Y. Sumitomo ; Y. Takahashi ; K. Hayakawa ; K. Nogami</i>	
SIMULATION FOR COMBINATION OF VELOCITY BUNCHINGS AND COHERENT THZ UNDULATOR RADIATION	658
<i>Y. Sumitomo ; K. Hayakawa ; Y. Hayakawa ; K. Nozami ; T. Sakai ; Y. Takahashi ; T. Tanaka</i>	

ELECTRON ACCELERATION BY INTENSE THZ PULSES	660
<i>Z. Tibai ; Sz. Turnar ; J. A. Fülöp ; J. Hebling ; G. Almasi</i>	
HIGH POWER COHERENT TERAHERTZ WAVE SOURCES AT LEBRA LINAC IN NIHON UNIVERSITY	662
<i>T. Sakai ; N. Sei ; T Tanaka ; Y. Havakawa ; Y. Sumitomo ; K. Havakawa ; K. Nogami ; H. Ogawa</i>	
EVALUATION OF THERMAL LEAKAGE IN WR-5 WAVEGUIDE CALORIMETER.....	664
<i>Y. Tojima ; M. Kinoshita ; H. Iida ; K. Fujii</i>	
CALIBRATION OF POWER METER WITH TAPERED WAVEGUIDE AT FREQUENCY RANGE OF 110–170 GHZ.....	666
<i>Moto Kinoshita ; Yuya Tojima ; Hitoshi Iida</i>	
CURRENT STATUS OF TERAHERTZ FREQUENCY METROLOGY AND STANDARD AT NICT	668
<i>S. Nagano ; H. Ito ; M. Kajita ; Y. Hanado ; T. Ido</i>	
TERAHERTZ WAVE HETERODYNE DETECTION BASED ON PARAMETRIC UP-CONVERSION AT ROOM TEMPERATURE	670
<i>Shin'ichiro Hayashi ; Yoshinori Uzawa</i>	
RANDOM ERROR ESTIMATION IN COMPLEX REFRACTIVE INDEX MEASURED BY TRANSMISSION MODE TERAHERTZ TIME DOMAIN SPECTROSCOPY	672
<i>Kentaro Kurake ; Kento Kinumura ; Shun Takagi ; Norihisa Hiromoto ; Saroj R. Tripathi</i>	
FABRY-PÉROT INTERFEROMETER SCANNED BY GEOMETRIC PHASE.....	674
<i>Seigo Ohno</i>	
AMPLITUDE-MODULATED CONTINUOUS-WAVE RANGING SYSTEM WITH RESONANT-TUNNELING-DIODE TERAHERTZ OSCILLATOR.....	676
<i>Jiyu Hu ; Ryotaka Wakasugi ; Safumi Suzuki ; Masahiro Asada</i>	
SPECTROSCOPIC RANGE POINTS MIGRATION METHOD FOR WIDE-BEAM TERAHERTZ IMAGING	678
<i>Takamaru Matsui ; Shouhei Kidera</i>	
0.65 THZ SHEET BEAM TRAVELING-WAVE TUBE BASED UPON TRUNCATED SINE WAVEGUIDE.....	680
<i>Shuanzhu Fang ; Jin Xu ; Xuebing Jiang ; Xia Lei ; Pengcheng Yin ; Quan Yang ; Tingting Guo ; Gangxiong Wu ; Qian Li ; Chong Ding ; Ruichao Yang ; Guoqing Zhao ; Hairong Yin ; Lingna Yue ; Dazhi Li ; Wenxiang Wang ; Yanyu Wei</i>	
A HIGH-GAIN ANTENNA WITH POLARIZATION-DIVISION MULTIPLEXING FOR TERAHERTZ WIRELESS COMMUNICATIONS	682
<i>Chao Shu ; Shaoqing Hu ; Yuan Yao ; Xiaodong Chen</i>	
PROPAGATION MEASUREMENTS FOR INDOOR WIRELESS COMMUNICATIONS AT 350/650 GHZ	684
<i>Heng Zhao ; Leihao Wei ; Mona Jarrahi ; Gregory Pattie</i>	
FAST SWITCHING AND DOUBLE RESONANCE OF NONLINEAR TRANSISTORS IN TERAHERTZ REGIME.....	686
<i>Yee Sin Ang ; L. K. Ang ; C. Zhang ; Zhongshui Ma</i>	
GRAPHENE CONDUCTIVITY MAPPING USING TERAHERTZ TIME-DOMAIN REFLECTION SPECTROSCOPY	687
<i>Hungyen Lin ; Philipp Braeuninger-Weimer ; Varun S. Kamboi ; David S. Jessop ; Riccardo Dcgl'innocenti ; Harvey E. Beere ; David A. Ritchie ; Stephan Hofmann ; J. Axel Zeitler</i>	
TUNABLE FANO RESONANCE USING GRAPHENE INTEGRATED METASURFACE	689
<i>Quan Li ; Shuang Wang</i>	
SPIN-POLARIZED GAAS SURFACE STUDIED BY FIRST-PRINCIPLES METHOD WITH SO INTERACTION FOR THZ EMISSION APPLICATION.....	691
<i>Mary Clare S. Escaño ; Hideaki Kasai ; Masahiko Tani</i>	
MICROFLUIDIC CHIP WITH SANDWICH STRUCTURE FOR TERAHERTZ SPECTRA OF GLYCEROL	692
<i>Su Bo ; Wu Yaxiong ; Wen Yiwei ; He Jingsuo ; Zhang Shengbo ; Zhang Cunlin</i>	
PHOTOTHERMAL CONVERSION AND FAST RESPONSE PROPERTIES OF 3D GRAPHENE FOAM IN THE TERAHERTZ RANGE	694
<i>Meng Chen ; Yingxin Wang ; Fei Fan ; Yi Huang ; Ziran Zhao</i>	
STIMULATED EMISSION IN 2.8 – 3.5 μM WAVELENGTH RANGE FROM PELTIER COOLED HGTE/CDHGTE QUANTUM WELL HETEROSTRUCTURES	696
<i>S.V. Morozov</i>	
THE BIAS VOLTAGE AND PHOTON FREQUENCY EFFECTS ON THE NEGATIVE OPTICAL CONDUCTANCE OF A GAPPED SINGLE LAYER GRAPHENE P-N JUNCTION (GGPNJ) IN THZ TO INFRARED REGIME.....	698
<i>Shareef F. Sultan Al- Tikrity</i>	

CARRIER DYNAMICS IN SNS2SINGLE CRYSTALS AND VERTICAL NANOSTRUCTURES:	
ROLE OF EDGES.....	700
<i>Kateryna Kushnir ; Erin Morissette ; Binod Giri ; Curtis W. Doiron ; Ronald L. Grimm ; Pratap M. Rao ; Lyubov V. Titova</i>	
TUNABLE POLARIZATION-INDEPENDENT TERAHERTZ BAND-STOP FILTER BASED ON GRAPHENE METASURFACE	702
<i>Jiang-Yu Liu ; Tie-Jun Huang ; Pu-Kun Liu</i>	
TERAHERTZ CONDUCTIVITY OF PHOTOEXCITED MULTI-LAYER GRAPHENE	704
<i>Alexander N. Grebenchukov ; Anton D. Zaitsev ; Mikhail G. Novoselov ; Petr S. Demchenko ; Egor V. Kornilov ; Evgeniva O. Kovalska ; Anna V. Baldychcva ; Mikhail K. Khodzitskv</i>	
MILLIMETER-WAVE TECHNOLOGIES FOR BODY-CENTRIC APPLICATIONS	706
<i>Maxim Zhadobov</i>	
ACTIVE THZ DEVICES USING HYBRID LEAD-HALIDE PEROVSKITES	707
<i>Ajay Nahata</i>	
FIELD EFFECT TRANSISTORS BASED TERAHERTZ DETECTORS 25 YEARS HISTORY, STATE OF THE ART AND FUTURE DIRECTIONS	708
<i>Woiciech Knap ; Jacek Marczewski ; Michal Zaborowski ; Daniel Tomaszewski ; Przemyslaw Zagrajek ; Dmytro B. But ; Pavlo Sai ; Ivan Yahniuk ; Nina Dyakonova ; Dominique Coquillar ; Frederic Tenne ; Grzegorz Cywinski</i>	
COUPLING OF 2D PLASMONS IN GRATING-GATE PLASMONIC THZ DETECTOR TO THZ WAVE WITH LATERAL POLARIZATION	711
<i>M. Suzuki ; T. Hosotani ; T. Otsuji ; T. Suemitsu ; Y. Takida ; H. Ito ; H. Minamide ; A. Satou</i>	
ORGANICS-BASED PHASE MODULATOR FOR TERAHERTZ DETECTION UP TO 1.25 THZ	713
<i>Ileana-Cristina Benea-Chelmus ; Tianqi Zhu ; Francesca Fabiana Settembrini ; Christopher Bonzon ; Elena Mavrona ; Delwin L. Elder ; Wolfgang Heni ; Juerg Leuthold ; Larry R. Dalton ; Jerome Faist</i>	
SENSITIVITY ENHANCEMENT OF PHOTOTHERMOELECTRIC TERAHERTZ DETECTORS WITH SERIES COMBINATION BETWEEN CARBON NANOTUBES AND METALS	714
<i>K. Li ; D. Suzuki ; Y. Ochiai ; Y. Kawano</i>	
TERAHERTZ RECEIVERS FOR TIME-DOMAIN SPECTROSCOPY MADE OF TRANSITION METAL DOPED INGAAS: UP TO 105 DB DYNAMIC RANGE	716
<i>Robert B. Kohlhaas ; Björn Globisch ; Steffen Breuer ; Simon Nellen ; Lars Liebermeister ; Martin Schell ; P. Richter ; Martin Koch ; Mykhaylo P. Sentsiv ; William T. Masselink</i>	
TERAHERTZ FIELD EMISSION OF FEMTO-COULOMB ELECTRON BUNCHES	718
<i>Dominique Matte ; Lauren Gingras ; Mark Sutton ; Bradley J. Siwick ; David G. Cooke</i>	
EXTREME NONLINEAR OPTICS IN TRANSITION METAL DICHALCOGENIDE MONOLAYERS	721
<i>Koichiro Tanaka</i>	
DIRECT INJECTION OF ULTRASHORT ELECTRON BUNCHES INTO A SOLID MATERIAL USING TERAHERTZ-DRIVEN ELECTRON FIELD EMISSION.....	722
<i>Simon L. Lange ; Lars René Lindvold ; Peter U. Jepsen</i>	
DEMONSTRATION OF 0.6 MJ MULTICYCLE THZ PULSES VIA CHIRP-AND-DELAY DOWN CONVERSION OF BROADBAND LASERS WITH PRECISE SPECTRAL PHASE TUNING AND LARGE PPLN	724
<i>N. H. Matlis ; S. W. Jolly ; F. Ahr ; V. Leroux ; T. Eichner ; A-L. Calendron ; K. Ravi ; H. Ishizuki ; T. Taira ; A. R. Maier ; Franz X. Kärtner</i>	
GENERATION OF 4 THZ RADIATION FROM LITHIUM-NIOBATE OFF-AXIS THZ PARAMETRIC OSCILLATOR	725
<i>Yu-Chung Chiu ; Yen-Chieh Huang ; Tsang-Dong Wang ; Gang Zhao</i>	
LASER-PLASMA METHOD FOR GENERATION OF FEW- AND SUBCYCLE PULSES IN A BROAD SPECTRAL RANGE	728
<i>V. A. Kostin ; N. V. Vvedenskii</i>	
COHERENT TERAHERTZ RADIATION EMITTED BY WIDE-ANGLE ELECTRON BEAMS FROM LASER-WAKEFIELD ACCELERATORS	730
<i>X. Yang ; E. Brunetti ; D. Jarosznvnskr</i>	
TERAHERTZ PULSES WITH STRONG DC PRECURSORS.....	732
<i>Michael I. Bakunov ; Evgeny S. Efimenko ; Maxim V. Tsarev ; Sergey A. Sychugin</i>	
TWO-COLOR FEMTOSECOND PLASMA BACKWARD TERAHERTZ EMISSION	734
<i>Pavel A. Chizhov ; Alexandr A. Ushakov ; Vladimir V. Bukin ; Nikolay A. Panov ; Daniil E. Shipilo ; Olga G. Kosarcva ; Andrei B. Savel'ev ; Sergey V. Garnov</i>	
HIGH-POWER PULSED TERAHERTZ SPECTROMETER	736
<i>I.A. Tzibizov ; G.I. Kropotov ; D.I. Tsvnishka</i>	
REAL-TIME CONTINUOUS WAVE TERAHERTZ SPECTROSCOPY WITH 2 THZ BANDWIDTH.....	738
<i>Lars Liebermeister ; Simon Nellen ; Robert B. Kohlhaas ; Martin Schell ; Björn Globisch</i>	

1.5 PORT VECTOR SPECTROMETER FOR TERAHERTZ TIME DOMAIN SPECTROSCOPY	740
<i>Fahd R. Faridi ; Uttam Nandi ; Sascha Preu</i>	
PURE PHASE TERAHERTZ WAVE-FRONT MODULATOR	742
<i>Yan Zhang ; Jingying Guo ; Teng Wang ; Xinke Wang</i>	
HIGH-SPEED TERAHERTZ WAVEFORM MEASUREMENT FOR INTENSE TERAHERTZ LIGHT USING 100-KHZ YB-DOPED FIBER LASER.....	744
<i>Masaaki Tsubouchi ; Keisuke Nagashirna</i>	
THZ NEAR- FIELD IMAGING AND SPECTROSCOPY WITH NANOSCALE RESOLUTION.....	747
<i>Aina Reich ; Max Eisele ; Andreas Huber</i>	
VISUALIZATION OF ZERO-DIMENSIONAL PLASMONS IN GRAPHENE QUANTUM DOTS WITH NEAR-FIELD INFRARED MICROSCOPY	750
<i>T. Okamoto ; A. Sasagawa ; Y. Harada ; S. Nakano ; W. Norimatsu ; M. Kusunoki ; Y. Kawano</i>	
SEMICONDUCTOR BAND STRUCTURE CHARACTERIZATION BY TERAHERTZ EXCITATION SPECTROSCOPY	752
<i>A. Arlauskas ; V. Pacebutas ; R. Butkute ; R. Norkus ; B. Cechavicius ; E. Pozingyte ; A. Krotkus</i>	
EXTRACTION OF THZ ABSORPTION SIGNATURES OBSCURED BY ROUGH SURFACE SCATTERING USING DISCRETE WAVELET TRANSFORM	754
<i>M. Ebrahimkhani ; M. H. Arbab</i>	
INTRA- EXCITONIC TERAHERTZ EMISSION FROM SEMICONDUCTORS	756
<i>A.O. Zakhar'in ; A.V. Andrianov</i>	
THZ- TDS MEASUREMENTS OF HYDRATION STATE OF BIO RELATED MATERIALS AND DATA ANALYSIS BY MACHINE LEARNING	758
<i>Daiki Kawakami ; Hitoshi Tabata</i>	
INVESTIGATION OF WATER-FREE BIOTISSUE-MIMICKING PHANTOMS IN TERAHERTZ FREQUENCY RANGE.....	759
<i>Tianmiao Zhang ; Mikhail K. Khodzitsky ; Petr S. Demchenko ; Alexander V. Bykov ; Alexey P. Popov ; Igor V. Meglinski</i>	
DETECTION OF HUMAN TUMOR MARKERS WITH THZ METAMATERIALS.....	761
<i>C. Weisenstein ; D. Schaar ; M. Schmeck ; A. K. Wigger ; A. K. Bosserhoff ; P. Haring Bolívar</i>	
TERAHERTZ MICROFLUIDIC METAMATERIAL BIOSENSOR FOR TINY VOLUME LIQUID SAMPLES	763
<i>Rui Zhang ; Qingming Cherr ; Kai Liu ; Zefeng Chen ; Kaidi Li ; Jianbin Xu ; Emma Pickwell-Macpherson</i>	
DEVELOPMENT OF PDMS MICROCHANNEL INTEGRATED TYPE TERAHERTZ CHIP	765
<i>R. Taie ; K. Serita ; K. Kitagishi ; T. Kawai ; I. Kawayama ; H. Murakami ; M. Tonouchi</i>	
TUNEABLE OPTICAL FREQUENCY COMB GENERATOR FOR THZ SPECTROSCOPY.....	767
<i>Lalitha Ponnampalam ; Martyn J. Fice ; Haymen Shams ; Cyril C. Renaud ; Alwyn J. Seeds</i>	
CONTINUOUS WAVE TERAHERTZ GENERATION FROM PHOTODIODE-BASED EMITTERS WITH UP TO 200 μ W TERAHERTZ POWER.....	769
<i>S. Nellen ; R. Kohlhaas ; L. Liebermeister ; S. Breuer ; B. Globisch ; M. Schell</i>	
BROADBAND SPECTRUM FROM A PHOTOCONDUCTIVE EMITTER SPANNING UP TO 13 THZ	771
<i>A. Singh ; A. Pashkin ; S. Winnerl ; M. Helm ; H. Schneider</i>	
HIGH-POWER TERAHERTZ GENERATION FROM TELECOMMUNICATION-COMPATIBLE, BIAS-FREE PHOTOCONDUCTIVE NANO-ANTENNAS	773
<i>Deniz Turan ; Nezih T. Yardimci ; Zixuan Rong ; Dingkun Ren ; Hyunseok Kim ; Diana Huffaker ; Mona Jarrahi</i>	
OPTIMIZATION OF TERAHERTZ EMISSION SPECTRA OF ELECTRICALLY PUMPED 2DEG PLASMONIC ALGAN/GAN HETEROSTRUCTURES	775
<i>Grigelionis I ; Jakštas V ; Janonis V ; Kašalynas I</i>	
FEEDBACK EFFECTS AND NONLINEAR DYNAMICS IN RESONANT TUNNELING DIODES	777
<i>A. Karsaklian Dal Bosco ; S. Suzuki ; M. Asada ; H. Minamide</i>	
THE ROUTE TO NANOSCALE TERAHERTZ TECHNOLOGY: NANOWIRE-BASED TERAHERTZ DETECTORS AND TERAHERTZ MODULATORS.....	779
<i>Jessica L Bolland ; Kun Peng ; Sarwat Baig ; Diamshid Damry ; Patrick Parkinson ; Lan Fu ; Hark Hoe Tan ; Chennupati Jagadish ; Laura M Herz ; Hannah Joyce ; Michael Johnston</i>	
GENERATING AND SHAPING LIGHT IN THE THZ FREQUENCY RANGE	781
<i>C. Derntl ; S. Schoenhuber ; M. Kainz ; M. Wenclawiak ; B. Limbacher ; J. Darmo ; K. Unterrainer</i>	
DRESSING INTERSUBBAND TRANSITIONS AT TERAHERTZ FREQUENCIES	782
<i>Johannes Schmidt ; Stephan Winnerl ; Emmanouil Dimakis ; Manfred Helm ; Harald Schneider</i>	
NONLINEAR THZ PLASMONICS IN Bi_2Se_3 TOPOLOGICAL INSULATOR.....	784
<i>P.Di Pietro ; N. Adhlakha ; F. Piccirilli ; A. Di Gaspare ; S. Oh ; A. Perucchi ; S. Lupi</i>	
SUBCYCLE NONLINEAR TERAHERTZ OPTICS IN DOPED SEMICONDUCTOR THIN FILM	786
<i>X. Chai ; X.ROPagnol ; M. Raeiszadeh ; S. Safavi-Naeini ; M. Reid ; T. Ozaki</i>	

ULTRAFAST CONTROL OF EVEN-ORDER HARMONIC GENERATION FROM SOLIDS BY AN INTENSE TERAHERTZ FIELD	788
<i>Haovu Huang ; Liwei Song ; Nicolas Tancoene-Deiean ; Nicolai Klemke ; Angel Rubio ; Franz X. Kärtner ; Oliver D. Miicke</i>	
GIANT TERAHERTZ NONLINEARITY OF GRAPHENE	790
<i>Dmitry Turchinovich</i>	
TILTED PULSE-FRONT PHASE-MATCHING IN THREE DIMENSIONS: OVERCOMING THE CHERENKOV ANGLE RESTRICTIONS	791
<i>Steven P. Jamison ; David A. Walsh ; Edward W. Snedden</i>	
OPTICAL RECTIFICATION OF A 100W AVERAGE POWER ULTRAFAST THIN-DISK OSCILLATOR.....	793
<i>F. Meyer ; N. Hekmat ; S. Mansourzadeh ; M. Hoffmann ; C. J. Saraceno</i>	
PULSE FRONT TILT DERIVED FROM A DIGITAL MICROMIRROR DEVICE AND ITS THZ APPLICATION	794
<i>K. Murate ; M. Javan ; X. Ropagnol ; F. Blanchard</i>	
THIN-DISK LASER OSCILLATOR DRIVING THZ GENERATION UP TO 6 THZ	797
<i>C. Paradis ; N. Modsching ; O. Razskazovskaya ; J. Drs ; V. J. Wittwer ; T. Südmeyer ; F. Meyer ; C. J. Saraceno</i>	
PLASMONIC RESONANCES AFFECTING TERAHERTZ GENERATION IN LASER-INDUCED GAS-PLASMAS.....	799
<i>K. J. Kaltenecker ; I. Thiele ; B. Zhou ; A. Nguyen ; E. Smctanina ; R. Nuter ; P. González De Alaiza Martinez ; J. Déchard ; L. Berge ; P. U. Jepsen ; S. Skupin</i>	
A MIRRORLESS TERAHERTZ- WAVE PARAMETRIC OSCILLATOR.....	800
<i>Kouji Nawata ; Yu. Tokizane ; Yuma Takida ; Takashi Notake ; Zhengli Han ; Andreas Karsaklian Dal Bosco ; Mio Koyama ; Hiroaki Minamide</i>	
DESIGN, ANALYSIS AND IMPLEMENTATION OF QUARTER-WAVE ABSORBER STRUCTURE FOR UNCOOLED INFRARED DETECTORS WITH HIGH FILL FACTOR	802
<i>Ramazan Cetin ; Ozan Erturk ; Tayfun Akin</i>	
HIGH NUMERICAL APERTURE DIFFRACTIVE OPTICS FOR IMAGING APPLICATIONS AT 0.6 THZ FREQUENCY.....	804
<i>L. Minkevicius ; D. Jokubauskis ; V. Janonis ; S. Indrisilnas ; G. Raciukaitis ; V. Tamosiunas ; I. Kasalynas ; G. Valušis</i>	
TERAHERTZ ARTIFICIAL DIELECTRIC STEPPED - REFRACTIVE- INDEX LENS.....	806
<i>A. I. Hernandez-Serrano ; Raiind Mendis ; Kimberly S. Reichel ; Wei Zhang ; E. Castro-Camus ; Daniel M. Mittleman</i>	
RESONANT DIELECTRIC STRUCTURE AS A LENS FOR SUPER-RESOLUTION IMAGING	808
<i>A. V. Chernyadiev ; A.V. Vozianova ; M.K. Khodzitsky</i>	
PAPER-BASED OPTICAL COMPONENTS FOR THE THZ REGION.....	810
<i>Rhiannon Lees ; Polina S. Stefanova ; Andreas K. Klein ; Claudio Balocco ; Andrew J. Gallant</i>	
CHIRALITY PLASMONIC LENS INDUCED TERAHERTZ SUPER-FOCUSING	812
<i>Xiaofei Zang ; Yiming Zhu ; Yan Peng ; Lin Chen</i>	
DEMONSTRATION OF COMPUTATIONAL THZ DIFFRACTIVE OPTICAL ELEMENTS ENABLED BY A MODIFIED DIRECT BINARY SEARCH TECHNIQUE	814
<i>Sourangsu Banerji ; Ashish Chanana ; Hugo O. Condori-Quispe ; Sara Arezoomandan ; Ajay Nahata ; Berardi Sensale-Rodriguez</i>	
STRUCTURE AND DYNAMICS OF BOUND WATER IN POLYMER FILM STUDIED BY THZ SPECTROSCOPY	817
<i>Hiromichi Hoshina ; Yoh Iwasaki ; Takuro Kanemura ; Eriko Kometani ; Makoto Okamoto ; Chiko Otani</i>	
ACTIVE BIDIRECTIONAL CONTROL HYBRID BASED ON ORGANIC MATERIALS FOR TERAHERTZ WAVES.....	820
<i>Wei Wang ; Hongyu Ji ; Bo Zhang ; Jingling Shen</i>	
THZ- TDS ON POLYMERS: MONITORING THERMO-OXIDATIVE AGEING AND CRYSTALLIZATION KINETICS	822
<i>Sebastian Engelbrecht ; Kai-Henning Tybussek ; Bernd Fischer ; Stefan Sommer</i>	
BOSON PEAK AND FRACTON OF SODIUM CARBOXYMETHYL STARCH DETECTED BY TERAHERTZ TIME-DOMAIN AND LOW-FREQUENCY RAMAN SPECTROSCOPIES	824
<i>Wakana Terao ; Tatsuya Mori ; Seiji Koiima ; Karolina Kaczmarzka ; Beata Grabowska ; Yasuhiro Fujii ; Akitoshi Koreeda ; Jae-Hyeon Ko</i>	
EXPERIMENTAL CHARACTERIZATION OF ARTIFICIAL HUMAN SKIN WITH MELANOMAS FOR ACCURATE MODELLING AND DETECTION IN HEALTHCARE APPLICATION	826
<i>Rui Zhang ; Ke Yang ; Qammer Abbasi ; Najah Abed Abuali ; Akram Alomainy</i>	
TERAHERTZ CONDUCTIVITY IN PROTEINS	828
<i>Jens Neu ; Sonhja M. Yi ; Yanzui Gu ; Nikhil S. Malvankar ; Charles A. Schmuttenmaer</i>	

CONCENTRATION DEPENDENCE OF IGG IMMOBILIZED ON A SENSING PLATE FOR HIGHER SENSITIVITY OF A TERAHERTZ CHEMICAL MICROSCOPE.....	830
<i>M. Iida ; T. Kamiya ; K. Sakai ; T. Kiwa ; K. Tukada</i>	
THZ ANISOTROPY IDENTIFICATION USING TUNABLE COMPACT NARROW BAND THZ SOURCES	832
<i>D. K. George ; A.G. Markelz ; Ian Mcnee ; Patrick Tekavec ; Vladimir Kozlov ; Peter Schunemann</i>	
MEASUREMENT OF PROTEIN CONFORMATIONAL FLUCTUATION IN ICE BY PASSIVE MILLIMETER-WAVE MICROSCOPY	834
<i>Akio Kishigami ; Tatsuo Nozokido</i>	
DETECTION OF IONS IN SOLUTIONS WITH SUB-MICRO LITER VOLUMES USING A TERAHERTZ CHEMICAL MICROSCOPE.....	836
<i>Y. Maeno ; T. Kamiya ; T. Kiwa ; K. Sakai ; K. Tsukada</i>	
STUDY ON THE MEMBRANE ELECTROPORATION THRESHOLD WITH THE APPLIED TERAHERTZ ELECTRIC FIELD	839
<i>Jingchao Tang ; Hairong Yin ; Jialu Ma ; Wenfei Bo ; Yang Yang ; Jin Xu ; Yubin Gong</i>	
CHARACTERING WATER CONTENTS IN ORGAN TISSUES USING THZ PULSES	841
<i>Seung Jae Oh ; Young-Bin Ji ; Hyeyoung Son ; Yuna Choi ; Young-Min Huh ; Jin-Suck Suh</i>	
PROPAGATION DYNAMICS OF THE THZ RADIATION THROUGH A DEHYDRATED TISSUE BY THE PULSE TIME DOMAIN HOLOGRAPHY METHOD	843
<i>O.A. Smolyanskaya ; E.L. Odlyanitskiy ; K.I. Zaytsev ; M.S. Kulya</i>	
A TUNABLE OPTICAL CAVITY FOR ENHANCEMENT OF NB₅N₆ MICROBOLOMETER THZ DETECTOR ABSORPTION.....	845
<i>X.C. Tu ; P. Xiao ; C. T. Jiang ; S. M. Zhai ; X. L. Guo ; X. Q. Jia ; L. Kang ; J. Chen ; P.H. Wu</i>	
ULTRA-BROADBAND W - BAND BALANCED SCHOTTKY DIODE ENVELOPE DETECTOR FOR HIGH-DATA RATE COMMUNICATION SYSTEMS	846
<i>Angel Blanco Granja ; Roland Reese ; Rolf Jakoby ; Andreas Penirschke</i>	
FERMI-LEVEL MANAGED BARRIER DIODE: ROOM-TEMPERATURE LOW-NOISE TERAHERTZ-WAVE DETECTOR	848
<i>Hiroshi Ito ; Tadao Ishibashi</i>	
NEW INGAAS THZ SCHOTTKY DETECTORS WITH NANOWIRE CONTACT FOR ZERO-BIAS OPERATION.....	851
<i>Ahid S. Hajo ; Oktay Yilmazoglu ; Franko Küppers</i>	
SEMICONDUCTING Y-BA-CU-O UNCOOLED DETECTORS: FEASIBILITY OF THZ PYROELECTRIC SENSING.....	853
<i>Annick F. Dezardin ; Maniakavahoaka Razanoelina ; Xavier Galiano ; Yvan Meautte ; Masayoshi Tonouchi ; Alain J. Krcisler</i>	
AN ULTRA-COMPACT 520-600 GHZ/1100-1200 GHZ RECEIVER WITH <10 W POWER CONSUMPTION FOR HIGH-SPECTRAL RESOLUTION SPECTROSCOPY FROM SMALL-SAT PLATFORMS	855
<i>Jose V. Siles ; Jonathan Kawamura ; Darren Hayton ; Imran Mehdi ; Jonathan Hoh ; Chris Groppi</i>	
ACTIVE AND ULTRAFAST TERAHERTZ METAMATERIALS.....	857
<i>C. H. Zhang ; B. B. Jin ; J. B. Wu ; J. Cheri ; P.H. Wu</i>	
DETECTION OF EGFR PROTEIN USING TERAHERTZ METAMATERIAL BIOSENSOR.....	859
<i>Kai Liu ; Rui Zhang ; Xuequan Chen ; Emma Pickwell-Macpherson</i>	
METALLIC PERIODIC SURFACE LATTICE ENHANCED HIGH-POWER MM-WAVE SOURCES	861
<i>A.J. Maclachlan ; H. Yin ; L. Zhang ; C.R. Robertson ; K. Ronald ; A.W. Cross ; A.D.R. Phelps</i>	
ULTRASENSITIVE THZ SENSING WITH CORRUGATED HYPERBOLIC METAMATERIALS	863
<i>Guangyuan Li ; Yuanfu Lu ; Wenquan Liu ; Guohua Jiao ; Jiancheng Lv</i>	
TERAHERTZ THIN-FILM SENSING WITH ANGLE-SUSCEPTABLE METASURFACE.....	865
<i>Nazar Nikolaev ; Sergei Kuznetsov ; Miguel Beruete</i>	
CRITICAL MODE SOFTENING IN ULTRA-STRONG COUPLING OF LANDAU LEVEL TRANSITIONS TO THZ METAMATERIALS BEYOND THE HOPFIELD MODEL	867
<i>Janine Keller ; Giacomo Scalari ; Felice Appugliese ; Shima Rajabali ; Curdin Maissen ; Christian A. Lehner ; Werner Wegscheider ; Pierre Nataf ; Jérôme Faist ; Johannes Haase ; Michele Failla ; Maksym Myronov ; David R. Lcadley ; James Lloyd-Hughes</i>	
A SOLID-STATE 0.56 THZ NEAR-FIELD ARRAY FOR μM-SCALE SURFACE IMAGING	870
<i>Philipp Hillger ; Ritesh Jain ; Janusz Grzyb ; Laven Mavarani ; Thomas Bücher ; Ullrich R. Pfeiffer ; Gaetan Mac Grogan ; Patrick Mounaix ; Jean-Paul Guillet</i>	
NON-SCANNING TERAHERTZ NEAR-FIELD IMAGING WITH SPATIAL RESOLUTION OF $\sim \lambda/100$.....	873
<i>Li-Guo Zhu ; Si-Chao Chen ; Ze-Ren Li</i>	

TOWARDS POLARIZATION-RESOLVED ALL-ELECTRONIC THZ-NANOSCOPY	875
<i>Stephan Schäffer ; Anna Katharina Wigger ; Peter Haring Bolívar</i>	
SCANNING THZ NOISE MICROSCOPY OF OPERATING NANO-DEVICES	877
<i>Le Yang ; Ruijie Qian ; Qianchun Weng ; Xue Gong ; Pingping Chen ; Susumu Komiyama ; Wei Lu ; Zhenghua An</i>	
SUB-WAVELENGTH IMAGING IN THE TERAHERTZ DOMAIN THROUGH OPTICAL RECTIFICATION.....	879
<i>Federico Sanjuan ; Gwenaél Gaborit ; Jean-Louis Coutaz</i>	
IMAGING ON THE NANOSCALE WITH THZ TIME-DOMAIN, EMISSION AND PUMP-PROBE MICROSCOPY	881
<i>Pemille Klarskov ; Anzela Pizzuto ; Daniel M. Mittleman</i>	
THZ PUMP-PROBE SETUP FOR EXPERIMENTS IN HIGH MAGNETIC FIELDS.....	883
<i>B. Bernáth ; D. Kamcnyskiy ; B. Redlich ; A. F. G. Van Der Meer ; P. C. M. Christianen ; H. Engelkamp ; J. C. Maan</i>	
EXPERIMENTAL DEMONSTRATION OF 20DB NONRECIPROCITY AROUND 1.5THZ ON A INSB MAGNETOPLASMONIC GRATING MIRROR AT 77K	885
<i>O. Stepanenko ; T. Horak ; S. Mitryukovskiy ; R. Peretti ; J.-F. Lampin ; M. Vanwolleghem ; J. Chochol ; K. Postava</i>	
SUBWAVELENGTH FIBER: ENHANCED THZ MAGNETIC SOURCE	887
<i>Shaghik Atakramians ; Ilya V. Shadrivov ; Andrey E. Miroshnichenko ; Alessio Stefani ; Heike Ebendorff-Heidepriem ; Tanya M. Monro ; Shahraam Afshar V</i>	
ULTRA- PRECISE PROCESSING AND MAKER FRINGE MEASUREMENTS OF ORGANIC N-BENZYL-2-METHYL-4-NITROANILINE CRYSTAL	889
<i>Takashi Notake ; Masahiro Takeda ; Takuya Hosobata ; Yutaka Yamagata ; Hiroaki Minamide</i>	
INFLUENCE OF TWO-PHOTON ABSORPTION ANISOTROPY ON TERAHERTZ GENERATION IN < 111 > ZINC BLENDE CRYSTALS	891
<i>Federico Sanjuan ; Gwenaél Gaborit ; Jean-Louis Coutaz</i>	
SYNCHRONIZED PLASMA WAVE RESONANCES IN ULTRATHIN-MEMBRANE GAN HETEROSTRUCTURES	893
<i>Hugo O. Condori Quispe ; Ashish Chanana ; Ajay Nahata ; Berardi Sensale-Rodriguez ; Jimmy Encomendero ; Mingda Zhu ; Debdeep Jena ; Huili Grace Xing ; Nicole Trometer</i>	
PROGRESS ON 1 MW OPERATION OF JAPAN GYROTRON FOR ITER EC SYSTEM.....	894
<i>R. Ikeda ; Y. Oda ; K. Kajiwara ; T. Kobayashi ; T. Nakai ; M. Terakado ; K. Takahashi ; S. Moriyama ; K. Sakamoto</i>	
DEVELOPMENTS OF EQUIPMENT FOR SUB- THZ COLLECTIVE THOMSON SCATTERING IN LHD	896
<i>Teruo Saito ; Shunsuke Tanaka ; Ryuji Shinbavashi ; Takumi Hirobe ; Yuusuke Yamaguchi ; Masafumi Fukunari ; Yoshinori Tatematsu ; Kunizo Ohkubo ; Shin Kubo ; Takashi Shimosuma ; Kenii Tanaka ; Masaki Nishiura</i>	
TERAHERTZ-RANGE HIGH-ORDER CYCLOTRON HARMONIC PLANAR GYROTRONS WITH TRANSVERSE ENERGY EXTRACTION.....	898
<i>N. S. Ginzburz ; V. Yu. Zaslavsky ; T. Idehara ; V.M. Manuilov ; I. V. Zheleznov ; A. N. Kuftin ; A. M. Malkin ; I. V. Zotova ; A. S. Sergeev ; M. Yu. Glyavin</i>	
OVERVIEW OF RECENT GYROTRON R&D AT KIT IN VIEW OF THE EU DEMO	899
<i>K. A. Avramidis ; G. Aiello ; P. T. Brucker ; G. Gantenbein ; M. George ; G. Grossetti ; S. Illy ; Z.C. Joannidis ; J. Jin ; P. C. Kalaria ; A. Marek ; I. Gr. Pazonakis ; S. Ruess ; T. Ruess ; Rzesnicki ; T. Scherer ; M. Schmid ; D. Strauss ; M. Thumm ; C. Wu ; A. Zein ; J. Jelonnek ; T. Franke ; M. Q. Tran</i>	
DEVELOPMENT OF A SECOND HARMONIC MULTI-FREQUENCY GYROTRON WITH GAUSSIAN BEAM OUTPUT	901
<i>Yoshinori Tatematsu ; Kyoya Takayama ; Yuto Maeda ; Tatsuya Ueyama ; Taisei Ogura ; Masafumi Fukunari ; Yuusuke Yamaguchi ; Teruo Saito</i>	
POSSIBILITIES OF MODE SELECTION IN DOUBLE-BEAM GYROTRONS WITH ADDITIONAL ABSORBING BEAM.....	903
<i>V. Manuilov ; V. Zaslavsky ; I. Zotova ; I. Osharin ; A. Savilov ; A. Fokin ; T. Idehara ; M. Glyavin</i>	
TERAHERTZ LARGE-ORBIT HIGH-HARMONIC GYROTRONS AT IAP RAS FEATURES.....	905
<i>I.V. Bandurkin ; V.L. Bratman ; Yu.K. Kalynov ; V.N. Manuilov ; I.V. Osharin ; A.V. Savilov ; N.A. Zavolsky</i>	
SUBMM ASTRONOMY FROM GROUND AND SPACE: EVOLUTION AND FUTURE PERSPECTIVES	908
<i>Thijs De Graauw</i>	
THE 1200GHZ RECEIVER FRONTEND OF THE SUBMILLIMETRE WAVE INSTRUMENT OF ESA JUPITER ICY MOONS EXPLORER	911
<i>A. Maestrini ; L. Gatilova ; J. Treuttel ; Y. Jin ; A. Cavanna ; D. Moro Melgar ; T. Vacelet ; A. Féret ; S. Carooen ; G. Gay ; F. Dauplay ; J-M. Krieg ; B. Thomas ; P. De Maagt ; C. Goldstein</i>	

THE BENCH TEST OF A HIGH TEMPORAL RESOLUTION HCN INTERFEROMETRY FOR ATMOSPHERIC PRESSURE AIR PLASMAS	913
<i>J.B. Zhang ; H. Q. Liu ; Y.X. Jie ; X. C. Wei ; J.X. Xie ; L.Q. Hu</i>	
A COMPACT INTEGRATED 675–693 GHZ POLARIMETER.....	915
<i>Eric W. Bryerton ; Jeffrey L. Hesler ; Daniel Koller ; Yiwei N. Duan ; Thomas W. Crowe</i>	
AXION HALOSCOPES: MOVING FROM MICROWAVES TO MM-WAVES.....	917
<i>Samantha M. Lewis</i>	
ATACAMA LARGE MILLIMETER/SUBMILLIMETER ARRAY (ALMA): SCIENTIFIC ACHIEVEMENTS AND DEVELOPMENTS FOR FUTURE	919
<i>Tetsuo Hasegawa</i>	
SIMULATIONS OF THE PENETRATION OF 60–300 GHZ RADIATION INTO THE HUMAN EAR	920
<i>Zoltan Vilagosh ; Alireza Lajevardipour ; Andrew Wood</i>	
NANO-SCALE INFRARED IMAGING OF β-SHEET STRUCTURES IN SYNAPTIC JUNCTIONS OF PRIMARY NEURONS ISOLATED FROM TRANSGENIC MICE	922
<i>O. Klementieva ; J. Mathurin ; A. Engdahl ; R. Freitas ; K. Willen ; P. Uvdal ; L.M. Miller ; G. Gouras</i>	
TERAHERTZ SPECTROSCOPIC IDENTIFICATION OF LIGUSTICUM CHUANXIONG HORT AND LIGUSTICUM CHUANXIONG HORT. CV. FUXIONG.....	924
<i>Jun Zhou ; Junhong Tian ; Lin Zhou ; Xiaoxiao Zheng ; Guihua Jiang ; Yuying Ma</i>	
DEVICE FOR LIGHT-MATTER INTERACTION ENHANCEMENT IN THE FULL THZ RANGE FOR PRECISE SPECTROSCOPY OF SMALL VOLUME SAMPLES.....	926
<i>Romain Peretti ; Sergey Mitryukovskiy ; Flavie Braud ; Emilien Peytavit ; Emmanuel Dubois ; Jean-Francois Lampin</i>	
TOWARDS PATHOGENIC FUNGAL DETECTION USING THZ METAMATERIAL BIOSENSORS.....	928
<i>A. K. Wigger ; D. Amazu ; A. Neuberger ; N. Regner ; N. Vieweg ; P. Lcisching ; P. Haring Bolivar</i>	
COMPLEX PERMITTIVITY CALCULATION OF TINY BIOLOGICAL MATERIALS USING CAVITY PERTURBATION METHOD AT MILLIMETER WAVE FREQUENCY	930
<i>Jialu Ma ; Jingchao Tang ; Wenfei Bo ; Yang Yang ; Jin Xu ; Baoqing Zeng ; Yubin Gong</i>	
MODELLING NEURONAL ACTIVITY ALTERATIONS CAUSED BY MMW- THZ MEDIATED MELTING OF LIPID MEMBRANE	932
<i>Sergii Romanenko ; Peter H. Siegel ; Livia Hoola ; Alan R Harvey ; Vincent Wallace</i>	
SPECTROSCOPIC MEASUREMENT OF BIREFRINGENT MATERIALS BY SIMULTANEOUS ACQUISITION OF TWO-POLARIZATION-STATE THZ PULSE RESPONSES	934
<i>Yoichi Kawada ; Katsumasa Yoshioka ; Yusuke Arashida ; Ikufumi Katayama ; Jun Takeda ; Hironori Takahashi</i>	
THZ DYNAMICS OF HYDRATED PHOSPHOLIPID STUDIED BY BROADBAND DIELECTRIC SPECTROSCOPY.....	936
<i>Yu Kadamura ; Naoki Yamamoto ; Keisuke Tominaga</i>	
PHASE TRANSITIONS IN SNSE PROBED BY FAR INFRARED SPECTROSCOPY	938
<i>U. Schade ; L. Puskar ; M. Berg ; E. Ritter ; I. Efthimiopoulos ; A. Marcelli ; M. Ortolani ; W. Xu ; Y. Liu ; L. Zhao</i>	
TERAHERTZ OPTICAL TRANSMISSION OF CHARGED GE/SI QUANTUM DOTS.....	940
<i>Roman M. Balagula ; Anton N. Sofronov ; Dmitry A. Firsov ; Leonid E. Vorobjev ; Alexander A. Tonkikh ; Hayk A. Sarkisyan ; David B. Hayrapetyan ; Eduard M. Kazaryan</i>	
GIANT THERMAL EFFECT OF VIBRATION MODES OF SINGLE-CRYSTALLINE ALANINE.....	942
<i>Zenjiro Mita ; Hiroshi Watanabe ; Shin-Ichi Kimura</i>	
OPTICAL PARAMETER EXTRACTION OF PLASTIC MATERIALS BASED ON THZ-TDS.....	944
<i>Dandan Zhang ; Jiaojiao Ren ; Lijuan Li ; Qingmao Zhang ; Yiming Zhang ; Ping Huang</i>	
TEMPERATURE AND SUBSTRATE DEPENDENT CONDUCTIVITIES OF CVD GRAPHENE MEASURED BY TERAHERTZ TIME-DOMAIN SPECTROSCOPY	947
<i>I. Kawayama ; S. Ohashi ; S. Kameo ; F. R. Bagsican ; M. Razanoelina ; H. Murakami ; J. Kono ; R. Vajtai ; P. M. Ajayan ; M. Tonouchi</i>	
SPECTROSCOPY OF TEMPERATURE-DRIVEN SINGLE VALLEY DIRAC FERMIONS IN HGTE/CDHGTE QUANTUM WELLS	949
<i>A.M. Kadvkov ; S.S. Krishtopenko ; B. Jouault ; W. Desrat ; M. Marcinkiewicz ; S. Ruffenach ; C. Consejo ; J. Torres ; S.V. Morozov ; V.I. Gavrilenko ; N.N. Mikhailov ; S.A. Dvoretzskii ; W. Knap ; F. Teppe</i>	
FERROMAGNETIC RESONANCE IN HEXAGONAL FERRITE $\text{BaFe}_{12}\text{O}_{19}$ AT THE EHF FREQUENCY RANGE.....	951
<i>A. V. Badin ; K. V. Dorozhkin ; G. E. Kuleshov ; V. A. Zhuravlev ; V. I. Suslyaev ; G. E. Dunaevskii ; K.V. Bilinskii</i>	
UNDERSTANDING THE FORMATION OF MIDGAP STATES IN GAAS(001)-β2(2$\times$4) WITH SURFACE DEFECTS BASED ON DENSITY FUNCTIONAL THEORY	953
<i>Dhonny Bacuyag ; Melanie David ; Mary Clare Escaño ; Masahiko Tani</i>	

QUANTITATIVE IMPURITY MEASUREMENT IN ORGANIC CRYSTALS BY PRECISE MEASUREMENT OF THZ ABSORPTION FREQUENCIES	955
<i>Tetsuo Sasaki ; Tomoaki Sakamoto ; Makoto Otsuka</i>	
TERAHERTZ TIME-DOMAIN SPECTROSCOPY AND LOW-FREQUENCY RAMAN SCATTERING OF BOSON PEAK DYNAMICS OF LITHIUM BORATE GLASSES	957
<i>Yuta Iijima ; Tatsuya Mori ; Seiji Kojima ; Yasuhiro Fujii ; Akitoshi Koreeda ; Suguru Kitani ; Hitoshi Kawaji ; Jae-Hyeon Ko</i>	
INTRINSIC LOSSES IN DIELECTRICS INVESTIGATED BY TERAHERTZ SPECTROSCOPY	959
<i>L. Nedelcu ; C.D. Geambasu ; M.G Banciu ; G. Mozildca ; M. Mogidea</i>	
BOSON PEAK DETECTION OF COLORED CRAFT GLASS BY TERAHERTZ TIME-DOMAIN SPECTROSCOPY	961
<i>Wataru Yajima ; Tatsuya Mori ; Yuta Iijima ; Yeonkyung Jeong ; Seiji Nijima ; Yasuhiro Fujii ; Akitoshi Koreeda ; Seiji Kojima</i>	
GENERATION OF TERAHERTZ VORTEX WAVES IN RESONANT-TUNNELING-DIODE OSCILLATORS BY INTEGRATED RADIAL LINE SLOT ANTENNA	963
<i>Yunchao Chen ; Safumi Suzuki ; Masahiro Asada</i>	
A MULTI-CARRIER SIGNALS GENERATION BASED ON DPMZM IN PARALLEL FOR THZ COMMUNICATION SYSTEM	965
<i>Wei Jiang ; Shanghong Zhao ; Qinggui Tan ; Xiaojun Li ; Dong Liang ; Wenrui Zhang</i>	
THZ-WAVE GENERATION IN DSTMS-DASC MIXED CRYSTALS	967
<i>Koichiro Akiyama ; Yoichi Kawada ; Takashi Yasuda ; Atsushi Nakanishi ; Hiroshi Satozono ; Hironori Takahashi</i>	
PERIODIC TERAHERTZ- WAVE GENERATION USING A PHOTOCONDUCTIVE ANTENNA ARRAY IN A RECTANGULAR METAL WAVEGUIDE.....	969
<i>Motoki Bssho ; Ryosuke Ito ; Jongsuck Bae</i>	
HIGH-POWER MM-WAVE SOURCES BASED ON SCHOTTKY DIODES.....	971
<i>Oleg Cojocar ; Diego Moro-Melgar ; Ion Oprea ; Matthias Hoeﬂe ; Martin Rickes</i>	
COHERENT, FOCUSED, AND THRESHOLD-LESS CHERENKOV RADIATION FROM TWO-DIMENSIONAL SUB-WAVELENGTH HOLE ARRAYS	973
<i>Yucheng Liu ; Weihao Liu ; Linbo Liang ; Qika Jia ; Lin Wang ; Yalin Lu</i>	
ON-CHIP TERAHERTZ NEAR-FIELD GENERATION/DETECTION SCHEME.....	975
<i>Dmitry S. Bulgarevich ; Yusuke Akamine ; Hideaki Kitahara ; Valynn Katrine P. Mag-Usara ; Hiroyuki Kato ; Masahiro Kusano ; Dongfeng He ; Masahiko Tani ; Makoto Watanabe</i>	
ENHANCED TERAHERTZ RADIATION FROM GASB/INAS HETEROSTRUCTURES.....	977
<i>S. Sasa ; M. Tatsumi ; Y. Kinoshita ; M. Koyama ; T. Maemoto ; I. Kawayama ; M. Tonouchi</i>	
OPTIMIZATION OF OH1 SINGLE-CRYSTALLINE THIN FILM FOR EFFECTIVE THZ SOURCE BY PHYSICAL VAPOR DEPOSITION.....	979
<i>Peibin Wang ; Hirohisa Uchida ; Kei Takeya ; Kodo Kawase</i>	
INTENSE THZ SOURCE OF SUB-CYCLE PULSES WITH TUNABLE ELLIPTICAL POLARIZATION	981
<i>X. Ropagnol ; X. Chai ; M. Raeiszadeh ; S. Safavi-Naeini ; M. Reid ; T. Ozaki</i>	
IMAGE ENHANCEMENT ALGORITHMS OF TERAHERTZ IMAGES BASED ON QUANTUM PROBABILITY STATISTICS	983
<i>Zhongbo Zhu ; Xiaojun Li ; Qinggui Tan ; Wei Jiang ; Dong Liang</i>	
AN IMPROVED POST-PROCESSING METHOD FOR THREE-DIMENSIONAL VISUALIZATION IN TERAHERTZ PULSE-ECHO IMAGING	985
<i>H. Hanaizumi</i>	
TOTAL INTERNAL REFLECTION THZ DEVICES FOR HIGH SPEED IMAGING.....	987
<i>Rayko I. Stantchev ; Thierry Blu ; Emma Pickwell-Macpherson</i>	
A HIGH SENSITIVITY TERAHERTZ IMAGING SYSTEM BASED ON COMPRESSED SENSING	989
<i>Yilong Zhang ; Wei Miao ; Hao Gao ; Jie Hu ; Shengcai Shi</i>	
PARAMETER ESTIMATION OF THE PREPROCESSING TARGETS WITH A WIDEBAND TERAHERTZ RADAR.....	991
<i>Qi Yang ; Bin Deng ; Hongqiang Wang ; Yuliang Qin ; Chenggao Luo</i>	
APPLICATION OF CEPSTRUM FILTERING IN THZ IMAGES THROUGH SCATTERING MEDIA	993
<i>Omar B. Osman ; Arjun Virk ; M. Hassan Arbab</i>	
STUDY OF THE POINT SPREAD FUNCTION OF MULTI-CIRCULAR SYNTHETIC APERTURE IMAGING AT TERAHERTZ FREQUENCIES.....	995
<i>Yanwen Jiang ; Hongqiang Wang ; Bin Deng ; Yuliang Qin ; Chenggao Luo ; Zhaowen Zhuang</i>	
TRANSMISSION-TYPE DUAL-BAND TERAHERTZ-WAVES CODER.....	997
<i>Shan Yin</i>	

CHARACTERIZATION OF EPOXY-SILVER NANOPARTICLE COMPOSITES IN MICROWAVE AND MILLIMETER-WAVE REGIME	998
<i>Shih-Chieh Su ; Tsun-Hsu Chang</i>	
TERAHERTZ MULTISPECTRAL IMAGING BY THERMO-CONVERSION USING MIM ANTENNA	1000
<i>A. Salmon ; P. Bouchon ; S. Rommeluere ; R. Haldar ; P. Fauche ; J-P. Caumes</i>	
LINEAR TO CIRCULAR POLARIZATION CONVERSION OF TERAHERTZ WAVE USING METALLIC HELIX ARRAY	1002
<i>Kento Kinumura ; Shun Takagi ; Norihisa Hiromoto ; Kodo Kawase ; Saroi Tripathi</i>	
THZ GAS DETECTION USING CELLULOSE NANOPOROUS FOAM	1004
<i>Yen-Tse Cheng ; Yu-Hsin Chiang ; Chu-Yun Kao ; Han-Hsiang Chen ; Wei-Chih Wang</i>	
EFFICIENT WAVEGUIDE MODE CONVERSIONS BASED ON PHASE-GRADIENT METASURFACES	1006
<i>Tie-Jun Huang ; Jiang-Yu Liu ; Li-Zheng Yin ; Feng-Yuan Han ; Pu-Kun Liu</i>	
ACTIVE THERMAL CONTROL OF 5 NM GAP TERAHERTZ ANTENNAS	1008
<i>Hyeong Seok Yun ; Jeeyoon Jeong ; Dasom Kim ; Dai-Sik Kim</i>	
TERAHERTZ ASYMMETRIC COPLANAR WAVEGUIDE FILTER.....	1010
<i>Han Sun ; Yaxin Zhang</i>	
AN ON-CHIP INTEGRATED STRUCTURE FOR TERAHERTZ BAND STOP FILTER/ABSORBER BASED ON REFLECTION WAVE CANCELLATION.....	1012
<i>Ting Zhang ; Ziqiang Yang ; Yaxin Zhang ; Shixiong Liang ; Zongjun Shi</i>	
THZ JOSEPHSON SPECTROSCOPY OF MODE COUPLING IN SPLIT-RING RESONATORS	1014
<i>A. Snezhko ; I. Gundareva ; Y. Divin ; V. Pavlovskiy ; V. Pokalyakin</i>	
OPTICALLY CONTROLLED THZ METAMATERIAL MODULATORS.....	1016
<i>Polina Stefanova ; Andreas K. Klein ; Rhiannon Lees ; Andrew J. Gallant ; Claudio Balocco</i>	
THZ SPECTROSCOPY INSIDE A CLIMATE CHAMBER.....	1018
<i>J. Omik ; S. Sommer ; R. Gente ; M. Koch ; J.C. Balzer ; K. Fey ; T. Pillieh</i>	
DEVELOPMENT OF EFFICIENT CONTACT GRATING DEVICE FOR TERAHERTZ WAVE GENERATION	1020
<i>K. Nagashima ; M. Tsubouchi ; M. Maruyama ; Y. Ochi</i>	
3D-PRINTED TUNABLE THZ PRISM.....	1022
<i>Stefan F. Busch ; Martin Koch ; Enrique Castro-Camus ; Felipe Beltran-Mejia ; Jan C. Balzer</i>	
ANTI-REFLECTION CHARACTERISTICS OF LASER DRILLING SUBWAVELENGTH TAPERED STRUCTURES AT TERAHERTZ FREQUENCIES.....	1024
<i>Naoki Horita ; Xi Yu ; Mahiro Takeuchi ; Shingo Ono ; Jongsuck Bae</i>	
STUDYING OF THERMAL INFLUENCE FOR IMPROVING ANTI-REFLECTIVE CHARACTERISTICS OF MOTH-EYE STRUCTURES FABRICATED BY FEMTOSECOND LASER PROCESSING	1026
<i>X. Yu ; N. Horita ; M. Takeuchi ; M. Sudo ; S. Ono ; J. Bae</i>	
HIGH-DIRECTIVITY TERAHERTZ SILICON-LENS TEM HORN ANTENNA.....	1028
<i>K. Froberger ; G. Ducournau ; J.F. Lampin</i>	
CONTINUOUS WAVE MULTIMODE AMPLITUDE THZ SPECTROSCOPY.....	1030
<i>Alexandra Gerling ; Sebastian Dülme ; Nils Schirnski ; Andreas Stöhr ; Martin R. Hofmann ; Carsten Brenner</i>	
CONTINUOUS-WAVE TERAHERTZ SYSTEM WITH 50 DB DYNAMIC RANGE AT 1 THZ USING A N-I-PN-I-P SUPERLATTICE PHOTOMIXER AND AN ERAS: INGAAS PHOTOCONDUCTOR OPERATED AT 1550 NM.....	1031
<i>Mario Méndez Aller ; Hong Lu ; Arthur C. Gossard ; Sascha Preu</i>	
RESONANT CAVITY ENHANCED INAIAS / INGAAS- MSMPHOTODETECTORS WITH 3 DB-CUT OFF FREQUENCY ABOVE 100 GHZ	1033
<i>Maximilien Billet ; Sara Bretin ; Yann Desmet ; Xavier Wallart ; Christophe Coinon ; Guillaume Ducournau ; Jean-Francois Lampin ; Emilien Peytavit</i>	
CHARACTERIZATION OF TERAHERTZ WAVE PROPAGATION DEPENDENT ON METAL-ROD-ARRAY STRUCTURES	1035
<i>Borwen You ; Dejun Liu ; Ja-Yu Lu ; Toshiaki Hattori</i>	
ULTRA-LOW-COST THZ WAVE PLATES BASED ON HIGH-CONTRAST GRATINGS	1037
<i>Andreas K. Klein ; Jonathan M. Hammler ; Claudio Balocco ; Andrew Gallant</i>	
METAL-GRAPHENE BASED DYNAMICALLY TUNABLE BANDS STOP FILTER.....	1038
<i>Renbin Zhong ; Yan Liu ; Jiebiao Huang ; Yilin Lü ; Shenggang Liu</i>	
LASER-ABLATED ANTIREFLECTIVE STRUCTURES FOR TERAHERTZ RADIATION FOCUSING	1040
<i>Vincas Tamošiunas ; Simonas Indrišiunas ; Milda Tamosiunaite ; Linas Minkevicius ; Andrzej Urbanowicz ; Gediminas Raciukaitis ; Irmantas Kašalynas ; Gintaras Valušis</i>	

HIGH POWER MICROWAVE EFFECTS ON CRITICAL CHIPS FOR KA-BAND T/R MODULE OF PHASED ARRAY RADAR.....	1042
<i>Guo Guo ; Xinjian Niu ; Yinghui Liu ; Hui Wang ; Changyong Guo</i>	
MODELING OF THZ PUMP INDUCED PLASMONIC OSCILLATIONS IN SILICON MEMBRANES.....	1044
<i>N. Wang ; E.A. Nanni ; X. Shen ; R. K. Li ; M. Hoffmann ; B. K. Ofori-Okai ; Q. Zheng ; J. Yang ; X. J. Wang</i>	
DYNAMICS OF THE GAS DISCHARGE SUSTAINED BY THE POWERFUL RADIATION OF PULSED AND CW TERAHERTZ GYROTRONS.....	1046
<i>A.V. Sidorov ; S.V. Razin ; A.P. Veselov ; A.V. Vodopyanov ; A.G. Luchinin ; A.P. Fokin ; M.V. Morozkin ; A.I. Tsvetkov ; M.Yu. Glyavin</i>	
PARAMETERS OF A CW PLASMA TORCH OF ATMOSPHERIC PRESSURE SUSTAINED BY FOCUSED SUB-TERAHERTZ GYROTRON RADIATION.....	1048
<i>A. V. Vodopyanov ; A. V. Sidorov ; S. V. Razin ; I. D. Dubinov ; S. V. Sintsov ; M. D. Proyavin ; M.V. Morozkin ; A. P. Fokin ; M. Yu. Glyavin</i>	
THZ RADIATION MODULATED BY CONFINEMENT OF TRANSIENT CURRENT BASED ON PATTERNED COFEB/PT HETEROSTRUCTURES.....	1050
<i>Shunnon Zhang ; Qin Li ; Ye Dai ; Xian Lin ; Guohong Ma ; Zuanming Jin ; Weihua Zhu ; Zongzhi Zhang ; Jianquan Yao</i>	
TUNNELING RECTIFICATION IN RING SHAPED NANOGAPS.....	1051
<i>Taehee Kang ; R. H. Joon-Yeon Kim ; Geunchang Choi ; Jaiu Lee ; Hyunwoo Park ; Hyeongtag Jeon ; Cheol-Hwan Park ; Dai-Sik Kim</i>	
DEVELOPMENT OF METAMATERIAL STRUCTURES FOR THZ FREQUENCY CONVERSION DEVICES.....	1053
<i>Yusuke Akamine ; Dmitry Bulgarevich ; Kohji Yamamoto ; Takashi Furuya ; Hideaki Kitahara ; Jessica Afalla ; Valynn Mag-Usara ; Keisuke Takano ; Makoto Nakajima ; Khoa Nhat Thanh Phan ; Kosaku Kato ; Masahiko Tani</i>	
LONG TERM STABILIZATION OF PHASE-LOCKING OF A THZ-QCL.....	1055
<i>Yoshihisa Irimajiri</i>	
IMAGING USING TERAHERTZ QUANTUM CASCADE LASER SOURCES BASED ON DIFFERENCE FREQUENCY GENERATION.....	1057
<i>Atsushi Nakanishi ; Kazuue Fujita ; Kazuki Horita ; Hironori Takahashi</i>	
HIGH-PERFORMANCE THZ QUANTUM CASCADE LASERS IN SINGLE-MODE.....	1059
<i>Junqi Liu ; Yuanyuan Li ; Fengqi Liu ; Jinchuan Zhang ; Shenqiang Zhai ; Ning Zhuo ; Lijun Wang ; Shuman Liu ; Zhanguo Wang</i>	
2.08 THZ AND 4.96 THZ ROOM-TEMPERATURE QUANTUM CASCADE LASERS BASED ON NON-POLAR M-PLANE ZNMGO/ZNO.....	1060
<i>Vadim P. Sirkeli ; Oktay Yilmazoglu ; Franko Küppers ; Hans L. Hartnagel</i>	
TRANSVERSE MODE PROPAGATION IN FOLDED WAVEGUIDES OF QUANTUM CASCADE LASERS.....	1062
<i>Emilia Pruszyńska-Karbownik ; Maciej Sakowicz</i>	
PHASE PROCESSING IN MILLIMETER WAVE INVERSE SYNTHETIC APERTURE RADAR IMAGING OF SHIP TARGETS.....	1063
<i>Qi Yang ; Hongqiang Wang ; Bin Deng ; Yulianq Qin</i>	
IMAGING FLUCTUATION IN MATTER ON NANO-SCALES -SCANNING NOISE MICROSCOPE (SNOIM)-.....	1065
<i>S. Komiyama</i>	
TERAHERTZ MICROSCOPY DOWN TO THE ATOMIC SCALE.....	1068
<i>T. L. Cocker ; D. Peller ; M. A. Huber ; F. Mooshammer ; M. Plankl ; F. Sandner ; L. Viti ; M. S. Vitiello ; J. Repp ; R. Huber</i>	
METAMATERIAL-ENHANCED QUANTUM INFRARED DETECTORS.....	1072
<i>Y. Todorov ; D. Palaferri ; M. Jeannin ; A. Mottaghizadeh ; D. Gacemi ; A. Vasanelli ; C. Sirtori</i>	
BROADBAND TERAHERTZ DETECTION WITH AN ANTENNA COUPLED ZERO-BIAS FIELD-EFFECT TRANSISTOR.....	1075
<i>Stefan Regensburger ; Amlan K. Mukherjee ; Sascha Preu ; Hong Lu ; Arthur C. Gossard</i>	
FAR INFRARED AND THZ DETECTORS: PRINCIPLES OF OPERATION AND FIGURES OF MERIT.....	1077
<i>M. Zerbini ; A. Doria ; G.P. Gallerano ; E. Giovenale ; G. Galatola-Teka</i>	
TERAHERTZ INP DHBT-BASED DETECTORS FOR STUDIES OF WATER STATUS OF SORGHUM LEAVES.....	1079
<i>D. Coquillat ; N. Dyakonova ; C. Consejo ; Y. Meriguet ; J. Torres ; F. Teppe ; V. Nodjiadjim ; A. Konczykowska ; M. Riet ; J.-L. Verdeil ; W. Knap</i>	

ENHANCING HETERODYNE SYSTEM PERFORMANCES USING FUNDAMENTAL MILLIMETER WAVE MIXERS WITH 36 GHZ INSTANTANEOUS IF BANDWIDTH AND 35 % RELATIVE DETECTION BANDWIDTH	1081
<i>J. Treuttel ; D. Gonzalez-Ovejero ; C. Lee ; I. Mehdi</i>	
INFORMATION METAMATERIAL AND METASURFACE - FROM CONCEPT TO SYSTEM	1083
<i>Tie Jun Cui</i>	
FROM TERAHERTZ SURFACE WAVES TO SPOOF SURFACE PLASMON POLARITONS.....	1086
<i>Yuehong Xu ; Ying Zhang ; Quan Xu ; Xueqian Zhang ; Yanfeng Li ; Jianqiang Gu ; Zhen Tian ; Chunmei Ouyang ; Xixiang Zhang ; Weili Zhang ; Jiaguang Han</i>	
NANOSCALE OBSERVATION OF REAL-SPACE MID-INFRARED FIELD DISTRIBUTION IN A STAMP-TYPE PLASMONIC STRUCTURE.....	1087
<i>R. Yuasa ; T. Okamoto ; A. Sasagawa ; Y. Kawano</i>	
A HIGH TRANSMISSION TERAHERTZ-WAVE QUARTER-WAVE PLATE BY DOUBLE-LAYER SRRS WITH FILM METAMATERIAL	1089
<i>Zhengli Han ; Seigo Ohno ; Yu Tokizane ; Kouji Nawata ; Takashi Notake ; Yuma Takida ; Hiroaki Minamide</i>	
BROADBAND TERAHERTZ CODING METASURFACE INTEGRATED WITH BIAS CIRCUIT	1091
<i>Hongxin Zeng ; Ziqiang Yang ; Yaxin Zhang ; Feng Lan ; Pinaki Mazumder ; Abdur Rauf Khan</i>	
DIFFUSE BEAM WITH ELECTRONIC THZ SOURCE ARRAY	1093
<i>Daniel Headland ; Robin Zatta ; Ullrich Pfeiffer</i>	
A GOLD COATED PLASMONIC SENSOR FOR BIOMEDICAL AND BIOCHEMICAL ANALYTE DETECTION	1095
<i>Md. Saiful Islam ; Jakeya Sultana ; Alex Dinovitser ; Brian W.-H. Ng ; Derek Abbott</i>	
LIQUID CRYSTAL BASED TERAHERTZ SPATIAL LIGHT MODULATOR FOR IMAGING APPLICATION	1097
<i>Anup Kumar Sahoo ; Chun-Ling Yen ; Yuan Chun Lu ; Ci-Ling Pan ; Chan-Shan Yang ; Hung Chun Lin ; Yi-Hsin Lin ; Osamu Wada</i>	
DUAL-POLARIZATION IMAGING WITH REAL-TIME CAPABILITY USING A TERAHERTZ NOISE SOURCE FOR FOOD INSPECTION	1099
<i>D. Takehara ; M. Endo ; T. Ishibashi ; M. Shimizu ; S. Kusanagi ; T. Nozokido ; J. Bae</i>	
A HIGH-SPEED AND STABLE THZ SPECTROSCOPIC IMAGING SYSTEM USING MULTIWAVELENGTH IS- TPG	1101
<i>Kosuke Murate ; Kazuki Maeda ; Yunzhuo Guc ; Kodo Kawase</i>	
TERAHERTZ GYROTRONS WITH UNIQUE PARAMETERS	1103
<i>M. Yu. Glyavin ; G. G. Denisov</i>	
DEMONSTRATION OF A 593 GHZ GYROTRON FOR DNP	1106
<i>Monica Blank ; Philipp Borchard ; Stephen Cauffman ; Kevin Felch</i>	
TWO-BEAM SELF-EXCITED FREQUENCY GYROMULTIPLIER.....	1108
<i>I.V. Bandurkin ; M.Yu. Glyavin ; T. Idehara ; I.V. Osharin ; A.V. Savilov</i>	
DEVELOPMENT AND FIRST OPERATION OF THE 170 GHZ, 2 MW LONGER-PULSE COAXIAL-CAVITY MODULAR GYROTRON PROTOTYPE AT KIT	1110
<i>T. Rzesnicki ; K. A. Avramidis ; G. Gantenbein ; S. Illy ; Z. C. Joannidis ; J. Jin ; I. Gr. Pagonakis ; S. Ruess ; T. Ruess ; M. Schmid ; M. Thumm ; J. Weggen ; J. Jelonnek</i>	
ECRH AT W7-X - CONCURRENT OPERATION OF 10 GYROTRONS.....	1112
<i>H. Braune ; K.J. Brunner ; H. P. Laqua ; S. Marsen ; D. Moseev ; F. Noke ; F. Purps ; N. Schneider ; T. Schulz ; T. Stange ; P. Uhren ; F. Wilde</i>	
THZ TRANSIENT PHOTOCONDUCTIVITY WITH NEAR-FIELD DETECTION	1114
<i>N.J.J. Van Hoof ; S.E.T. Ter Huurne ; J. Gomez Rivas ; A. Halpin</i>	
DETECTION OF BOSON PEAK AND FRACTAL DYNAMICS OF PROTEIN BY TERAHERTZ TIME-DOMAIN SPECTROSCOPY	1116
<i>Tatsuya Mori ; Yue Jiang ; Leona Motoji ; Wakana Terao ; Kentaro Shiraki ; Yohei Yamamoto ; Seiji Kojima ; Yasuhiro Fuiii ; Akitoshi Koreeda ; Suguru Kitani</i>	
SYNTHETIC THZ NANOHOLOGRAPHY FOR IMAGING CVD GRAPHENE	1117
<i>D. Madhi ; C. M. Maissen ; S. Mastel ; J. Hesler ; P. U. Jepsen ; R. Hillenbrand</i>	
PREPROCESSING FOR ROBUST ESTIMATION OF MATERIAL PARAMETERS BY CONTINUOUS WAVE THZ SPECTROSCOPY	1118
<i>B. Friederich ; K. Kolpatzeck ; X. Liu ; T. Schultze ; J. C. Balzer ; A. Czylwik ; I. Willms</i>	
λ-Ti₂O₅ WITH TEMPERATURE AND LASER INDUCED PHASE TRANSITION CHARACTERISTICS FOR ACTIVE TUNING OF TERAHERTZ WAVE TRANSMISSION	1120
<i>Qiwu Shi ; Wanxia Huang</i>	
PROTON TUNNELING DETECTED IN CESIUM SILICATE COMPOUND LDS-L	1122
<i>H. Matsui</i>	

LOW-FREQUENCY TERAHERTZ GENERATION BASED ON HIGH-POWER QUANTUM CASCADE LASERS EMITTING AT $\lambda \sim 14 \mu\text{M}$	1124
<i>Kazuue Fujita ; Akio Ito ; Masahiro Hitaka ; Tatsuo Dougakiuchi ; Tadataka Edamura</i>	
REAL-TIME MOLECULAR SPECTROSCOPY THROUGH SELF-MIXING IN A TERAHERTZ QUANTUM-CASCADE LASER	1127
<i>T. Hagelschuer ; M. Wienold ; H. Richter ; H.-W. Hübers</i>	
WAVELENGTH TUNABILITY OF THE TRANSISTOR-INJECTED QUANTUM CASCADE LASER	1129
<i>Zhiyuan Lin ; Zhuoran Wang ; Guohui Yuan ; Jean-Pierre Leburton</i>	
ACTIVE AND PASSIVE FREQUENCY COMB GENERATION IN TERAHERTZ QUANTUM CASCADE LASERS	1131
<i>Hua Li ; J. C. Cao</i>	
TERAHERTZ (THZ) DIRECT DETECTORS BASED ON SUPERCONDUCTING HEBs WITH THERMAL, MICROWAVE AND THZ BIASING	1132
<i>R. F. Su ; Y. D. Zhang ; X.C. Tu ; X. Q. Jia ; L. Kang ; B. B. Jin ; W. W. Xu ; J. Chen ; P. H. Wu</i>	
ULTRABROADBAND TERAHERTZ DETECTORS BASED ON CMOS FIELD-EFFECT TRANSISTORS WITH INTEGRATED ANTENNAS	1134
<i>Kestutis Ikamas ; Dovile Cibiraite ; Maris Bauer ; Alvydas Lisauskas ; Viktor Krozer ; Hartmut G. Roskos</i>	
TERAHERTZ PHOTON COUNTERS FOR HBT INTENSITY INTERFEROMETRY	1136
<i>Hiroshi Matsuo ; Hajime Ezawa ; Masahiro Ukibe ; Go Fujii ; Shigetomo Shiki</i>	
INVESTIGATING THE POTENTIAL OF SIGE DIODE IN BICMOS 55NM FOR POWER DETECTION AND DATACOM APPLICATIONS AT 300 GHZ	1137
<i>Joao Carlos Azevedo Goncalves ; Issa Alaji ; Daniel Gloria ; Sylvie Lepilliet ; François Danneville ; Christoohe Gaouierc ; Guillaume Ducournau</i>	
THZ DETECTION WITH FIELD-EFFECT TRANSISTORS: THE ROLE OF PLASMA WAVES AND OF THERMOELECTRIC CONTRIBUTIONS	1139
<i>Hartmut G. Roskos ; Maris Bauer ; Kestutis Ikamas ; Florian Ludwig ; Alvydas Lisauskas</i>	
SENSITIVITY ENHANCEMENT FOR ASYMMETRIC SPLIT RING RESONATORS IN A VERTICAL COUPLING GEOMETRY	1140
<i>Tuan Anh Pham Tran ; Peter Haring Bolivar</i>	
DIFFRACTION ENHANCED TRANSPARENCY IN A HYBRID GOLD-GRAPHENE THZ METASURFACE	1142
<i>S.E.T. Ter Huurne ; N.J.J. Van Hoof ; R.H.J. Vervuurt ; A.A. Bol ; A. Halpin ; J. Gomez Rivas</i>	
BI-LAYER METAMATERIAL BASED BROADBAND LINEAR POLARIZATION CONVERTER UNDER TWO COHERENT BEAM ILLUMINATION	1144
<i>Wei Tan ; Caihong Zhang ; Hua Li ; Dacheng Wang ; Zheng Feng ; Biaobing Jin</i>	
ANISOTROPIC DIELECTRIC METAMATERIALS WITH MULTIPOLAR MIE RESONANCES FOR HIGH EFFICIENCY TERAHERTZ POLARIZATION CONTROL	1146
<i>Dacheng Wang ; Wei Tan ; Song Sun ; Zheng Feng</i>	
BROADBAND TERAHERTZ LINEAR-TO-CIRCULAR POLARIZATION CONVERSION	1148
<i>Chun-Chieh Chang ; Hou-Tong Chen</i>	
A THZ IMAGING SYSTEM USING SPARSE ANTENNA ARRAY FOR SECURITY SCREENING	1151
<i>Shaoqing Hu ; Xiaodong Chen ; Yasir Alfadhl</i>	
CMOS TERAHERTZ IMAGING PIXEL WITH A WIDEBAND ON-CHIP ANTENNA	1153
<i>Y. Kanazawa ; E. Sano ; S. Yokoyama ; P. Ambalathankandy ; M. Ikebe ; S. Hirumatsu ; Y. Takida ; H. Minamide</i>	
FAR-INFRARED REMOTE-SENSING ENABLED BY ROOM-TEMPERATURE THERMOPILE IMAGERS	1155
<i>Giacomo Mariani ; Matthew Kenyon ; Zachary Small ; Sabah Bux</i>	
DETECTION OF TERAHERTZ TIME-DOMAIN SIGNALS WITH KIDS	1157
<i>Gizem Soyly ; Federico Sanjuan ; Emilie Héroult ; Jean- Francois Roux ; Jean-Louis Coutaz ; Florence Levy-Bertrand ; Alessandro Monfardini</i>	
THEORETICAL ANALYSIS OF GYROTRON SELF-INJECTION LOCKING BY DELAYED REFLECTION	1158
<i>Maria M. Melnikova ; Alexandra V. Tyshkun ; Andrey G. Rozhnev ; Nikita M. Ryskin</i>	
PULSE TEST OF A W-BAND SECOND HARMONIC GYROTRON BASED ON A 1.8 T CONTINUOUS OPERATION SOLENOID	1160
<i>Sun Dimin ; Zhuo Tingting ; Ma Guowu ; Hu Linlin ; Chen Hongbir ; Meng Fanbao</i>	
TWO-STAGE ENERGY RECOVERY SYSTEM FOR THZ BAND DOUBLE-BEAM GYROTRON	1162
<i>V. Manuilov ; V. Zaslavsky ; I. Zotova ; T. Idehara ; M. Glyavin</i>	
HIGH-POWER ULTRA-WIDEBAND OPERATION OF THE JINR-IAP FEM-AMPLIFIER	1163
<i>Alim K. Kaminsky ; Sergey N. Sedykh ; Ilva V. Bandurkin ; Nikolai Yu. Pcskov ; Andrei V. Savilov ; Vladislav Yu. Zaslavsky</i>	

GENERATION OF TRAIN OF ULTRASHORT KA-BAND PULSES BY HELICAL GYRO-TWTS WITH NONLINEAR CYCLOTRON RESONANCE ABSORBER IN THE FEEDBACK LOOP.....	1165
<i>N.S. Ginzburg ; G.G. Denisov ; M.N. Vilkov ; A.S. Sergeev ; S.V. Samsonov ; I.V. Zotova</i>	
ALL-ELECTRONIC THZ NANOSCOPY.....	1167
<i>Fritz Keilmann</i>	
AN EFFECTIVE APPLICATION OF THZ SPECTROSCOPY FOR IDENTIFYING FABRIC FIBERS AND THEIR QUALITY EVALUATION	1168
<i>Toru Kurabayashi ; Shunsuke Masuyama ; Shinichi Yodokawa</i>	
MATERIAL CHARACTERIZATION WITH FREQUENCY DOMAIN THZ ELLIPSOMETRY	1170
<i>Andreas K. Klein ; Polina S. Stefanova ; Andrew Gallant ; Claudio Balocco</i>	
THE ATOMIC DYNAMICS OF DISORDERED CRYSTALS ELUCIDATED WITH TERAHERTZ TIME-DOMAIN SPECTROSCOPY AND AB INITIO SIMULATIONS.....	1172
<i>M. T. Ruggiero ; J. Kolbel ; W. Zhang ; D. M. Mittleman ; J. A. Zeitler</i>	
PHOTO-CARRIER DYNAMICS OF MBE-GROWN GAAS ON SILICON STUDIED BY OPTICAL-PUMP TERAHERTZ-PROBE	1174
<i>Jessica Afalla ; Karl Cedric Gonzales ; Joselito Muldera ; Elizabeth Ann Prieto ; Gerald Catindig ; John Daniel Vasquez ; Horace Andrew Husay ; Takeshi Moriyasu ; Hideaki Kitahara ; Dmitry Bulgarevich ; Valynn Mag-Usara ; Takashi Furuya ; Armando Somintac ; Arnel Salvador ; Elmer Estacio ; Masahiko Tani</i>	
ULTRA-STABLE HETERODYNE DETECTION IN THE MID-IR.....	1176
<i>D. Gacemi ; Y. Todorov ; A. Bigioli ; D. Palaferri ; C. Sirtori</i>	
CONTINUOUS-WAVE HIGHLY EFFICIENT LOW-DIVERGENCE TERAHERTZ WIRE LASERS	1177
<i>S. Biasco ; K. Garrasi ; F. Castellano ; M. S. Vitiello ; L. Li ; E. H. Linfield ; A.G. Davies ; H. E. Beere ; D.A. Ritchie</i>	
EPITAXIAL GROWTH OF INGASB LAYERS ON GAAS SUBSTRATES FOR FABRICATION OF INGASB-BASED THZ-QCLS.....	1179
<i>Hiroaki Yasuda</i>	
BROADBAND ON-CHIP THZ FREQUENCY COMBS.....	1181
<i>Giacomo Scalari ; Andres Forrer ; Tudor Olariu ; David Stark ; Mattias Beck ; Jerome Faist</i>	
INFRARED SPECTROSCOPIC TRACING OF HYDRATION/DEHYDRATION PROCESSES OF DRY YEAST CELLS	1183
<i>Natsuki Matsuoka ; Satoru Nakashimal</i>	
DEVELOPMENTS TO ENHANCE THE FEASIBILITY OF SMILES-2 MISSION.....	1185
<i>Satoshi Ochiai ; Philippe Baron ; Yoshihisa Irimajiri ; Yoshinori Uzawa ; Toshiyuki Nishibori ; Yutaka Hasegawa ; Akinori Saito ; Masato Shiotani</i>	
ENHANCED TRANSMISSION OF THZ RADIATION THROUGH Fe^{2+}: ZNSE CRYSTALS.....	1187
<i>Maria O. Zhukova ; Yaroslav V. Grachev ; Anton N. Tcypkin ; Sergey E. Putilin ; Vladimir P. Chegnov ; Olga I. Chegnova ; Victor G. Bespalov</i>	
BROADBAND ELECTRON PARAMAGNETIC RESONANCE USING A TUNABLE CONTINUOUS-WAVE TERAHERTZ PHOTOMIXER SOURCE	1189
<i>Eiji Ohmichi ; Tatsuya Fujimoto ; Keisuke Minato ; Hideyuki Takahashi ; Hitoshi Ohta</i>	
TERAHERTZ OPTICAL CHARACTERISTICS OF ORGANOMETALLIC LEAD-IODIDE (BROMIDE) PEROVSKITES AND CESIUM LEAD HALIDE NANOCRYSTALS	1191
<i>A.V. Andrianov ; A.N. Aleshin ; A.O. Zakhar'in ; L.B. Matyushkin</i>	
THZ- AND MID IR FOURIER TRANSFORM SPECTROSCOPY ON PHYSICAL AGED POLYETHYLENE	1193
<i>J. Beckmann ; K. Von Der Ehe ; M. Jaunich ; D. Wolff ; U. Schade</i>	
SIMPLE THZ FARADAY SPECTROSCOPIC SYSTEM USING A PHASE SHIFTER	1194
<i>Atsushi. Nakane ; Tomohide. Morimoto ; Masaya. Nagai ; Masaaki. Ashida</i>	
TEMPORAL FREQUENCY DISTRIBUTION OF THZ PULSES BY CHANGING PUMP PULSE CONDITIONS	1196
<i>Junichi Hamazaki ; Norihiko Sekine ; Akifumi Kasamatsu ; Iwao Hosako</i>	
DEVELOPMENT OF MILLIMETER-WAVE FABRY-PEROT RESONATOR FOR SIMULTANEOUS ELECTRON-SPIN AND NUCLEAR-MAGNETIC RESONANCE MEASUREMENT AT LOW TEMPERATURES	1198
<i>Y. Fuiiil ; Y. Ishikawa ; Y. Koizumi ; T. Omija ; Ik. Ohya ; S. Mitsudo ; S. Miura ; H. Yamamori ; H. Kikuchi ; A. Fukuda</i>	
MEASUREMENT OF COUPLING PROPERTIES OF FREE SPACE TERAHERTZ-WAVE TO SURFACE PLASMON RESONATOR	1200
<i>Yu Tokizane ; Yuma Takida ; Hiroaki Minamide ; Jun-Ich Shikata</i>	
MEASUREMENT OF THE DIELECTRIC CONSTANT OF OPTICALLY DENSE MATERIALS BY POLARIZATION-SENSITIVE TERAHERTZ ELLIPSOMETRY	1202
<i>Quan Guo ; Dongwen Zhang ; Zhihui Lv ; Yindong Huang ; Zengxiu Zhao ; Jianmin Yuan</i>	

HIGH-INDEX, LOW-LOSS ND³⁺: OXYFLUOROSILICATE GLASSES FOR THZ APPLICATIONS	1203
<i>Doddoji Ramachari ; Chan-Shan Yang ; Chun-Ling Yen ; Chao-Kai Wang ; Osamu Wada ; Ci-Ling Pan</i>	
ENHANCED TERAHERTZ EMISSION OF GAAS MICROSTRUCTURES	1205
<i>Inhee Maeng ; Gyu-Seok Lee ; Chul Kang ; Gun-Wu Ju ; Kwangwook Park ; Seoung-Bum Son ; Yong-Tak Lee ; Chul-Sik Kee</i>	
DEVELOPMENT OF MILLIMETER-WAVE ELECTRON-SPIN- RESONANCE MEASUREMENT APPARATUS FOR ULTRALOW TEMPERATURES AND ITS APPLICATION TO MEASUREMENTS OF CUPZN	1207
<i>Y. Ishikawa ; Y. Fujii ; K. Ohya ; Y. Koizumi ; S. Mitsudo ; T. Mizusaki ; S. Miura ; T. Asano ; H. Kikuchi ; A. Fukuda ; A. Matsubara ; H. Yamamori</i>	
SIGNIFICANT ELECTRIC NEAR- FIELD ENHANCEMENT IN RINGLIKE STRUCTURES	1209
<i>Trukhin V.N ; Kagan M.S ; Paprotskiy S.K</i>	
0.34- THZ HIGH-TEMPERATURE SUPERCONDUCTING JOSEPHSON-JUNCTION MIXER WITH SUPERIOR NOISE AND CONVERSION PERFORMANCE	1211
<i>X. Gao ; J. Du ; T. Zhang ; Y. Jay Guo</i>	
CHARACTERISTICS OF VOX MICROBOLOMETER ON Si₃N₄/SiO₂ MEMBRANE FABRICATED BY DEEP-RIE AND XEF₂ VAPOR ETCHING FOR THZ-DETECTORS	1212
<i>K. Maeda ; V. N. Hai ; K. Nishioka ; A. Matsutani ; T. Tachiki ; T. Uchida</i>	
ANTENNA-COUPLED TERAHERTZ MICROBOLOMETERS WITH MEANDER STRUCTURES: THE COMPARISON OF TITANIUM AND PLATINUM THERMISTORS	1214
<i>N. Hiromoto ; E. Durgadevi ; A. Banerjee ; H. Satoh ; H. Inokawa ; C. Apriono ; E. T. Rahardjo ; D. Itoh ; E. Brundermann</i>	
CAVITY MODE EVALUATION OF THZ-WAVE OSCILLATORS USING SUPERCONDUCTING BI-2212 INTRINSIC JOSEPHSON JUNCTIONS FOR HIGH POWER GENERATION	1216
<i>T. Tachiki ; T. Uchida</i>	
THE IMPACT OF FLIP-CHIP PROCESS ON NB₅N₆ MICROBOLOMETER ARRAYS FOR TERAHERTZ DETECTION	1218
<i>Xinle Guo ; Chengtao Jiang ; Peng Xiao ; Shimin Zhai ; Xuecou Tu ; Xiaoping Jia ; Lin Kang ; Jian Chen ; Peiheng Wu</i>	
THE EFFECT OF METAL REFLECTOR ON RESPONSIVITY OF NB₅N₆ THZ DETECTOR	1220
<i>P. Xiao ; X.C. Tu ; C. T. Jiang ; S. M. Zhai ; X. L. Guo ; X. Q. Jia ; L. Kang ; J. Chen ; P. H. Wu</i>	
SUPERCONDUCTING NANOWIRE SINGLE-PHOTON DETECTORS AT A WAVELENGTH OF 2000 NM	1222
<i>Ruiying Xu ; Guanghao Zhu ; Lin Kang ; Xuecou Tu ; Xiaoping Jia ; Labao Zhang ; Biaobin Jin ; Jian Chen ; Weiwei Xu ; Peiheng Wu</i>	
DEVELOPMENT OF A QUICK-RESPONSE MICROWAVE BOLOMETER FOR THE STRAY RADIATION MEASUREMENT IN LHD	1224
<i>Hiroe Igami ; Shin Kubo ; Takashi Shimosuma ; Yasuo Yoshimura ; Hiromi Takahashi ; Toru Ii Tsujimura</i>	
TERAHERTZ ANTENNA CHARACTERIZED BY HIGH TEMPERATURE SUPERCONDUCTING YBCO GRAIN BOUNDARY JOSEPHSON JUNCTION	1226
<i>H. F. Geng ; M. Yu ; T. Hua ; W.W. Xu ; P.H. Wu</i>	
THE DESIGN OF A BOWTIE ANTENNA FOR 0.65 THZ DETECTION	1228
<i>C.T. Jiang ; X.C. Tu ; P. Xiao ; S.M. Zhai ; X.L. Guo ; X.Q. Jia ; L. Kang ; J. Chen ; P.H. Wu</i>	
DUAL BAND KINETIC INDUCTANCE BOLOMETERS FOR SUBMILLIMETER-WAVE IMAGING: EXPERIMENTAL AND THEORETICAL OPTICAL RESPONSE	1230
<i>S.O. Dabironezare ; E. Gandini ; N. Llombart ; J. Hassel ; L. Grönberg ; H. Sipola ; V. Vesterinerr</i>	
BLIND RESTORATION METHOD FOR NEAR- FIELD MILLIMETER-WAVE SAIR	1232
<i>Jianfei Chen ; Jian Guo ; Sheng Zhang ; Xiaowei Zhu</i>	
THREE-DIMENSIONAL MILLIMETER WAVE IMAGING OF BOREHOLE WALL CRACKS	1234
<i>Qijia Guo ; Tianying Chang ; Hong-Liang Cui</i>	
OPTICAL PERFORMANCE OF A WIDEBAND 28NM CMOS DOUBLE BOW-TIE SLOT ANTENNA FOR IMAGING APPLICATIONS	1236
<i>S.L. Van Berkel ; E.S. Malotiaux ; D. Cavallo ; M. Spirito ; A. Neto ; N. Llombart</i>	
ON THE CONTRIBUTION OF THERMALLY GENERATED SURFACE PLASMON-POLARITONS TO HEAT RADIATION OF METAL OBJECTS	1238
<i>Vasily V. Gerasimov ; Ildus Sh. Khasanov ; Alexey K. Nikitin ; Ta Thu Trang</i>	
ACTIVE THZ IMAGING USING MEMS RESONATOR-BASED BOLOMETER AND QUANTUM CASCADE LASER	1240
<i>Isao Morohashi ; Yoshihisa Irimajiri ; Norihiko Sekine ; Iwao Hosako ; Ya Zhang ; Boqi Qiu ; Kazuhiko Hirakawa</i>	
PHASE SELF-CALIBRATION FOR MILLIMETER WAVE MIMO IMAGING	1242
<i>Qijia Guo ; Xianzhong Tian ; Tianying Chang ; Hong-Liang Cui</i>	

OPTIMAL 1D MIMO ARRAY TOPOLOGY FOR MILLIMETER-WAVE SHORT-RANGE IMAGING	1244
<i>Yan. You ; Lingbo Qiao ; Ziran Zhao</i>	
MAGNIFYING NEAR-FIELD IMAGE STRUCTURE BASED ON MONOLAYER GRAPHENE	1246
<i>Shengyu Shan ; Cunjun Ruan ; Yufei Wang</i>	
SENSITIVITY OF SOI LATERAL DIODES FOR BOLOMETRIC SENSING.....	1248
<i>Dan Corcos ; Danny Elad ; Thomas Morf ; Ute Drechsler</i>	
DIFFRACTIVE FOCUSING STRUCTURES FOR BROADBAND APPLICATION IN THZ RANGE.....	1250
<i>K. Liebert ; M. Rachon ; J. Bomba ; A. Sobczyk ; A. Siemion ; J. Suszek ; M. Sypek</i>	
AN IMPROVED DOUBLE-π MODEL FOR MILLIMETER WAVE CMOS ON-CHIP INDUCTOR.....	1253
<i>Jiavu Dong ; Yunaiu Wu ; Chenxi Zhao ; Huihua Liu ; Yiming Yu ; Honzvan Tang ; Kai Kang</i>	
NOISE AND ECHO SIMULATION AND REMOVAL OF TERAHERTZ TIME-DOMAIN SPECTROSCOPY.....	1255
<i>Wen Lyui ; Hua Geng ; Xiaoping Zheng ; Yingxin Wang</i>	
THE OPTIMIZATION AND DESIGN OF EXTENDED INTERACTION OSCILLATORS	1256
<i>Cui Jian ; Li Aidi ; Lu Guangfei</i>	
ENHANCED TERAHERTZ ELECTROMAGNETICALLY INDUCED TRANSPARENCY METAMATERIALS VIA INCONSISTENT THICKNESS OF THE RESONATORS	1258
<i>Lan Wang ; Yaxin Zhang ; Zongjun Shi ; Ziqiang Yang ; Shixiong Liang</i>	
THZ MICROCAVITY MADE OF WIRE GRID STRUCTURE CONTAINING ELECTRICAL SPLIT RING RESONATOR METAMATERIALS	1260
<i>Nguyen Thi Dieu Thanh ; Kyosuke Okabe ; Shota Inoue ; Fusao Shimokawa ; Shunsuke Nakanishi ; Noriaki Tsurumachi</i>	
ENHANCED TERAHERTZ SMITH-PURCELL RADIATION BY COMBINING META-FILM ARRAYS WITH GRATINGS	1262
<i>Weihao Liu ; Yucheng Liu ; Linbo Liang ; Qika Jia ; Lin Wang ; Yalin Lu</i>	
ELECTRON BEAM-INDUCED AIRY BEAM-LIKE THZ RADIATION FROM GRADED METALLIC GRATING	1264
<i>Tatsunosuke Matsui ; Ryosuke Yoshida ; Kazuki Omura</i>	
ACTIVE TUNING OF EFFECTIVE REFRACTIVE INDEX BASED ON DOUBLE-LAYERED CLOSED-RING RESONATOR ARRAY TERAHERTZ METAMATERIALS	1266
<i>Yuki Watanabe ; Tatsunosuke Matsui</i>	
INFRARED LOCALIZED SURFACE PLASMON RESONANCES ON SUBWAVELENGTH CORRUGATED METAL DISKS	1267
<i>V. Bulgakova ; V. Gerasimov ; A. Lemzyakov ; Ilya A. Milekhin</i>	
INVERSE SMITH-PURCELL EFFECT IN PHOTONIC CRYSTALS	1269
<i>Xiaoqiuyan Zhang ; Min Hu ; Sen Gong ; Zhenhua Wu ; Yueheng Cao ; Pengfei Hu ; Shenggang Liu</i>	
NEGATIVE REFRACTIVE INDEX FISHNET ENHANCEMENT BY WIRE SHIFT.....	1271
<i>A. Y. Wegrowski ; W. C. Wang</i>	
MICROFLUIDIC TERAHERTZ DUAL-BAND SENSOR WITH HYBRID FANO META-ATOMS FOR STRONG INTERACTION EXPANSION	1273
<i>Feng Luo ; Feng Lan ; Pinanki Mazumder ; Ziqiang Yang ; Luyang Wang ; Abdur Rauf Khan ; Zongjun Shi</i>	
THE ROSETTE PETAL WIDTH INFLUENCE ON ELLIPTICITY ANGLE OF CHIRAL METASURFACE FOR SUB-TERAHERTZ FREQUENCY RANGE.....	1274
<i>Maxim Masyukov ; Anna Vozianova ; Alexander Grebenchukov ; Mikhail Khodzitsky</i>	
INVESTIGATIONS ON 0.2-THZ TRAVELING-WAVE TUBES WITH STAGGERED GRATING SLOW-WAVE STRUCTURE	1276
<i>Nikita M. Ryskin ; Andrey G. Rozhnev ; Andrey E. Ploskih ; Anton A. Burtsev ; Igor A. Navrotsky ; Aleksei V. Danilushkin</i>	
DEVELOPMENT OF PLANAR SLOW-WAVE STRUCTURES FOR LOW-VOLTAGE MILLIMETER-BAND VACUUM TUBES	1278
<i>Nikita M. Ryskin ; Andrey G. Rozhnev ; Andrey V. Starodubov ; Alexey A. Serdobintsev ; Roman A. Torgashov ; Victor V. Galushka ; Anton M. Pavlov</i>	
POLYIMIDE SPLITTERS FOR TERAHERTZ SURFACE PLASMONS	1280
<i>Vasily V. Gerasimov ; Alexey K. Nikitin ; Alexey G. Lemzyakov ; Ivan A. Azarov ; Ilya A. Milekhin ; Boris A. Knyazev ; Evgeni A. Bezus ; Elena A. Kadamina ; Leonid L. Doskolovich</i>	
EVOLUTIONARY OPTIMISATION OF THZ COMPONENTS	1282
<i>Vanessa Fenlon ; Rhiannon Lees ; Polina S. Stefanova ; Andreas K. Klein ; Andrew J. Gallant ; Claudio Balocco</i>	
PRE- LAUNCH RADIOMETRIC CALIBRATION SYSTEM FOR THE METOP-SG MWS INSTRUMENT	1284
<i>F. Cahill ; M. Henry ; R. Green ; P.G. Huggard ; B. Ellison ; L. Stock ; E. Newman ; M. Iranmesh ; S. Dell'eva ; A. Caldwell ; K. Ostoljic ; J. Mann ; T. Brooke ; D. Peters ; D. Smith ; G. Hutchinson ; E. Johnson ; S. Tustain ; F. Hillier ; M. Winser ; G. Tennant ; P. Campbell ; V. Kangas</i>	

BROADBAND OUTPUT WINDOWS FOR THZ GYRO-TWAS	1286
<i>Craig R. Donaldson ; Liang Zhang ; Wenlong He</i>	
SISMA: A NUMERICAL SIMULATION SOFTWARE FOR SIS MIXER DESIGN	1288
<i>Wenlei Shan ; Wentao Wu ; Shengcai Shi</i>	
OPPORTUNITIES AND CHALLENGES FOR EIK'S IN DNP NMR APPLICATIONS.....	1290
<i>Melanie Rosay ; Ivan Sergeyev ; Leo Tometich ; Christopher Hickey ; Albert Roitman ; Doug Yake ; Dave Berry</i>	
DEVELOPMENT OF A HIGH-POWER GYROTRON FOR BEAMED ENERGY PROPULSION APPLICATIONS	1292
<i>Masafumi Fukunari ; Yuusuke Yamaguchi ; Yoshioka Tatematsu ; Teruo Saito ; Yasuhisa Oda ; Keishi Sakamoto ; Tsuyoshi Kariya ; Ryutaro Minami ; Tsuyoshi Imai ; Kimiya Komurasaki</i>	
THEORETICAL AND EXPERIMENTAL STUDIES OF OVERSIZED KA-BAND SURFACE-WAVE OSCILLATORS BASED ON 2D PERIODICAL CORRUGATED STRUCTURES	1294
<i>Naum S. Ginzburg ; Evgeny V. Ilyakov ; Igor S. Kulagin ; Andrey M. Malkin ; Nikolai Yu. Peskov ; Alexander S. Sergeev ; Vladislav Yu. Zaslavsky</i>	
VECTOR METHOD FOR HIGH POWER MICROWAVE PHASE RETRIEVAL USING IR IMAGES.....	1296
<i>Jianwei Liu ; Xinjian Niu ; Yinghui Liu ; Hui Wang ; Guo Guo ; Xu Sun</i>	
PERSPECTIVE FIELD EMITTERS FOR ELECTRON-BEAM MICROWAVE DEVICES OF SHORT-WAVE MILLIMETER AND SUBMILLIMETER RANGE	1298
<i>Gennadii Sominskii ; Vyacheslav Sezonov ; Tatiana Tumareva ; Evgeny Taradaev</i>	
STUDY OF MODE COMPETITION IN THE THIRD HARMONIC GYROTRON WITH INCLUSION OF THE ELECTRON VELOCITY SPREAD AND THE BEAM WIDTH.....	1300
<i>O. Dumbrajs ; T. Idehara</i>	
SIMULATIONS OF NONUNIFORM ELECTRON BEAMS IN A GYROTRON ELECTRON-OPTICAL SYSTEM.....	1302
<i>Oleg I. Louksha ; Pavel A. Trofimov</i>	
OBSERVATION OF INCREASED NUMBER OF FREQUENCY STEPS IN MULTI-FREQUENCY OSCILLATIONS WITH A TWO-CAVITY GYROTRON	1304
<i>Yuusuke Yamaguchi ; Masafumi Fukunari ; Taisei Ogura ; Tatsuya Ueyama ; Yuto Maeda ; Kyoya Takayama ; Yoshinori Tatematsu ; Teruo Saito</i>	
FREQUENCY-STABILIZED TERAHERTZ GYROTRON BACKWARD-WAVE OSCILLATOR DURING ELECTRONIC TUNING PROCESS	1306
<i>Shi Pan ; Chao-Hai Du ; Zi-Chao Gao ; Lu-Yao Bao ; Juan-Feng Zhu ; Claudio Paoloni ; Pu-Kun Liu</i>	
TWO-STAGE ENERGY RECOVERY SYSTEM FOR DEMO GYROTRON	1308
<i>M. Glyavin ; V. Manuilov ; M. Morozkin</i>	
QUASI-OPTICAL MODE CONVERTER FOR A 0.42 THZ TE_{17,4} GYROTRON	1310
<i>Wei Wang ; Ning Zhang ; Tao Song ; Chenghai Wang ; Diwei Liu ; Shenggang Liu</i>	
A QUASI-OPTICAL MODE CONVERTER FOR 220 GHZ CONFOCAL GYRO-TWTS.....	1312
<i>Xiaotong Guan ; Wenjie Fu ; Dun Lu ; Tongbin Yang ; Yang Yan</i>	
ENHANCED THZ ABSORPTION OF POLAR MOLECULE- FORMED PLASMA	1314
<i>Yindong Huang ; Quan Guo ; Ziyi Zhang ; Biyi Yi ; Jing Zhao ; Jianmin Yuan ; Zengxiu Zhao</i>	
ULTRAFAST MAGNON DYNAMICS IN ANTIFERROMAGNETIC NICKEL OXIDE OBSERVED BY OPTICAL PUMP-PROBE AND TERAHERTZ TIME-DOMAIN SPECTROSCOPIES.....	1315
<i>T. Kohmoto ; T. Moriyasu</i>	
DOUBLE-PUMP-PULSE TERAHERTZ EMISSION METHOD AS A NOVEL TOOL TO INVESTIGATE ULTRAFAST PROCESSES IN SEMICONDUCTORS	1317
<i>Ieva Belackaite ; Lukas Burakauskas ; Ramunas Adomavicius</i>	
HIGH-ORDER SIDEBAND GENERATION UNDER CIRCULARLY POLARIZED LIGHT EXCITATION IN MONOLAYER TRANSITION METAL DICHALCOGENIDES.....	1319
<i>Kohei Nagai ; Naotaka Yoshikawa ; Koichiro Tanaka</i>	
Author Index	