

2024 Photonics & Electromagnetics Research Symposium (PIERS 2024)

**Chengdu, China
21-25 April 2024**

Pages 1-636



**IEEE Catalog Number: CFP24C18-POD
ISBN: 979-8-3503-7591-6**

**Copyright © 2024 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: | CFP24C18-POD |
| ISBN (Print-On-Demand): | 979-8-3503-7591-6 |
| ISBN (Online): | 979-8-3503-7590-9 |
| ISSN: | 2831-5790 |

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

| | |
|--|----|
| Co-Designed Millimeter-Wave and Microwave Antennas for 5G and B5G Handsets..... | 1 |
| <i>Huan-Chu Huang, Jie Wu, Shuang Cui</i> | |
| Toward Dual-Band Circularly Polarized Antenna for High-Precision Marine BeiDou Satellite Navigation Application — Improvements of Antenna Structure and Feed Network | 6 |
| <i>Y. Zhang, H. M. Liu, S. H. Liu, Y. J. Zeng, S. Li</i> | |
| ITS-G5 Antennas: Powering Future Urban Transports..... | 16 |
| <i>Abu Zafar Md. Imran, Martin Thomas, Eugene Ogbodo, Azunka Ukala</i> | |
| Advanced Filtering Power Dividers: Achieving Superior Isolation in RF Applications | 22 |
| <i>Hassan Sarfraz, Azunka Ukala, Eugene Ogbodo, Martin Thomas, Eze Stella Ifeyinwa</i> | |
| Enhanced Dual-Band Antenna for Intelligent Vehicular Communications | 30 |
| <i>Sayed Ahmad, Eugene Ogbodo, Azunka Ukala</i> | |
| Compact Wideband Four-Coupled-Line Based Filtering Directional Coupler with Wide Upper Stopband..... | 37 |
| <i>Y. Zhang, H. M. Liu, Y. J. Pei, T. Ma, S. R. Zhang</i> | |
| Circularly Polarized Spherical-Conformal Dielectric Resonator Antenna with Wideband and Wide Beamwidth..... | 43 |
| <i>S. H. Liu, H. M. Liu, T. Ma, Y. Zhang, X. L. Sun</i> | |
| Reconstruction of the Under-Sampled High-Frequency Data in a Broadband Planar Near-Field Test Based on the Asymptotic Field Similarity | 52 |
| <i>J. Zheng, B. Liu, Z. Wang, X. Chen</i> | |
| Decoupling of Antipodal Vivaldi Antenna Array with Polarization Conversion Metasurface | 60 |
| <i>Xiao-Jun Zou, Ming Tan, Ya-Wei Wang, Wei Song, Hang Zhu, Hai-Yan Lv, Guo-Qin Kang, Guang-Ming Wang</i> | |
| Simulation Carbon Nano Tubes CNT Reliability for Hydrogen H Storage..... | 68 |
| <i>Diyar Bajalan</i> | |
| Photonic Chiplet Integration on Optical Interposer: Can Hybrid Bonding Realize Passive Optical Coupling? | 72 |
| <i>How Yuan Hwang, Peter O'Brien</i> | |
| Based on Absolute Airspace Reference System Analysis of Doppler Effect of Light (Electromagnetic Wave) | 79 |
| <i>Shandong Zhao, Yijia Zhao</i> | |
| Arctic Sea Ice Classification with the AMSR2 Data | 84 |
| <i>E. V. Zabolotskikh, M. A. Zhivotovskaya, S. M. Azarov, K. Yarusov</i> | |
| Total Cloud Liquid Water Content Retrieval Over the Arctic Sea Ice from the AMSR2 Data | 89 |
| <i>E. V. Zabolotskikh, E. V. Lvova, K. I. Yarusov, S. M. Azarov</i> | |
| Novel UWB Antennas for Microwave Breast Cancer Detection..... | 94 |
| <i>Yiyi Yao, Qihang Zhou</i> | |

| | |
|---|-----|
| Design of CA-CP-RLSA | 104 |
| <i>Zhao Feng</i> | |
| Estimation of the AMSR2 Data Potential to Retrieve the Arctic Sea Ice Thickness | 107 |
| <i>E. V. Zabolotskikh, S. M. Azarov, A. Stokoz, K. I. Yarusov</i> | |
| A New Method of Electromagnetic Diagonalization of Anisotropic Permittivity | 112 |
| <i>Jin Li, Yingle Li</i> | |
| Principal Feature Extraction Based Low-Complexity Convolutional Neural Network for Concurrent Multiband Digital Predistortion of RF Power Amplifiers..... | 119 |
| <i>B. Y. Li, X. Hu, Q. H. Yao, Z. Y. Chang, Y. R. Yao, W. D. Wang</i> | |
| Electromagnetic Charge Density with a Causal Current Density Vector and Infinite Speed of Light..... | 125 |
| <i>Namik Yener</i> | |
| Black Body Radiation Problem with an Infinite Speed of Light Perspective and Some Consequences | 133 |
| <i>Namik Yener</i> | |
| Infinite Speed of Light and Compton Scattering | 141 |
| <i>Namik Yener</i> | |
| Epsilon-Near-Zero Enhancement of Linear and Nonlinear Thermo-Optic Effects | 147 |
| <i>Jiaye Wu, Marco Clementi, Chenxingyu Huang, Feng Ye, Hongyan Fu, Lei Lu, Shengdong Zhang, Qian Li, Camille-Sophie Brès</i> | |
| Random Forest Regression-Based Model for Fitting Multilayer Isotropic Medium Scattering Problems..... | 152 |
| <i>Shuiqing Zeng, Huan Wang, Yuxian Zhang, Zhixiang Huang, Naixing Feng</i> | |
| Analysis of Transmission Coefficients in Multilayer Media Structures Using Scale Compressed Finite-Difference Time-Domain Method..... | 156 |
| <i>Yilin Kang, Naixing Feng, Yuxian Zhang, Xiaoli Feng, Huan Wang, Jiuyang Fan, Lixia Yang, Zhixiang Huang</i> | |
| A Lightweight and Scalable Half-Brick and Half-Tile Design for X-Band Digital T/R Sub-Array..... | 160 |
| <i>Nan Zhao, Tingfeng Jin, Liu Yang, Yuan Huang, Honghu Wu, Xinmin Zhang</i> | |
| Random Forest Algorithm Based High Dimensional Space-Mapping Method for Stratified Medium..... | 165 |
| <i>Huan Wang, Shuiqing Zeng, Yuxian Zhang, Zhixiang Huang, Naixing Feng</i> | |
| 110–170 GHz Bandpass Filter with Steep Rejection Slope Based on Symmetrical H-Plane Cavities..... | 170 |
| <i>Shu Jiang, Yi Song, Huijun Yang, Hengfei Xu, Shiqi Ge, Wenbo Wang</i> | |
| Retrieval of Global Total Precipitable Water Over Sea Surfaces from MWHS-II/FY-3D Data Using the BP Neural Network..... | 175 |
| <i>Yi-Fan Zhang, Geng-Ming Jiang</i> | |
| A 3D Mach-Zehnder Time-Domain EO Sensor for the EMP Measurement | 180 |
| <i>Yuewu Shi, Wei Chen, Xin Nie, Wei Wu, Wei Wang, Jianguo Miao</i> | |
| MW-Power "Inverted-Gyrotron" Cyclotron-Resonance Rectenna..... | 189 |
| <i>G. G. Denisov, I. V. Zotova, I. V. Zheleznov, R. M. Rozental, A. S. Sergeev, V. N. Manuilov, M. Yu. Glyavin</i> | |

| | |
|--|-----|
| Simulation of Simplified Cascade Waveguide Plasma Limiter Under High Power Microwave | 193 |
| <i>Lin Wang, Jiamin Wu, Yusen Yang</i> | |
| Universal Design Device for Electromagnetic Shielding Performance Measurement of Multi-Core, Quasi-Coaxial, Or Non-Coaxial Shielded Cables..... | 200 |
| <i>Haichun Wang, Yinghui Zhou, Zheng Sun, Peng Hu</i> | |
| Research on ISAR Imaging Algorithm of a Certain Type of Shipborne Aircraft | 205 |
| <i>G. H. Y. Peng, X. C. Ren, Y. Q. Wang, Y. Zhao, P. J. Yang</i> | |
| The Electrical Property Impact Applied by Ablation on Functional Areas..... | 215 |
| <i>Hu Fan, Chao Wang, Yi Wang, Rong Qing Sun, Han Qiao Shi, Peng Zhang, Jian Chang Wang, Bao Gang Sun</i> | |
| A Wideband 1-Bit 16×16 Electronically Reconfigurable Reflectarray at X-Band | 225 |
| <i>Qia Wang, Jixiang Wan, Li Yu, Langtao Bai</i> | |
| A Broadband Circularly Polarized Patch Antenna Based on Bowknot-Shaped Slot-Coupled Feeding for UHF RFID Application..... | 230 |
| <i>Hongmei Wang, Zhongbao Wang, Yan Zhang, Shipeng Zhao, Hongmei Liu</i> | |
| A Wideband Filtering Rat-Race Ring Coupler Based on Double-Sided Parallel Striplines with Excellent Isolation..... | 235 |
| <i>Bing Wang, Zhongbao Wang, Yan Zhang, Shipeng Zhao, Hongmei Liu</i> | |
| Double-Polarization Slotted Arrays for Extremely Low Side-Lobe Based on Single-Ridged Waveguide..... | 242 |
| <i>Z. Yu, X. L. Zhang, C. Chen, W. D. Chen</i> | |
| GPR-AI Master: GPR Data Analysis Utilizing Deep Learning and ECS for Backfill Grouting Detection in Shield Tunnels..... | 245 |
| <i>Kang Li, Xiongyao Xie, Biao Zhou, Changfu Huang, Zhuqing Zhang, Honglin Lin, Li Zeng</i> | |
| Passive Reconfigurable Intelligent Surface (RIS) for Enhanced Wireless Communications | 253 |
| <i>Cheng-Nan Hu, Qin-Cheng Li, Po-Yu Ho, Fu-Shun Hsu, K.-C. Chou, W.-J. Cheng, Chao- Hsing Chang, P.-S. Wan</i> | |
| Dual-Band Functionalities Switchable Reconfigurable Metasurface | 257 |
| <i>Hamza Asif Khan, Jingjing Zhang, Jun Wei Zhang</i> | |
| Space Close Multiple Source Signal Reconstruction Algorithm Based on Dual-Layer Variable Weight Blind Source Separation..... | 262 |
| <i>Jialei Liu, Jiazhi Ma, Longfei Shi, Junxian Chen, Zhikang Lin</i> | |
| A Fast Computation Method for Solving Scattering from Multilayer Dielectric Structures with Anisotropic Materials | 271 |
| <i>Zeng Yang, Han-Chi Xu, Yuan Zhang, Zhi-Yong Huang, Zhi-Jie Xie</i> | |
| Augmented Neural Networks Behavioral Model of Wideband RF Power Amplifiers for 5G New Radio | 278 |
| <i>Q. H. Yao, X. Hu, B. Y. Li, Z. Y. Chang, B. Peng, W. D. Wang</i> | |
| Preliminary Design of a Two-Plate Corner Reflector Antenna for Drone with High Power Electric Field Source..... | 283 |
| <i>Shih-Chung Tuan, Shen Shou Max Chung</i> | |

| | |
|--|-----|
| A Higher-Order BEM Discretization Scheme for the EEG Forward Problem | 287 |
| <i>Rui Chen, Mengmeng Li, Dazhi Ding</i> | |
| Surface Waves on Equivalent Impedance Metasurfaces: Recent Developments and New Goals | 290 |
| <i>Zhixia Xu</i> | |
| Design of Blass-Like Matrix Based Wideband Beamforming Network with Arbitrary Power Distributions | 297 |
| <i>S. Li, H. M. Liu, Y. Zhang, T. Ma, Y. J. Pei</i> | |
| Research on Magnetic Field Similarity in the Production of Eddy Current Magnetic Field Scaling Model | 305 |
| <i>Kena Wu, Zhi-Hao Ye, Zhaozhi Wu, Yuelin Liu, Shengdao Liu, Jun Ouyang</i> | |
| Dynamically Tunable Refractive Index Sensor of MIM-Graphene Hybrid Cavity Structure Based on Fano Resonance..... | 316 |
| <i>Ting Zhang, Xiaoqing Yang, Gao Feng, Huaijiang Peng</i> | |
| Research Progress in Quantum Weak Measurement Methods for Chiral Molecule Detection..... | 325 |
| <i>Y. C. Zhang, W. Zhang, P. Zeng, C. J. Zhao, S. Huang, T. Li, X. L. Wang, H. Z. Song</i> | |
| High-Frequency Water Level Estimation in the Yangtze River from GNSS-Interferometric Reflectometry | 333 |
| <i>Zilong Chen, Shuanggen Jin</i> | |
| Flatland Cherenkov Radiation on the Capacitive/Inductive Equivalent Impedance Surface | 338 |
| <i>Shuo Bao, Shunli Li, Xue Zhou, Zhixia Xu</i> | |
| Theory of Electromagnetic Wave Scattering and Dispersion in Exponential Materials | 343 |
| <i>Sichao Qu, Erqian Dong, Nicholas Fang</i> | |
| Engineering Boundary Impedance for Quality Factor Control by Customizable Acoustic Metamaterials | 350 |
| <i>Sichao Qu, Min Yang, Nicholas Fang</i> | |
| Ultrathin RCS Reduction Metasurface Based on Integer and Fractional Vortex Waves..... | 356 |
| <i>Qian Liu, Difei Liang, Haiyan Chen, Tiancheng Han, Xin Yao, Qingting He, Xiaodi Wang, Shuntian Wen, Zhichao Xue</i> | |
| Quantitative Assessment of the Contribution of Light Absorption and Scattering to the PPG Signal by Monte Carlo Simulation | 363 |
| <i>D. G. Lapitan, A. P. Tarasov, D. A. Rogatkin</i> | |
| A High-Gain Antipodal Vivaldi Antenna Loaded with Metamaterial and Semi-Trapezoidal Slots..... | 370 |
| <i>Jiayuan Hu, Zuxue Xia, Wenhui Xia, Xin Cao, Xin Xiong, Rui Cheng, Haoxin Luo</i> | |
| A Novel Tri-Band Balanced Bandpass Filter Based on SIW with Double-Sided Complementary Split Ring Resonators (DS-CSRRs) | 374 |
| <i>Rui Cheng, Zuxue Xia, Wenhui Xia, Xin Cao, Xin Xiong, Jiayuan Hu</i> | |
| A High Isolation Dual-Polarized Antenna with Low Profile Using Partially Reflective Surface..... | 379 |
| <i>Xin Xiong, Zuxue Xia, Wenhui Xia, Xin Cao, Jiayuan Hu, Rui Cheng</i> | |
| Using FY-3E Data to Independently Retrieve Sea Ice Thickness..... | 383 |
| <i>Yunjian Xie, Yingqiang Zhen, Qingyun Yan</i> | |

| | |
|--|-----|
| Estimation of Sea Ice Thickness Using FY-3E Data Based on Random Forest Method | 388 |
| <i>Hongying Li, Qingyun Yan, Yingqing Zhen</i> | |
| Reconstructing NDVI for Lakes: Early Insights Leveraging CYGNSS and ERA-5 Data | 393 |
| <i>Yingqing Zhen, Qingyun Yan</i> | |
| Research of Objection Recognition Based on Radar Cross Section Calculations | 401 |
| <i>Chonghao Sun, Run Huang, Ziqi Nie, Jingyi Wang, Yanchun Zuo, Rui Wang</i> | |
| Electromagnetic Transmission for Dust Clouds in X-Band and Ka-Band..... | 407 |
| <i>Qi Zhao, Run Huang, Danyang Li, Bing Lv, Yanchun Zuo, Lixin Guo</i> | |
| Double-Ridged Horn Antenna for Electromagnetic Scattering Measurement Experiment | 414 |
| <i>Dayong Wu, Wenyuan Wang, Dilong Wu, Chonghao Sun, Yanchun Zuo, Lixin Guo</i> | |
| Based on Laser-Induced Breakdown Spectroscopy and Encryption and Decryption of Printer Chinese Information | 421 |
| <i>Xing Su, Chungang Jia, Yanchun Zuo, Dayong Wu, Li Shen, Lixin Guo</i> | |
| Modified Newton Optimization Algorithm for Fast-Convergent Parameter Update in Microwave Filter Tuning | 428 |
| <i>Xinyu Zhou, Hongwei Zhou, Qingfeng Zhang</i> | |
| A Compact High-Gain Rotman Lens Multibeam Antenna with Low Crossover Level and Sidelobe..... | 436 |
| <i>Yuanxi Cao, Sen Yan, Jiahao Zhang</i> | |
| Rapid Recognition of Solid and Liquid Microparticles Through Lateral Mie Scattering..... | 441 |
| <i>Pushihuan Wang, Haoyang Cheng, Shangran Xie</i> | |
| Research of Transmission Characteristics of Two-Dimensional Photonic Crystal Resonant Cavity..... | 445 |
| <i>Xue Zhou, Shuo Bao, Zhixia Xu</i> | |
| A Compact Broadband Filtering Circularly Polarized Antenna with Band-Pass Structure in Sequential-Phase Feed Network..... | 450 |
| <i>Jia Wan, Xin Cao, Longjian Zhou, Qiangming Cai, Cong Chen, Yuyu Zhu</i> | |
| A Low-Profile Wideband Dual-Polarized Antenna with Coupled Feed Structure for 5G Base Station Application | 456 |
| <i>Cong Chen, Xin Cao, Longjian Zhou, Qiangming Cai, Jia Wan, Yuyu Zhu</i> | |
| A Multi-Scale Deep Neural Network Technique for Surrogate Modeling of Microwave Components..... | 461 |
| <i>Zheng Li, Xiao-Chun Li, Ze-Ming Wu</i> | |
| Design of a Miniaturized Low Sidelobe Slot Antenna Based on Dielectric Waveguide in X-Band..... | 466 |
| <i>Huajie Ke, Xin Cao, Qiangming Cai, Longjian Zhou, Yuyu Zhu, Wei Yang</i> | |
| Broadband Filtering Antenna Based on Microstrip Patch and Substrate Integrated Waveguide | 471 |
| <i>Chengyu Li, Qianwen Liu, Yiming Tang</i> | |
| Design of Patterned Transcendental Metamaterial Cover Structures for Crosstalk Reduction in FBAR Parallel Feed Lines | 477 |
| <i>Tongchuan Chu, Xin Cao, Longjian Zhou, Qiangming Cai, Yuyu Zhu</i> | |
| Beamwidth and Bandwidth Enhancement of a Dual-Circularly Polarized Microstrip Patch Antenna | 483 |
| <i>Rui Du, Neng-Wu Liu</i> | |

| | |
|--|-----|
| High-Power Millimeter Wave Radiation for Fundamental and Applied Plasma Studies at the A. V. Gaponov-Grekhov Institute of Applied Physics | 488 |
| <i>V. A. Skalyga, N. V. Chekmarev, M. Yu. Glyavin, S. V. Golubev, I. V. Izotov, D. A. Mansfeld, A. V. Polyakov, E. I. Preobrazhenskiy, S. V. Razin, A. V. Sidorov, S. V. Sintsov, A. P. Veselov, M. E. Viktorov, A. V. Vodopyanov, S. S. Vybin</i> | |
| Broadband Radar De-Chirping Receiver Based on a Microwave Photonic I/Q Mixer | 496 |
| <i>Yuewen Zhou, Jiayuan Kong, Fangzheng Zhang</i> | |
| Photonic Generation of Multi-Carrier LFM Signals Based on an Optical Frequency Comb | 500 |
| <i>Jiayuan Kong, Jinhui Li, Yuewen Zhou, Fangzheng Zhang</i> | |
| Design of Angle-Stable and High-Transmittance Frequency Selective Raserorber Based on Bilateral Connected Interdigital Resonator | 504 |
| <i>Yixuan Xu, Tongtong Shi, Xueyi Hu, Yuchen Yan, Weiwei Wu</i> | |
| Study on Radar Scattering Characteristics of Breaking Wave..... | 510 |
| <i>Pengbo Du, Yunhua Wang, Yanmin Zhang, Jianbo Cui, Yushi Zhang, Xin Li</i> | |
| High-Q Monolayer Near-Perfect Absorber Through Quasi-Bound States in the Continuum..... | 515 |
| <i>Kedi Wu, Haosen Zhang</i> | |
| Design of a Dual-Polarized High-Gain Diagonal Horn Antenna..... | 521 |
| <i>Chunliang Dai, Yongli Ma, Chi Liu, Linqian Jin</i> | |
| Parasitic Effects Analysis and Equivalent Circuit Modeling of Tapered Serpentine Interconnects of On-Chip FBAR Up to 67GHz | 527 |
| <i>Xin Cao, Weiping Li, Qiangming Cai, Longjian Zhou, Yuyu Zhu</i> | |
| Design of Transmitarray Based on Optimization Algorithm for Compact Antenna Test Range | 532 |
| <i>Yan Zhang, Haoran Ye, Chaochao Zhao, Xurui Zhang</i> | |
| Multi-View SAR Image Classification Through Decision Fusion of Adaptive Dictionary Learning and CNN..... | 538 |
| <i>Liyuqi Wang, Mengjiao Tang, Yao Rong, Meixin Ni, Fan Li</i> | |
| A Simulation Method of HFSWR Tsunami Echo Based on COMCOT | 545 |
| <i>Yixuan Liu, Zhe Lyu, Linwei Wang, Changjun Yu</i> | |
| Abnormal Dip in Bistatic Transmission Coefficients for VV and VH Polarizations from Slightly Rough Surfaces with Exponential Correlation Functions..... | 552 |
| <i>Hong-Hu Wan, Peng Xu</i> | |
| Digital PB-Metasurfaces Based on 2-Bit OAM Modules for Wide-Angle RCS Reduction..... | 558 |
| <i>Andrey I. Semenikhin, Diana V. Semenikhina, Yury V. Yukhanov</i> | |
| Combined Phase Coding of PB-Metasurfaces with OAM Generation for Wide-Angle RCS Reduction | 565 |
| <i>Andrey I. Semenikhin, Diana V. Semenikhina, Yury V. Yukhanov</i> | |
| Modulation of Microwave Reflection by Grid Electrode DC Glow Discharge..... | 574 |
| <i>Z. Y. Li, X. B. Lyu, C. X. Yuan, Z. X. Zhou, C. F. Hou, A. A. Kudryavtsev</i> | |
| Effect of Material, Shape and Transmittance of the DC Glow Discharge Grid Anode on Microwave Transport in the Post-Anode Plasma | 579 |
| <i>Xingbao Lyu, Chengxun Yuan, Svetlana Avtaeva, Anatoly Kudryavtsev, Zhongxiang Zhou</i> | |

| | |
|---|-----|
| Research on Scattering Characteristics of Swarm Targets..... | 589 |
| <i>Jingyue Sun, Kunyi Guo, Xinqing Sheng, Wei Cong</i> | |
| A Novel Two-Paths-Modified-LSTM-Based ISAR Multiband Fusion Method Using All-Azimuths Simulation Training Data | 597 |
| <i>Wen Jiang, Hui Kuang, Xianghao Kong, Yu Wang, Yi Li, Qingfei Zhang, Yongfei Mao</i> | |
| A Radio Frequency Measuring Method of Deformation | 608 |
| <i>Ran Yan, Yang Pan, Hongbin Ma, Sijie Chen, Jiangtao Huangfu</i> | |
| View-Spatial-Attention Augmentation on Multi-View Micro-Doppler Spectra for Hidden Human Activity Recognition | 612 |
| <i>Yimeng Zhao, Jianqi Wang, Yong Jia, Fugui Qi</i> | |
| Manipulation of Orbital Angular Momentum Energy by Huygens' Metasurfaces with Donut-Shaped Phase Distribution..... | 620 |
| <i>Sihan Cui, Xiaojun Huang</i> | |
| Investigation of the Effect of Cavity Roughness on the Output Characteristics of Terahertz Gyrotrons..... | 625 |
| <i>D. A. Kotova, A. S. Sedov, A. S. Zuev</i> | |
| Optimizing Duty Cycle for Maximum Efficiency in Resonant Wireless Power Transfer: A Smith Chart Approach..... | 630 |
| <i>Heng-Ming Hsu, Dian-Ying Wu, Bo Yang</i> | |
| Algorithm for the Multi-Target Joint Detection and Ambiguity Resolving Based on Dynamic Programming..... | 637 |
| <i>Yitong Mao, Chong Song, Bingnan Wang, Chenhao Zhao</i> | |
| The Study of Consistency Imaging Method for Optics and SAR Based on Common Aperture | 642 |
| <i>Ke Wang, Chong Song, Yinshen Wang, Bingnan Wang, Maosheng Xiang</i> | |
| Project of 700 GHz/300 kW/10 Ms Pulsed Gyrotron for Initiating and Studying Localized Gas Discharges | 648 |
| <i>M. Yu Glyavin, V. N. Manuilov, I. V. Zotova, I. V. Zhelezov, Houxiu Xiao, Xiaotao Han, Xianfei Chen, Shaozhe Zhang</i> | |
| Electron Guns for Highly Efficient Electron-Cyclotron Energy Converters | 652 |
| <i>G. G. Denisov, M. Yu Glyavin, V. N. Manuilov, I. V. Zotova, I. V. Zhelezov</i> | |
| Gyrotron Electron Optic Systems: Types and Capabilities..... | 656 |
| <i>V. N. Manuilov</i> | |
| Dual-Band All-Optical Logic Gate Based on Coherent Control Principles..... | 660 |
| <i>Xinyu Shi, Ming Chen, Wanli Zhao, Wenhao Han</i> | |
| A Broadband 60G LTCC Bow-Tie Antenna | 665 |
| <i>Xia Zhou, Xiuqi Lai</i> | |
| A Wide Beamwidth SIW 28G Antenna | 670 |
| <i>Xia Zhou, Yicheng Lai</i> | |
| Dual-Band Dual-Mode Chiral Metasurface for Terahertz Near-Field Imaging..... | 675 |
| <i>Aning Ma, Di Geng, Guojian Li</i> | |

| | |
|---|-----|
| D-Band Heterogeneous Integrated Antenna | 683 |
| <i>Sen Lu, Yizhu Shen, Fang Hou, Zhen Lin, Sanming Hu</i> | |
| Joint Wideband Spectrum Sensing and Direction-Of-Arrival Estimation for Sub-Nyquist Sampled Sparse Linear Arrays | 691 |
| <i>Xu Ren, Guisheng Liao, Jian Gao, Sen Cao, Chunxia Cai, Dawei Gao</i> | |
| Continuous-Variable Quantum Key Distribution Access Network..... | 700 |
| <i>Tao Wang, Yuehan Xu, Lang Li, Xu Liu, Zicong Tan, Peng Huang, Guihua Zeng</i> | |
| Harmonic Synthetic Aperture Radar Imaging with Motion Compensation..... | 707 |
| <i>Chenhai Zhao, Qinghai Dong, Chong Song, Zekun Jiao, Yitong Mao, Bingnan Wang, Maosheng Xiang</i> | |
| Effect of Different Discharge Modes of Hollow Cathode Discharge on Electromagnetic Wave Propagation..... | 714 |
| <i>Qiuyue Zheng, Chengxun Yuan, Chen Zhou, Xingbao Lv, Zhian Hao, Zhongxiang Zhou, Anatoly Kudryavtsev</i> | |
| Three-Dimensional Spatial Multiplexed Holography for Accurate Reception Range and Position Control in Visible Light Communication | 720 |
| <i>Chaoxu Chen, Yuan Wei, Haoyu Zhang, Ziwei Li, Chao Shen, Junwen Zhang, Nan Chi, Jianyang Shi</i> | |
| MD-JoSAR Imaging System and Application Based on Multidimensional Joint Spatial Observations | 727 |
| <i>Zhengyang Yao, Qinghai Dong, Chong Song, Zekun Jiao, Bingnan Wang, Maosheng Xiang</i> | |
| Broadband Double-Layer L-Shaped Grating Coupler..... | 735 |
| <i>W. X. Hao, J. H. Zhou</i> | |
| A Novel Radial Phase Modulation Technique Aided LiDAR System..... | 740 |
| <i>Ruotong Wang, Chengwen Huang, Hao Xie, Junhe Zhou</i> | |
| Beam Tracing with Physical Optics for Angular Glint Calculation in Near Field | 746 |
| <i>Yifan Wu, Yuxuan Li, Yuhao Shen, Lizhen Yang, Nan Wu, Hai Lin</i> | |
| Self-Adaptive Reconfigurable Multifunctional Metasurface..... | 751 |
| <i>Chengjing Gao, Tingjun Lai, Zhengjie Huang, Dexin Ye</i> | |
| Fast Physical Optics Integrated Based on Vulkan Ray Tracing..... | 759 |
| <i>Xirun Yin, Ruoming Zhang, Ce Ding, Yanpeng Jia, Hai Lin</i> | |
| Low-Profile Dual-Channel Coded Metasurface for Independent Phase Manipulation of Electromagnetic Waves | 763 |
| <i>Wentao Li, Xiaojun Huang</i> | |
| Numerical Simulation and Analysis of Microwave Backscattering Characteristics from Sea Surface with Breaking Waves and Foam | 769 |
| <i>Pengbo Du, Yunhua Wang, Yushi Zhang, Xin Li, Jinpeng Zhang, Chunzhi Hou</i> | |
| Waveguide Feeding in 3-D Heterogeneous Integration of Holographic Antenna..... | 774 |
| <i>W. C. Wan, Y. Z. Shen, S. Xue, S. M. Hu</i> | |
| Analysis of High Power Microwave Coupling Effect of PCB Traces | 779 |
| <i>Huimin Yang, Yan Peng, Tiancheng Zhang, Huaguang Bao, Yanyan Zhang, Dazhi Ding</i> | |

| | |
|---|-----|
| Sectioned Gyro-BWO and Gyro-TWT with Zigzag Quasi-Optical Systems: 2D Theory and Results | 784 |
| <i>E. M. Novak, S. V. Samsonov, A. V. Savilov</i> | |
| Frequency-Tunable Sub-THz Gyrotrons with External Mirrors..... | 790 |
| <i>I. V. Bandurkin, Y. K. Kalynov, I. V. Osharin, A. V. Savilov, E. S. Semenov</i> | |
| Modeling of Selective Photonic-Structure Cavities for Sub-Terahertz High-Cyclotron-Harmonic Gyrotrons..... | 795 |
| <i>E. M. Novak, G. I. Kalynova, A. V. Savilov</i> | |
| Spatio-Temporal Theory of a Frequency-Tunable Gyrotron Based on a Three-Mirror Cavity | 801 |
| <i>E. M. Novak, A. V. Savilov</i> | |
| Research on Pulsed Laser Doppler Vibration Measurement Method | 809 |
| <i>Shengguo Zhou, Jinlong Tian, Mingming Sun, Yuan Huang, Weixiang Lv, Xinmin Zhang</i> | |
| Measurements of Millimeter Wave Radar from the Wave Tank at Low Incidence Angles | 815 |
| <i>Qinghui Xu, Chen Zhao, Zezong Chen, Sitao Wu, Xiao Wang, Haoyang Fan, Faliang Guo, Zhijie Hu</i> | |
| A Ku-Band Fixed-Height Dielectric Reflectarray | 821 |
| <i>Rigui Liu, Yu-Xiang Sun</i> | |
| Analytical Solution of the Gaussian Noise Model Applied to Hybrid Heterogeneous Links..... | 826 |
| <i>Tengyuan Liu, Yuheng Wang, Jiuzhou Guo, Junhe Zhou</i> | |
| A Rotating Reconfigurable Water Antenna Design | 831 |
| <i>Yifang Sun, Hongbin Ma, Yang Pan, Xingyu Liu, Zhuoyu Zhang, Jiangtao Huangfu</i> | |
| 3D Holography Based on D2NN with Random Phase Image Target | 836 |
| <i>Haoqian Pu, Ruotong Wang, Kai Chen, Junhe Zhou</i> | |
| A Delay Calibration Method for the Multi-Channel Broadband Microwave Photonic System | 841 |
| <i>Yuan Huang, Nan Zhao, Shengguo Zhou, Mingming Sun, Xinmin Zhang</i> | |
| A 3D Coherent Laser Imaging Radar Denoising Method Based on the Combination of Intensity and Elevation..... | 846 |
| <i>Guowang Jin, Qihao Huang, Xin Xiong</i> | |
| Estimation of 1-Km All-Sky Land Surface Temperature by Integration of Passive Microwave and Thermal Infrared Remote Sensing Data Through Random Forest | 852 |
| <i>Xiaodong Zhang, Ruanyu Zhang, Pingkai Wang, Kesong Dong, Lingge Qu, Lifei Jiang</i> | |
| First Experiments on Frequency Locked Operation of the 170GHz/1MW Gyrotron..... | 859 |
| <i>A. P. Fokin, A. N. Kuftin, V. I. Belousov, A. V. Chirkov, M. Yu. Shmelev, G. Yu. Golubiatnikov, B. Z. Movshevich, E. M. Tai, M. Yu. Glyavin, G. G. Denisov</i> | |
| Simulation of a Sub-THz Quasi-Optical Gyrotron Within a Multi-Mode Self-Consistent Model with Fixed Axial Field Structure | 865 |
| <i>A. P. Fokin, A. A. Ananichev, A. S. Zuev, M. Yu. Glyavin</i> | |
| The Experimental Investigation of Continuous Frequency Tuning in Sub-THz Gyrotrons with Short Cavities..... | 869 |
| <i>A. P. Fokin, A. E. Fedotov, A. A. Ananichev, A. S. Zuev, V. N. Manuilov, R. M. Rozental, I. V. Zotova, M. Yu. Glyavin</i> | |

| | |
|---|-----|
| Coastline Detection in Polarimetric SAR Images Based on GMM-HMM Segmentation Using Volume Scattering Component | 872 |
| <i>C. Liu, Y. Cheng, S. Liu, Q. Sun</i> | |
| Defining Internet Access Service QoS Measurement Server Placement Criteria in National Internet Network | 879 |
| <i>A. Staſecka, A. Lizunovs, A. Olins, M. Rjumsins, S. Spolitis, V. Bobrovs</i> | |
| A Novel Switchable Absorber/Reflector Based on Diode-Embedded Square-Loop Array | 885 |
| <i>Jiwen Sun, Qingbo Li, Lin Zhu, Qunsheng Cao</i> | |
| A Novel Wideband Filtering Power Divider with Full Frequency Isolation Performance, Controllable Bandwidth and Reflection Level | 890 |
| <i>Shuo Yang, Xindong Zhang, Xiaolong Wang, Chun-Ping Chen, Gennadi Milinevsky, Geyu Lu</i> | |
| Research on Data Quality Management and Control Methods of Electromagnetic Engineering Knowledge Graph | 895 |
| <i>Jialin Shi, Jiannan Xing, Tao Jiang</i> | |
| Aggregate Basis Functions for Subdomains of an Antenna Array | 905 |
| <i>Ting Zang, Gaobiao Xiao</i> | |
| The Near Wake Characteristics of Different Hypersonic Vehicles at Various Angles of Attack | 911 |
| <i>J. C. Tong, H. Y. Li, B. Xu</i> | |
| Enhanced GPR Inversion Method in Complex Underground Environment | 918 |
| <i>Shiwen Sheng, Xiaopeng Yang, Tian Lan</i> | |
| Effect of Two PEC Metal Netting Models on Fields of Bounded-Wave EMP Simulator | 929 |
| <i>Xiangqin Zhu, Wei Wu, Yinjun Gao, Hongfu Xia</i> | |
| Analysis of Fields of a New Horizontally Polarized EMP Simulator | 935 |
| <i>Xiangqin Zhu, Wei Wu, Zaigao Chen, Hongfu Xia</i> | |
| Joint Power and Time Allocation Algorithm in Multi-Radar System for Cooperative Target Detection | 939 |
| <i>Xinrui Zhang, Chenguang Shi, Jianjiang Zhou</i> | |
| Intelligent Decision-Making Algorithm for Anti-UAV Swarm Based on Convolutional Neural Networks | 948 |
| <i>Xuezhang Sun, Chenguang Shi, Jianjiang Zhou</i> | |
| Practical Source Security of On-Chip Continuous Variable Measurement Device Independent Quantum Key Distribution | 956 |
| <i>Lang Li, Tao Wang, Peng Huang, Yuehan Xu, Xu Liu, Huanxi Zhao, Guihua Zeng</i> | |
| Joint Channel Estimator Combining Deterministic and Random Noise for Wireless Optical Communication | 962 |
| <i>Yuan Wei, Chaoxu Chen, Ziwei Li, Chao Shen, Junwen Zhang, Nan Chi, Jianyang Shi</i> | |
| Precipitation Retrieval of FY-3D MWHTS and MWRI Data Based on Light Gradient Boosting Model | 971 |
| <i>Yanfang Lv, Lanjie Zhang, Yifan Zhang, Biao Zhang</i> | |
| Dual-Polarized Reflectarray-Based Metasurface Aperture for Computational Polarimetric Imaging at Microwave Frequencies | 975 |
| <i>Aobo Li, Mengran Zhao, Muhammad Ali Babar Abbasi, Okan Yurduseven</i> | |

| | |
|--|------|
| Assessment and Optimization of Disordered Distribution Reflecting Metasurfaces for Computational Imaging | 982 |
| <i>Aobo Li, Mengran Zhao, Muhammad Ali Babar Abbasi, Okan Yurduseven</i> | |
| Application of Polarization in Tomographic 3D Reconstruction..... | 988 |
| <i>Shuhang Dong, Zekun Jiao, Liangjiang Zhou</i> | |
| Design and Characterization of a Three-Layer PCB Low-Pass Filter for Enhanced Harmonic Suppression in Wi-Fi Frequency Bands: An Application of Characteristic Mode Analysis..... | 993 |
| <i>Jingyan Mo</i> | |
| Electric-Field-Coupled Inductive-Capacitive Resonators for Terahertz Electromagnetically Induced Transparency Metamaterials..... | 997 |
| <i>H. T. Ling, Z. L. Li, R. Q. Zhao, P. F. Ma, Y. P. Zou, Y. Feng, Y. Yashchyshyn, X. D. Zou, Y. F. Zhang</i> | |
| Enhancing Wi-Fi Based Ranging Accuracy Through a Two-Stage Algorithmic Approach..... | 1001 |
| <i>Jingyan Mo</i> | |
| Effects of Tangent Plane Approximation and Divergence Factor in Light Scattering by a Large Dielectric Object with Curved Surface..... | 1006 |
| <i>Ce Zhang, Kuan Fang Ren, Wen Ming Yu</i> | |
| Application of PINNs in PNJ Research..... | 1014 |
| <i>Qinyu Deng, Huan Tang, Renxian Li, Wei Li, Mingyu Zhang, Zhuoyuan Shi, Yuan Zhang</i> | |
| A Finite-Gap Port Model in SIE with CRWG Basis Functions for Radiation Analysis | 1022 |
| <i>Yu-Rui Jia, Qiang-Ming Cai, Zi-Qiang Wu, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Yu-Teng Zheng, Bo Pu, Jun Fan</i> | |
| Near-Field Focusing Emulation of Near-Field-Focused Arrays Using Far-Field-Focused Arrays..... | 1027 |
| <i>Huaqiang Gao, Junhao Zheng, Bingyi Qian, Xiaoming Chen</i> | |
| Electromagnetic Scattering of Infinitely Long Cylinder of Arbitrary Cross-Section Based on PINNs..... | 1032 |
| <i>Wei Li, Huan Tang, Renxian Li, Mingyu Zhang, Qinyu Deng, Yuan Zhang, Zhuoyuan Shi</i> | |
| Efficient Model Structure Selection Method for Automated Neural-Based Model Generation of Microwave Components..... | 1040 |
| <i>Weicong Na, Shanchao Ke, Ke Liu, Taiqi Bai, Wanrong Zhang, Ningning Yan</i> | |
| Microhollow Cathode Plasma Studies and Effect of Array Structure on Electromagnetic Wave Propagation..... | 1047 |
| <i>Yiru Zhou, Zhian Hao, Chengxun Yuan, Chen Zhou, Zhongxiang Zhou, Anatoly Kudryavtsev</i> | |
| A Novel Frequency Tuning and Calibration Scheme in an E-Band PLL | 1054 |
| <i>Yuxuan Wang, Guoqing Dong, Yizhu Shen, Sanming Hu</i> | |
| A Design of Decoupling Scheme for Antenna Array Operating in X Band..... | 1059 |
| <i>Jing Ruan, Tao Jiang</i> | |
| Ray Tracing Simulation of Electromagnetic Wave Interaction with Multilayered Medium Targets | 1066 |
| <i>Chen Yan, Yiping Han</i> | |
| Inverse-Design of an Ultra-Compact and Broadband Mode Size Converter..... | 1071 |
| <i>Yunjie Wang, Yeming Chen, Kai Pan, Shijie Song, Liwei Li, Xiaoke Yi</i> | |

| | |
|---|------|
| A Out-Of-Band Noise Detection and Whitening Method for Polarization Dependent Loss Mitigation | 1077 |
| <i>Jiuzhou Guo, Yuheng Wang, Tengyuan Liu, Junhe Zhou</i> | |
| An Ultra-Wideband Circular Array Interferometer and Direction Finding Algorithm | 1081 |
| <i>Qiancheng Ying, Le Zuo</i> | |
| Research on Image Compression Technique by Deep Learning Algorithm with Semantic Coding and Decoding..... | 1087 |
| <i>Jiaqi Rong, Dahai Han, Min Zhang, Xukun Chen, Sihang Liu</i> | |
| Frequency Band Shifting of Absorber Based on Fragmented Multi-Objective Optimization Algorithm | 1094 |
| <i>Liuqia E, Yuxuan Zeng, Shujie Liu, Zhonglei Mei, Tiaoming Niu</i> | |
| A Double-Layer Huygens' Metalens Antenna with Linear-To-Circular Polarization Function..... | 1098 |
| <i>Haibo Wang, Chunhua Xue</i> | |
| Broadband Low-Frequency Sound Attenuation by Composite Meta-Liner Under Grazing Flow | 1102 |
| <i>Hao Wang, Shuwei Ren, Xiangyang Zeng, Haitao Wang, Ye Lei</i> | |
| A Double-Layer Reflective Bifacial Metasurface and Its Bi-Functional Reflectarray Antenna Application | 1109 |
| <i>Qiang Gao, Chunhua Xue</i> | |
| Design and Optimization of Vortex Electromagnetic Wave Antenna | 1113 |
| <i>Yali Lu, Yating Yu, Zhiwen Luo, Shiying Tu</i> | |
| Scattering Characteristics of Vortex Electromagnetic Waves by Symmetrical Targets | 1121 |
| <i>Haodong Wang, Tan Qu, Jiandong Niu, Jiaji Wu</i> | |
| An Ultra-Low-Profile Folded Transmitarray Antenna Based on Chain Huygens' Metasurface..... | 1126 |
| <i>Yanfeng He, Chunhua Xue</i> | |
| A Novel Method to Identify the SAR Operating Mode Based on Sidelobe Reconnaissance and Machine Learning..... | 1129 |
| <i>Runfa Ma, Guodong Jin, Yu Wang, Daiyin Zhu</i> | |
| Modeling of Planar Transformers Based on PEEC Method | 1135 |
| <i>Ming-Jun Li, Qiang-Ming Cai, Tao Zhou, Yu Tang, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Bo Pu, Jun Fan</i> | |
| Design of SIW Filtering Power Dividers Based on Fractal Metamaterial Slotted Resonators | 1140 |
| <i>Zhilin He, Xin Cao, Qiangming Cai, Longjian Zhou, Haoran Li, Yuyu Zhu</i> | |
| A VIE-PEEC Method with Prism and Tetrahedron Mesh for Circuit Parameters Extraction from Complex Packaging Structures..... | 1145 |
| <i>Wei Yang, Qiang-Ming Cai, Feng Guo, Yu Tang, Tao Zhou, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Bo Pu, Jun Fan</i> | |
| Accurate RLC Extraction for Stripline Structures Using 2D-FEM | 1152 |
| <i>Chenxi Liu, Xiaoping Li, Quan Deng, Qiang-Ming Cai, Xin Cao, Longjian Zhou, Yuyu Zhu, Jun Fan</i> | |
| Analysis of Electromagnetic Pulse in Civil Air Defense Engineering Based on TDSBR Algorithm | 1157 |
| <i>Yu Tao, Yinghui Zhou, Zheng Sun, Tiancheng Zhang, Huaguang Bao, Dazhi Ding</i> | |

| | |
|---|------|
| Dual-Band Polarization- And Incident-Angle Independent Air-Like Metamaterials | 1166 |
| <i>Yaqing Huang, Zhengjie Huang, Dexin Ye</i> | |
| Prospects of Creation of Pulsed 1 THz High-Harmonic Gyrotrons of the Kilowatt Power Level for Plasma Applications | 1172 |
| <i>I. V. Bandurkin, Y. K. Kalynov, I. V. Osharin, A. V. Savilov, Ekaterina M. Novak</i> | |
| PIRESGAN: Radio Echo Sounding Signal Synthesis with Physic-Informed Generative Adversarial Networks | 1178 |
| <i>Q. Ma, T. Hao</i> | |
| A Wideband Millimeter-Wave Filtering Lens Antenna with a Low Profile..... | 1185 |
| <i>Ruize Gao, Hao Ding, Xiangyu Huang, Wenjie Liao, Qingyi Guo</i> | |
| The Multiband Antenna Tuned by Plasma..... | 1189 |
| <i>Chen Chen, Zijia Chu, Jianfei Li, Jingfeng Yao, Chengxun Yuan, Vladislav Igumnov</i> | |
| Study on Shielding Efficiency of Metal Wire Mesh for Cable Joints..... | 1193 |
| <i>Quanfeng Jiang, Qiang-Ming Cai, Jincheng Tang, Guangjin Lin, Haiyan Guo, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Bo Pu, Jun Fan</i> | |
| Design of the MIMO Antenna for Mobile Communication Terminal | 1198 |
| <i>Yuxin Li, Wenyi Zhou, Jingjing Xu</i> | |
| Design and Experiment on One-Octave Bandwidth Gyro-BWO with a Microwave Circuit in the Form of Zigzag Quasi-Optical Transmission Line | 1204 |
| <i>S. V. Samsonov, G. G. Denisov, A. A. Bogdashov, I. G. Gachev, M. V. Kamenskiy, A. V. Savilov, E. M. Novak</i> | |
| Soil Moisture Assessment and Drought Monitoring in Arid Environments from GNSS- Reflectometry: A Comparative Analysis Between Africa and China | 1210 |
| <i>Charafa El Rhadiouini, Shuanggen Jin</i> | |
| Modeling and Analysis of Creeping Wave Diffraction of Complex Target Surface Based on Planar Mesh Model..... | 1216 |
| <i>Yuanlong Li, Siyuan He, Yunhua Zhang, Qi Huang</i> | |
| Analysis of Electromagnetic Scattering Properties of Hypersonic Turbulence | 1221 |
| <i>Zheng Bian, Xiaoyu Ma, Kunmei Li, Zhiwei Wang, Kaige Wen, Wei Xu</i> | |
| Millimeter Wave Dual-Function Low-Side-Lobe Multi-Beam Reflectarray Antenna Based on Genetic Algorithm | 1228 |
| <i>Liu Luo, Wei Luo, Meilin Liu</i> | |
| Sound Insulation Properties of Truss-Based Inertial Amplification Double-Panel Acoustic Metamaterial..... | 1233 |
| <i>Y. Sun, J. Dong, H. P. Lee, H. Zheng</i> | |
| Propagation Characteristics of Layered Biaxial Chiral Media Based on Transfer Matrix Method | 1240 |
| <i>S. Nemat-Peirabadi, M. Y. Wang, B. Liu</i> | |
| Wall Parameter Estimation Method Based on Consistent Target States for Distributed Through-Wall Imaging Radar | 1246 |
| <i>Yu Yao, Shisheng Guo, Jiahui Chen</i> | |

| | |
|---|------|
| Evaluation of FY3G Brightness Temperature Using Microwave Radiation Transfer Model | 1255 |
| <i>Ruanyu Zhang, Xiaodong Zhang, Fangli Dou, Enchen Li, Xue Li</i> | |
| Manipulating Electromagnetic Absorption and Heat Transfer Simultaneously..... | 1259 |
| <i>Y. Wang, T. C. Han, D. F. Liang, L. J. Deng</i> | |
| Development and Research of a Monoblock Ring Confocal Resonator | 1264 |
| <i>Yu. V. Filatov, A. V. Gorelaya, H. Alhasan, V. A. Nevzorov, E. V. Shalymov, A. V. Venediktova, V. Yu. Venediktov</i> | |
| Impact Evaluation of External Charging Cables on mm-Wave OTA Performance | 1271 |
| <i>Wei He, Lei Chen, Siyang Sun</i> | |
| A Non-Destructive Metal Classification System Based on Magnetic Induction and Mutual Impedance Measurement..... | 1284 |
| <i>Ji Deng, Jincheng Tang, Feng Guo, Qiang-Ming Cai, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Bo Pu, Jun Fan</i> | |
| Test and Analysis of Electromagnetic Susceptibility of SPST Analog Switch | 1290 |
| <i>Wenxuan Huang, Bing Li, Mengyuan Wei, Peng Huang, Xiaozong Huang, Shuling Zhou, Xiaokang Wen</i> | |
| High-Efficiency Second Harmonic Generation in Periodically Poled Thin Film Lithium Niobate Waveguide | 1295 |
| <i>Yuzhao Dong, Jian Cheng, Dingshan Gao</i> | |
| Three-Dimensional Fitting Method for Scattering Characteristics of Objects | 1300 |
| <i>Chenyang Li, Tao Jiang</i> | |
| Ultra-Broadband Transcranial Ultrasound by Acoustic Phase-Only Hologram with a Tungsten Metalens | 1305 |
| <i>Ergqian Dong, Tianye Zhang, Jinhui Zhang, Xiaochun Su, Sichao Qu, Xin Ye, Zhan Yuan Gao, Chengtian Gao, Jiangang Hui, Zhanxiang Wang, Nicholas X. Fang, Yu Zhang</i> | |
| Research on Parameters Predictive Methods for Sea Clutter Model..... | 1314 |
| <i>Juncheng Yi, Jialin Shi, Tao Jiang</i> | |
| A High-Gain 3D-Printed Phased Array Antenna for Satellite Applications | 1321 |
| <i>Jiahao Xie, Kuo Zhang, Le Zuo</i> | |
| Investigation of the Effect of Dielectric Dissipation for a High Power W-Band Gyro-TWT..... | 1325 |
| <i>W. J. Wang, G. Liu</i> | |
| Denoising Method for SHARAD Radar Signal Based on Diffusion Probabilistic Model | 1330 |
| <i>Rui Shi, Hongxia Ye</i> | |
| An Efficient Coupling Prediction Method for Transmission Line Under an External EMP with Uncertainties..... | 1336 |
| <i>Wan-Hu Wang, Qi-Feng Liu, Xiao-Ting Huang, Weijun Wu</i> | |
| Interference Methods for the Structured Light Formation..... | 1343 |
| <i>B. A. Evtushenko, A. A. Ryzhaya, A. A. Sevryugin, E. V. Shalymov, E. K. Iuryeva, V. Y. Venediktov, A. L. Sokolov</i> | |

| | |
|---|------|
| THz and Multi THz Lasers Based on Heterostructure with HgCdTe/CdHgTe with Quasirelativistic Dispersion Laws | 1349 |
| <i>S. V. Morozov, K. A. Mazhukina, A. A. Yantser, A. A. Razova, V. V. Utochkin, M. A. Fadeev, V. V. Rumyantsev, A. A. Dubinov, D. V. Shengurov, N. N. Mikhailov</i> | |
| Broadband Independent Absorption Control for Orthogonal Circular Polarized Waves Using Achiral Active Metasurface | 1355 |
| <i>Yan Pang, Yueyu Meng</i> | |
| A Fast Computing Technology of Three-Dimensional Multilevel Fast Multipole Algorithm Based on Deep Learning | 1360 |
| <i>Zelin Xia, Jinbo Liu, Zengrui Li, Jiming Song</i> | |
| Location of the Suffa Observatory: Problems of Electromagnetic Compatibility and Regulatory Framework..... | 1367 |
| <i>I. Lesnov, D. Dadinilevsky, G. Shanin, V. Vdovin</i> | |
| An Evaluation of Representative Samples Replay and Knowledge Distillation Regularization for SAR ATR Continual Learning | 1371 |
| <i>Hao Sun, Yanjie Xu, Kai Fu, Lin Lei, Kefeng Ji, Gangyao Kuang</i> | |
| Joint Transmit-Receive Optimization for Target Location with Subarray-FDA-MIMO Radar..... | 1377 |
| <i>Fa Wei, Shengqi Zhu, Lan Lan, Ximin Li, Guisheng Liao</i> | |
| An FDTD Algorithm for Frequency Selective Surfaces Analysis with Excitation of High-Power Electromagnetic Wave..... | 1385 |
| <i>Dexin Ma, Xiaotian Pan, Xiao Jia, Mingjiang Wang</i> | |
| A Lightweight U-Net for Medical Image Segmentation..... | 1389 |
| <i>Yuxing Zhao, Lan Lin</i> | |
| Plasmonic Nanostructures Analysis Using Characteristic Mode Method..... | 1394 |
| <i>Xuechun Wang, Shihao Ma, Zhengwen Liao, Shang Li, Ting Wan</i> | |
| Infinite-Q Accidental and Merging BICs with Broken Up-Down Symmetry | 1399 |
| <i>H. Bai, A. Shevchenko, R. Kolkowski</i> | |
| Measurement and Analysis of 5G V2V Channel in Urban Scenarios | 1405 |
| <i>Haochuan Zang, Lixin Guo, Zhongyu Liu, Shuo Hu, Zhigang Zhong, Zuoyong Nan</i> | |
| Topological Flat Bands in 2D Optical Plasmonic Valley Photonic Crystals..... | 1409 |
| <i>Jie Chang, Zhixia Xu, Hongxin Zhao, Shunli Li, Xiaoxing Yin</i> | |
| A Non-Hermitian Sensing Via Matching Singularities Using Multi-Port Excitation | 1414 |
| <i>Xintong Shi, Jing Jin, Hai Lin</i> | |
| Flexible Multilayer Film with Selective Infrared Emission for Passive Daytime Radiative Cooling | 1417 |
| <i>Maoren Wang, Sulin Ma, Qindong Xie, Peiheng Zhou</i> | |
| Powerful Oversized Surface-Wave Oscillators with 2D-Periodical Slow-Wave Structures of Cylindrical Geometry Operating in W and G Bands | 1424 |
| <i>N. Yu. Peskov, V. Yu. Zaslavsky, E. B. Abubakirov, A. N. Denisenko, N. S. Ginzburg, A. M. Malkin, M. D. Proyavin, A. S. Sergeev</i> | |
| Toroidal CATR for Applications in 5G and LEO Satellites..... | 1431 |
| <i>Dau-Chyrh Chang, Oscar Yan, Zhaochu Chen, Zhangjin Qin, Xu Yin</i> | |

| | |
|---|------|
| Cloud Spatial Characteristics Evaluation Based on the Results of Downwelling K-Band Radiation Spectra Measurements..... | 1435 |
| <i>D. P. Egorov, B. G. Kutuza</i> | |
| A Motion Compensation Method for Synthetic Aperture Radar Based on Triangular Linear Frequency Modulation Continuous Wave Interferometry | 1440 |
| <i>Ruihua Shi, Gen Sun, Chong Song, Bingnan Wang, Maosheng Xiang</i> | |
| A 60GHz Series-Fed Microstrip Patch Antenna Array for Millimeter Wave Automotive Radar Application..... | 1448 |
| <i>Yu Han, Daiyao Zhang, Chengdong Huang, Jiang Jiang, Liguo Zhou</i> | |
| Angle of Arrival Estimation Method Based on SNR Threshold Detection and Data Cache | 1455 |
| <i>Shengguo Zhou, Pengfei Leng, Liu Huang, Boyang Wang, Weixiang Lv, Xinmin Zhang</i> | |
| Highly Efficient and Broad-Bandwidth Grating Coupler Between Optical Fiber and Silicon-On-Insulator Waveguide | 1461 |
| <i>Zhanhao Li, Wexin Hao, Junhe Zhou</i> | |
| Persymmetric Target Detection with Data Dividing Dimensionality Reduction | 1467 |
| <i>Juixin Zhang, Mingwen Li, Haoyuan Lu, Xiaoguang Jiao</i> | |
| On the Problem of Reciprocity of Radar Images of Forests at HV and VH Polarizations | 1474 |
| <i>A. A. Kalinkevich, D. P. Egorov, A. A. Chernienko</i> | |
| A Frequency-Energy Composite Selective Surface for High-Power Microwave Protection | 1482 |
| <i>Jinqi Dong, Yanqing Cheng, Shuyun Lin, Yao Zhou, Qi Chen</i> | |
| A Microstrip Energy Selective Antenna Based on PIN Diodes..... | 1486 |
| <i>Shuyun Lin, Yanqing Cheng, Jinqi Dong, Yao Zhou, Qi Chen</i> | |
| Projects of Sub-GW Power Sub-THz Band Planar Cherenkov Masers with Two-Dimensional Distributed Feedback..... | 1490 |
| <i>N. Yu. Peskov, V. Yu. Zaslavsky, N. S. Ginzburg, A. M. Malkin, A. S. Sergeev, A. V. Arzhannikov, P. V. Kalinin, E. S. Sandalov, S. L. Sinitsky, V. D. Stepanov</i> | |
| A Novel Compact Omnidirectional Tubby Patch Antenna with Capacitive Loading for Stable Radiation in Aero Vehicle Wireless Communications | 1496 |
| <i>Jingyan Mo</i> | |
| Availability of Optical and mmWave Terrestrial Links at Low and Mid Latitudes | 1500 |
| <i>E. Verdugo, L. Luini, C. Riva, L. Da Silva Mello, L. Resteghini, A. D'Acierno, R. Lombardi, Z. Ying, R. Nebuloni</i> | |
| Numerical Calculation of Anisotropic Mie Scattering Using Discrete Dipole Approximation Method | 1506 |
| <i>Luhao Ran, Shangran Xie</i> | |
| A Reverse Ray Tracing Algorithm for Site-Specific Modeling of O2I Radio Wave Propagation | 1511 |
| <i>Zhongyu Liu, Qi Yao, Lixin Guo, Zhigang Zhong, Zuoyong Nan</i> | |
| The Influence of the Limit Number on the Ray Tracing Models | 1517 |
| <i>Zhicong Li, Zhongyu Liu, Lixin Guo, Qi Yao, Zhigang Zhong, Zuoyong Nan</i> | |
| L/C Dual Band Vertical Polarized Shared-Aperture Antenna..... | 1523 |
| <i>Hailing Zhao, Chao Zou, Longjian Zhou, Qiang-Ming Cai, Xin Cao, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Yu-Teng Zheng, Bo Pu, Jun Fan</i> | |

| | |
|--|------|
| Localization of Microcell Models by Integrating Measured and Simulated Data | 1527 |
| <i>Mengjie Sun, Lixin Guo, Zhongyu Liu, Zhigang Zhong, Zuoyong Nan</i> | |
| Influence of Antenna Disturbing System on Deterministic Propagation Simulation in Typical Scenarios | 1535 |
| <i>Xiaoye Wang, Lixin Guo, Zhongyu Liu, Zhigang Zhong, Zuoyong Nan</i> | |
| Mathematical Modeling of the Singularities of Caustic Structure of Electromagnetic Waves Formed by Traveling Ionospheric Disturbances | 1541 |
| <i>E. V. Mikhaleva, A. S. Kryukovsky, D. S. Lukin, D. V. Rastyagaev</i> | |
| Development of Neural Network Approach for Reconstructing the Atmospheric Humidity Profile from Ground-Based Microwave Radiometer-Spectrometer Data..... | 1550 |
| <i>D. P. Egorov, Y. V. Verina, O. V. Kravchenko</i> | |
| A Low-Cost Method for Identifying Pre-Distortion Coefficients of RF Power Amplifiers Based on AE-GILC | 1555 |
| <i>Z. Y. Chang, X. Hu, B. Y. Li, Q. H. Yao, Y. R. Yao, W. D. Wang</i> | |
| A Multi-Source Satellite Soil Moisture Fusion Method Considering the Influence of Geographic and Climatic Factors..... | 1562 |
| <i>Yanqing Yang, Wei Zhao, Tao Ding</i> | |
| Design and Analysis of Outdoor Multipath Measurement System..... | 1569 |
| <i>Jiang Gao, Zhongyu Liu, Lixin Guo, Shuo Hu, Zhigang Zhong, Zuoyong Nan</i> | |
| Deep Learning Phase Recovery: Data-Driven Or Physics-Driven? | 1575 |
| <i>Kaiqiang Wang, Edmund Y. Lam</i> | |
| Holographic Stealth Antenna Based on Resonant Absorbing Metasurface | 1579 |
| <i>Yao Zhou, Weitong Min, Lunyi Liu, Yue Hu, Qi Chen</i> | |
| Terahertz Functional Devices Based on Multilayer Flexible Metasurface | 1584 |
| <i>Zhibo Yao, Xinyao Yuan, Yuanhao Lang, Xueqian Zhang, Quan Xu, Jiaguang Han</i> | |
| Communication Signal Automatic Modulation Classification Based on Feature Fusion..... | 1589 |
| <i>S. X. Xu, Y. Zhou, P. J. Hu</i> | |
| Optimizing Ultra-Wideband Antennas Through Finite Element Numerical Simulations and Complex Material Integration | 1597 |
| <i>M. H. Zhao, L. Xu, H. Wang, B. Q. Liu, H. X. Liu</i> | |
| High-Performance Thin-Film Lithium Niobate Mach-Zehnder Modulator Based on Dual-Capacitor Structure | 1602 |
| <i>Xiaofeng Liu, Bin Xiao, Ou Xu, Yuwen Qin, Quandong Huang</i> | |
| Implementation of Medical Image Segmentation Algorithm Based on Deep Network | 1607 |
| <i>Chao Tang, Yuxing Zhao, Lan Lin</i> | |
| Research on Background Electromagnetic Interference Suppression Method Based on MUSIC-LCMV Algorithm | 1614 |
| <i>Quan Deng, Qiang-Ming Cai, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Yu-Teng Zheng, Bo Pu, Jun Fan</i> | |
| The Brain-Controlled Programmable Metasurface Holography..... | 1621 |
| <i>Qiang Xiao, Qian Ma, Tie Jun Cui</i> | |

| | |
|--|------|
| Motion Compensation Based Track-Before-Detect Methods for Automotive Radar System | 1625 |
| <i>Q. Miao, P. Mou, M. Li, W. Li., W. Yi</i> | |
| A Simultaneous Transmit and Receive Slot Antenna with High Isolation Using Defected Ground Structures..... | 1635 |
| <i>Xudong Lu, Zheng Zhang, Meng-En Li, Xiao-Chong Zhang, Yixin Li, Di Wu</i> | |
| Tropical Belt Variations and Drivers from Multiple GNSS Radio Occultation Measurements..... | 1640 |
| <i>Shuanggen Jin, Mohamed Darrag, Aalaa Samy</i> | |
| A Novel MIMO Antenna with Compact Structure for 5G Smartphone Applications | 1646 |
| <i>Xiao-Chong Zhang, Xuan He, Yisha Cai, Yixin Li, Xudong Lu, Di Wu</i> | |
| A Wideband Monostatic Co-Circularly Polarized Simultaneous Transmit and Receive Antenna for 60-GHz Applications..... | 1651 |
| <i>Yixin Li, Junze Liang, Xudong Lu, Xiao-Chong Zhang, Yu-Xiang Sun, Di Wu</i> | |
| EMC Evaluation of High-Power Electronic System Based on Improved AHP-TOPSIS | 1657 |
| <i>Qiang-Ming Cai, Quan Deng, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Jun Fan</i> | |
| An X-Band Fabry-Perot Cavity Antenna with Broadband and High-Gain..... | 1663 |
| <i>Shuai Meng, Zhaoneng Jiang, Hui Liang, Chang Peng, Weixing Gao</i> | |
| Double-Beam Gyrotron with Simultaneous Excitation at the 1st and at the 2nd Cyclotron Harmonics | 1668 |
| <i>I. V. Zhelezov, V. Yu. Zaslavsky, K. A. Leshcheva, M. D. Proyavin, A. S. Sergeev, I. V. Zotova, M. Yu. Glyavin</i> | |
| A Conformal CP Antenna Based on Isotropic Holographic Metasurface..... | 1672 |
| <i>Hui Liang, Zhaoneng Jiang, Shuai Meng, Chang Peng, Weixing Gao</i> | |
| Accurate and Efficient Depth Completion Based on Attention | 1677 |
| <i>Ruoyun Ding, Yuxing Zhao, Lan Lin</i> | |
| Research on a Simplified Ray Tracing Method for Indoor Radio Wave Propagation Calculation | 1684 |
| <i>Yuncheng Mo, Jianfeng Gu, Wanchun Tang</i> | |
| Coastal Regions Sea Surface Salinity Retrieval of SMAP MISSION Based on Light Gradient Boosting Model | 1688 |
| <i>Haoming Song, Yifan Zhang, Biao Zhang, Yanfang Lv, Lanjie Zhang</i> | |
| Simulation of X-Band Radar Sea Clutter Based on Different Wave Spectrum Models | 1691 |
| <i>Meichen Liu, Feng Luo, Enchao Peng, Daozhong Sun</i> | |
| Design a Patch Dipole Antenna Array for the Application of Short Baseline Interferometer..... | 1699 |
| <i>Jincheng Tang, Peng Gao, Qiang-Ming Cai, Qi Liu, Chao Zhang, Xin Cao, Jun Fan</i> | |
| Cooling of Thermal Motion of Levitated Optically Coupled Nanoparticles | 1704 |
| <i>T. Zemánková, V. Liška, A. Jonáš, V. Svák, P. Jákl, S. H. Simpson, P. Zemánek, O. Brzobohatý</i> | |
| Scintillation Index of Plane and Spherical Laser Beams Propagating in Arbitrary Oceanic Turbulence..... | 1714 |
| <i>Weijie Dai, Liyan Zhang, Jiaming Lin, Kun Wu, Tiankuo Wei, Zongyao Zhao, Xinke Tang, Jian Song, Xiao-Ping Zhang, Yuhan Dong</i> | |

| | |
|---|------|
| Microwave Coincidence Imaging in Frequency Domain Based on Phase Modulation..... | 1723 |
| <i>Hang Lin, Hongyan Liu, Kang Liu, Ke Xu, Yongqiang Cheng, Caipin Li</i> | |
| A Novel Passive Jamming Method for SAR Based on Rotating Corner Reflector | 1730 |
| <i>Ying Wang, Guikun Liu, Yibin Chen, Jingwen Mou, Liang Li, Feng Ming</i> | |
| Generation of Dissipative Soliton Combs Based on Electron-Wave Interaction..... | 1736 |
| <i>N. S. Ginzburg, G. G. Denisov, S. E. Filchenkov, E. R. Kocharovskaya, S. V. Samsonov, A. S. Sergeev, V. N. Vilkov, L. A. Yurovskiy, I. V. Zotova</i> | |
| Theory and Simulations of Frequency-Locking Operation of a MW-Level Gyrotron | 1742 |
| <i>G. G. Denisov, I. V. Zotova, I. V. Zhelezov, A. N. Kuftin, N. S. Ginzburg, A. M. Malkin, A. S. Sergeev, V. N. Manuilov, M. Yu. Glyavin</i> | |
| Flexible and Self-Compensating Reflectarray Antenna Enabled by the Sensor-Antenna Integration..... | 1746 |
| <i>F. Li, T. S. Pan</i> | |
| Gyro-Multipliers Based on MW-Level Gyrotrons..... | 1753 |
| <i>G. G. Denisov, I. V. Zotova, I. V. Zhelezov, A. M. Malkin, A. S. Sergeev, M. Yu. Glyavin</i> | |
| Efficient Heterogeneous Scalable Finite Element Exterior Calculus Simulations for Electromagnetic Scattering on Manifold..... | 1758 |
| <i>Yifan Feng, Qiang Chen, Tiankuo Wang, Zeze Ning, Xv Tao</i> | |
| Numerical Simulation of Assisted Electrode Discharges for Electromagnetic Wave Interactions | 1764 |
| <i>Junjie Li, Chen Zhou, Xingbao Lv, Chengxun Yuan, Zhongxiang Zhou, Anatoly Kudryavtsev</i> | |
| Liquid Crystal Enabled Multichannel Vectorial Holography for Optical Encryption | 1770 |
| <i>Ze-Yu Wang, Han Zhang, Ling-Ling Ma, Yan-Qing Lu</i> | |
| Quasicrystalline Structures for Electromagnetic Wave Manipulation | 1775 |
| <i>M. V. Rybin</i> | |
| Simulation Analysis of Indoor Electromagnetic Environment Based on Correlation Coefficient..... | 1778 |
| <i>Jianfeng Gu, Yuncheng Mo, Wanchun Tang</i> | |
| An Improved Ray Tracing Algorithm for High-Efficiency Prediction of Ultra-Large-Scale Complex Electromagnetic Environments..... | 1782 |
| <i>Yi Gou, Dan Shi, Cong Guo, Dan Xiao, Xingguo Jiang</i> | |
| The High Gain Ka-Band LTCC Antenna Design for Electronically Steered Array..... | 1789 |
| <i>Su-Wei Chang, Chun-Cheng Chan, Brian Laughlin, Jiun-Wei Wu, Chih-Hsien Wu</i> | |
| Design and Application of Dual-Polarization Weather Radar Signal Simulator..... | 1795 |
| <i>Yuxiang Wen, Zhao Shi, Jianxin He</i> | |
| Improved Ultrasensitive Sensors Based on Bound States in the Continuum..... | 1804 |
| <i>A. A. Kutuzova, M. V. Rybin</i> | |
| Efficient Electromagnetic Scattering Simulation for Inhomogeneous Objects with Triply Periodic Minimal Surface Structure | 1807 |
| <i>Zi-Zhu Qin, Wei-Jia He, Bi-Yi Wu, Ming-Lin Yang, Xin-Qing Sheng</i> | |
| Research of Beam Forming Method for Radar-Based Non-Invasive Pulse Wave Monitoring..... | 1813 |
| <i>Siqi Huang, Xi Qiu, Jincheng Sun</i> | |

| | |
|---|------|
| Simulation of Nanosecond Microwave Pulse Amplification Based on a Gyrotron Traveling Wave Tube..... | 1820 |
| <i>Ruoyang Pan, Zhiyuan Zhang, Guo Liu, Weijie Wang, Yelei Yao, Wei Jiang, Zewei Wu, Youlei Pu, Jianxun Wang, Yong Luo</i> | |
| A W-Band Hybrid Vector-Modulated and Reflective-Type Phase Shifter in 130-Nm SiGe BiCMOS..... | 1824 |
| <i>Xian-Hu Luo, Xu Cheng, Yun-Bo Rao, Jiang-An Han, Xian-Jin Deng, Bin-Bin Cheng</i> | |
| Fiber Optic Shape Sensing Robustness Against Cores Failure..... | 1828 |
| <i>F. Falchetto, L. Rossi, F. Bastianini, G. Bolognini, R. Di Sante</i> | |
| High-Precision Atmospheric Aerosol Detection by Miescattering Lidar Combine with Raman Lidar..... | 1834 |
| <i>Jiyuan Cheng, Hu Zhao</i> | |
| Hybrid Two-Stage Preamplification for Small Signal Enhancement in φ -OTDR Distributed Acoustic Sensing | 1840 |
| <i>L. Rossi, F. Falchetto, L. K. Cheng, W. De Jong, R. Jansen, G. Bolognini</i> | |
| Silicon Prism as a Radiating Element of a Terahertz Photonic Integrated Phased Array Antenna | 1845 |
| <i>S. V. Seliverstov, A. K. Kozhukhovsky, S. S. Svyatodukh, G. N. Goltsman</i> | |
| Super-Power W-Band Free Electron Maser with Combined Two-Mirror Resonator Consisting of 3D and 1D Bragg Reflectors | 1850 |
| <i>E. D. Egorova, N. Yu. Peskov, A. S. Sergeev, N. S. Ginzburg, A. V. Arzhannikov, S. L. Sinitsky</i> | |
| Development of a Single-Mode DFB Heterolaser with Surface-Emitted Radiation Output | 1858 |
| <i>E. D. Egorova, V. R. Baryshev, N. S. Ginzburg, E. R. Kocharovskaya, A. M. Malkin, V. Yu. Zaslavsky, C. B. Morozov, A. S. Sergeev</i> | |
| Magnetic Field Monitoring on HVdc Transmission Lines Using a UHF-RFID Tag | 1864 |
| <i>Shijie Fu, Greg Bridges, Behzad Kordi</i> | |
| Research on the Characteristics of Focusing Effect of Electromagnetic Wave in Inhomogeneous Plasma | 1869 |
| <i>Jingfeng Yao, Hanlu Fei, Jianfei Li, Xin Ye, Chengxun Yuan, Zhongxiang Zhou</i> | |
| Polarimetric SAR Image Super-Resolution Based on Coded Polarimetric Contexture Matrix and a Dual-Branch Network | 1879 |
| <i>L. Y. Dai, M. D. Li, S. W. Chen</i> | |
| Autoencoder Parameter Extraction Technique for Parametric Modeling of Third-Order Waveguide Filter | 1886 |
| <i>Jinyi Liu, Feng Feng, Weicong Na, Wei Liu, Kaixue Ma, Qi-Jun Zhang, Ningning Yan</i> | |
| A Genetic Algorithm and Model Order Reduction Method Based EM Topology Optimization for a Four-Pole Waveguide Filter..... | 1892 |
| <i>Jiali Zhang, Feng Feng, Jin Jin, Wei Liu, Kaixue Ma, Qi-Jun Zhang</i> | |
| An Electrostatic Integral Equation Method Compatible with Non-Conformal Meshes | 1899 |
| <i>Zhong Y. Pang, Bo O. Zhu</i> | |
| Research on the Differences Between Ocean Wave Parameters Retrieved Based on ITTC Spectra and PM Spectra | 1906 |
| <i>Meichen Liu, Daozhong Sun, Feng Luo, Enchao Peng</i> | |
| Backscattering Analysis of Particle Clouds in Collision Scenario Based on VRT | 1913 |
| <i>Chun Xin Li, Zi He, Da Zhi Ding, Fan Ding, Xin Rui Jiang, Yu Peng Wang</i> | |

| | |
|---|------|
| Valley-Addressable Monolayer Lasing Through Berry Phase Photonic Cavities..... | 1920 |
| <i>Xiaoyang Duan</i> | |
| Reuse of Electromagnetic Band Gap Structures and Antennas | 1927 |
| <i>Hui Zhong</i> | |
| Fast RCS Simulation of Target on the Sea Surface Based on the SBR and Advanced Two-Scale Method | 1933 |
| <i>Siyuan Wang, Zi He, Dazhi Ding, Lin Liu, Ying Zhou</i> | |
| Research on the Evaluation of Stealth Target | 1940 |
| <i>Yao Wang, Zi He, Dazhi Ding, Fan Ding</i> | |
| SAR Simulation of Lunar Surface Based on Rocks Abundance from NAC | 1950 |
| <i>Bangzhi He, Wenjing Zheng, Zi He, Dazhi Ding</i> | |
| A Hierarchical Reconstruction Framework for the Gap Area of ESA CCI Soil Moisture Product Using Deep Learning Model | 1960 |
| <i>Tao Ding, Wei Zhao, Yanqing Yang, Tianhao Zhou</i> | |
| A Study of the Inherent Physical Attributes of Component-Level Scattering Center Position..... | 1967 |
| <i>Wancong Li, Siyuan He, Zhengqiu Tian</i> | |
| Two-Stage Cognition-Driven Multiphysics Optimization for Microwave Filters Design..... | 1971 |
| <i>Jiaping Fu, Jing Jin, Ke Cao, Tengyu Li, Xintong Shi, Hai Lin</i> | |
| Tightly Coupled Dipole Antenna Array for Reconfigurable Frequency Wireless Power Transfer | 1976 |
| <i>D. Inserra, G. Wen</i> | |
| A Compact and Broadband Meta-Surface Antenna with Multi-Mode Resonances..... | 1980 |
| <i>Kai Zhang</i> | |
| A Butler Matrix Based Multi-Beam Antenna Array Fed by GSG Probe in W-Band..... | 1985 |
| <i>Dongxu Wang, Yuanxi Cao, Cheng Guo, Kai-Da Xu, Sen Yan</i> | |
| Broadband Anomalous Reflection and Radar Cross Section Reduction Metasurface Based on Deep Learning | 1990 |
| <i>Xiuli Yue, Haiyan Xie, Kaihuai Wen, Quanfang Chen, Wenjiang Xu, Tiancheng Han</i> | |
| Hybrid Integrated External Cavity Diode Laser with Flexible Feedback at 1- μ m Band | 1997 |
| <i>Chen Chen, Fang Wei, Xiuyou Han, Qingshuai Su, Haoyang Pi, Yanguang Sun, Huimin Wu, Anton Stroganov, Qing Ye, Haiwen Cai</i> | |
| Study of the Multi-Parameter Influence of Wind Waves and Swell Waves Based on GNSS Bistatic Scattering Model | 2001 |
| <i>J. N. Yan, D. Nie, K. C. Zhang, M. Zhang</i> | |
| Multi-Physics Analysis of a Rasorber..... | 2008 |
| <i>K. H. Wen, H. Y. Xie, X. L. Yue, M. T. Xie, T. C. Han</i> | |
| A Multiple Eigenvalues-Based Approach for Spaceborne GNSS-R Sea Surface Wind Speed Inversion..... | 2014 |
| <i>K. C. Zhang, D. Nie, J. N. Yan, M. Zhang</i> | |
| Signal Integrity Analysis of Integrated Circuits Based on DGTD Method | 2022 |
| <i>Heng Fei Ma, Qing Nan Fan, Zheng Lang Jia, Huan Huan Zhang</i> | |

| | |
|--|------|
| Metasurface-Based Resonator with Rotational Magnetic Field for Wireless Power Transfer..... | 2026 |
| <i>Xinyu Huang, Longyang Wang, Xinrui Liu, Mingzhao Song</i> | |
| Analysis of the Influence of Radome on Seeker Antenna with the Consideration of Multiphysics Effects..... | 2031 |
| <i>Qing Nan Fan, Heng Fei Ma, Zheng Lang Jia, Huan Huan Zhang</i> | |
| Analysis of the Influence of Underground Media on the Ground Field Characteristics in Low Altitude Explosion Source Areas..... | 2035 |
| <i>Zhaomin Li, Jiarong Dong, Bing Wei</i> | |
| Parabolic Equation-Based Channel Model for RIS-Aided Train Communication Systems..... | 2043 |
| <i>Hao Qin, Xingqi Zhang</i> | |
| Efficient Two-Way Parabolic Equation Method with Sparse Fourier Transform for Radio Wave Propagation Over Irregular Terrain..... | 2047 |
| <i>Hao Qin, Sicheng An, Xingqi Zhang</i> | |
| Efficient Uncertainty Quantification with Subspace Pursuit for FDTD Based Microwave Circuit Models..... | 2054 |
| <i>Sicheng An, Hao Qin, Xingqi Zhang</i> | |
| An Embedded Triband Shared-Aperture Antenna with Omnidirectional Radiation Pattern | 2059 |
| <i>Yuan Zhang, Dongjun Wang, Longjian Zhou, Qiang-Ming Cai, Yan-Wen Zhao, Jun Hu</i> | |
| The Phase Encoding Signal Generation Based on the Time Domain Mode Locking Optoelectronic Oscillator | 2064 |
| <i>Feng Xiong, Yalan Wang, Jichen Weng, Yibei Wang, Jin Zhang, Anle Wang, Hongyi Wang, Xiaotong Liu, Dongyu Li, Dangwei Wang, Xiaoniu Peng</i> | |
| High Resolution 3-D Imaging Via Distributed UAVs SAR Tomography..... | 2069 |
| <i>Jiangbo Hu, Shunjun Wei, Rong Shen, Xiang Cai, Mou Wang, Jun Shi, Xiaoling Zhang</i> | |
| Wideband Class-D Radio Frequency Power Amplifier Based on Novel Bootstrap Driver..... | 2074 |
| <i>Zhihui Luo, Xinyu Zhou, Shichang Chen</i> | |
| A Doherty Amplifier with a Tunable Transformer for Load Modulation | 2080 |
| <i>Shah Yash Hemant, Ahmad Bilal, Abdul Hadee, Sohom Bhattacharjee, Cho Choon Sik</i> | |
| Subwavelength Grating Microring Resonator Sensor Based on Microwave Photonic Interrogation Technique | 2083 |
| <i>Yiming Yan, Xiaoyi Tian, Jianfu Wang, Chujun Wu, Liwei Li, Debin Meng, Xiaokeyi</i> | |
| An Optimizing Method for Parameters of Cavity Filter for Approximate Estimation of Class Curve Fitting | 2090 |
| <i>Junliang Wan, Qiang-Ming Cai, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Yu-Teng Zheng, Bo Pu, Jun Fan</i> | |
| A Low-RCS Wearable Planar Monopole Antenna Based on Phase Cancellation..... | 2096 |
| <i>Taotao Yan, Pan Lu, Jiaohao Zhang, Sen Yan</i> | |
| A Generalized Quantitative Microwave Medical Sensing and Imaging System for the Detection of Alzheimer's Disease..... | 2101 |
| <i>Caiyi Liao, Zheng Gong, Yifan Chen</i> | |

| | |
|---|------|
| Highly Sensitive and Cost-Effective Liquid Refractive Index Sensor Based on Polymer Two-Mode Waveguide Interferometer | 2107 |
| <i>Y. L. Zhang, M. T. Chen, K. X. Chen</i> | |
| Millimeter-Wave Ultra-Narrowband Band-Pass Filter Based on SIW and Archimedean Spiral Slots | 2112 |
| <i>Yiming Zhang, Weiting Sun</i> | |
| High-Q Thin-Film Lithium Niobate Asymmetric Microring Resonator with Different Etching Depths and a Multimode Interferometer Coupler..... | 2116 |
| <i>W. Z. Wu, K. X. Chen</i> | |
| A Novel Equivalent Circuit Model for the Design and Analysis of Square Loop Metamaterials | 2123 |
| <i>Ismail A. Shittu, Ibrahim Abe M. Elfadel</i> | |
| All-Pass Filter Assisted Microring Resonator with Ultra-High Rejection Ratio | 2130 |
| <i>Ming Chen, Yifan Liu, Kaixiang Cao, Yuan Yu, Fangzheng Zhang, Yu Yu, Xinliang Zhang</i> | |
| Far Field Prediction Based on Non-Fixed Height Near-Field Scan and VGG19 Convolutional Neural Network | 2133 |
| <i>J. M. Zhou, T. Y. Zeng, D. H. Han, X. C. Wei</i> | |
| Inception-V4 Convolutional Neural Network for Near-Field to Far-Field Transform | 2140 |
| <i>T. Y. Zeng, J. M. Zhou, D. H. Han, X. C. Wei</i> | |
| A Wideband Ex-Ey-Ez Hybrid Electric Probe for Near-Field Measurement | 2148 |
| <i>Mingrui Chen, Daxiang Cui</i> | |
| An Efficient Approach for Conformal Metasurface Cloak Design of High-Order Bezier Surface | 2153 |
| <i>Lingyu Chen, Zihao Ning, Mengmeng Li, Dazhi Ding</i> | |
| A Hybrid Excitation Method of Finite-Gap Port Model and Plane Wave in SIE for Electromagnetic Problems..... | 2158 |
| <i>Qiang-Ming Cai, Zi-Qiang Wu, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Yu-Teng Zheng, Bo Pu, Jun Fan</i> | |
| Extremely Low Power Consumption Ultraviolet Sensor Design for Low Light Signal Processing Demodulation with Photomultiplier Tube | 2163 |
| <i>Tianzheng Ren, Dahai Han, Min Zhang, Tongtong Wan, Qibin Xu</i> | |
| Polysilicon Terahertz Thermal Detector Based on CMOS Technology..... | 2168 |
| <i>Ke Wang, Yiming Liao, Wenbin Zhou, Feng Yan, Xiaoli Ji</i> | |
| A Digitally Controlled CMOS Vector-Sum Phase Shifter with Low RMS Phase Error for Ka-Band Phased-Arrays | 2173 |
| <i>Huanhuan He, Feng Wang, Hongyun Zhang, Licheng Zhang, Jiankang Li, Jiang Luo</i> | |
| An Effective Optimization Algorithm for Synthesizing Wideband Thinned Array Antenna..... | 2178 |
| <i>Shuyi Chen, Hao Wen, Pengfei Gu, Zi He, Dazhi Ding</i> | |
| A Method of 2D Electromagnetic Transmission Imaging Through Comb Spectrum Hadamard Coding | 2181 |
| <i>Sijie Chen, Yang Pan, Hongbin Ma, Ran Yan, Jiangtao Huangfu</i> | |
| Integrating Discrete-Valued Search and Continuous Gradient Information Through Probabilistic Approaches..... | 2186 |
| <i>Shanglin Yang, Hao Jia</i> | |

| | |
|--|------|
| Design and Simulation of a V Band High-Power TWT with Rectangular-Ring Vertex Double-Bar SWS..... | 2193 |
| <i>Cong Tao, Wanghe Wei, Wenhao Ding, Jingsong Len, Kun Zhu</i> | |
| A Two-Dimensional Joint Estimation Method Based on Deep Unfolding Iterative Adaptive Algorithm | 2196 |
| <i>Xiao Sun, Panhe Hu, Zhiliang Pan, Xiaolong Su, Wei Yang</i> | |
| Design of Low Cross Polarization Phased Antenna Arrays for X-Band Spaceborne SAR Applications..... | 2203 |
| <i>Kuo Zhang, Jiahao Xie, Zhenyang Liu, Songtao Yu</i> | |
| A DC-20 GHz 5-Bit CMOS Digital Step Attenuator for Phased-Array Applications | 2209 |
| <i>Jian Pei Dong, Wen Zhu Zhang, Jiang Luo, Xiang Wang, Jun Liu</i> | |
| Multi-Resonant Non-Intrusive Microwave Sensor for Liquid Identification with High Accuracy | 2215 |
| <i>Jinglei Yong, Xingli He, Lingfeng Li, Peng Li, Yunjing Zhang</i> | |
| A Non-Contact Electromagnetic Motion Measurement Method..... | 2221 |
| <i>Xingyu Liu, Hongbin Ma, Yang Pan, Yifang Sun, Jiangtao Huangfu</i> | |
| A Novel Type of Quasi-Optical Microwave Pulse Compressor Based on Interference Controlled by Laser Driven Semiconductor Phase Shifter..... | 2230 |
| <i>A. V. Palitsin, G. G. Denisov, D. I. Sobolev, M. Yu. Glyavin</i> | |
| Engineering the Radiative Lifetime of Excitons in Two-Dimensional Van Der Waals Heterostructures..... | 2234 |
| <i>P. A. Pantyukhina, A. A. Bogdanov, K. L. Koshelev</i> | |
| Parallel Phase-Locked Relativistic Magnetrons with All Cavity Axial Extraction..... | 2242 |
| <i>Renjie Cheng, Tianming Li, Renzhen Xiao, Jiaoyin Wang, Haiyang Wang, Hao Li, Yihong Zhou, Biao Hu</i> | |
| Chip-Scale Mid-Infrared Sensing Systems Based on Integrated Silicon Photonics | 2247 |
| <i>Yiming Ma</i> | |
| Deep Learning-Based Recognizing Liquids Using a Multi-Resonance Microwave Sensor..... | 2254 |
| <i>Yifan Zhou, Jinglei Yong, Jinyang Peng, Peng Li, Meisong Tong, Yunjing Zhang</i> | |
| A Wireless Temperature Monitoring Method for Battery Pack | 2262 |
| <i>Yang Pan, Sijie Chen, Hongbin Ma, Ran Yan, Jiangtao Huangfu</i> | |
| A Compact Transmitarray Element Based on 3-D Printing Technology | 2269 |
| <i>Yuying Li, Yang Li, Xiangyu Li, Xiayuan Yao</i> | |
| Single-Frequency Linearly-Polarized Nanosecond Fiber Laser | 2275 |
| <i>R. Su, S. Chen, W. Zhang</i> | |
| Development and Fabrication of Slow-Wave Structures for Miniaturized Double-Beam W-Band Traveling-Wave Tubes..... | 2284 |
| <i>R. A. Torgashov, A. A. Rostuntsova, D. A. Nozhkin, A. V. Starodubov, E. E. Kolesnichenko, I. S. Ozhogin, N. M. Ryskin</i> | |
| Simulation of Extended Target Radar Echo in Frequency-Domain Based on SBR Method | 2291 |
| <i>Shui-Rong Chai, Pu-Kun Dai, Li-Xin Guo</i> | |

| | |
|---|------|
| MEMS-Based Generalized Computational Mid-Infrared Spectrometer..... | 2297 |
| <i>Heng Chen, Jing Zhou, Hui Zhang, Nan Wang, Yiming Ma</i> | |
| 3-D Particle-In-Cell Modeling of the Plasma-Assisted Sub-THz Backward-Wave Oscillator..... | 2301 |
| <i>N. M. Ryskin, V. N. Titov, R. A. Torgashov, Prerna Unadkat, Vishant Vishant, Anand Abhishek, Niraj Kumar</i> | |
| Research on X-Band Microstrip Broadband Antenna Based on Metasurface | 2306 |
| <i>Haixuan Li, Rui Zhang, Zhicheng Wang</i> | |
| Fast Yield Estimation of Metasurface-Based Microwave Absorber Using the Neuro-TF Approach | 2311 |
| <i>Xiu Mei Lin, Long Chen, Jia Nan Zhang, Jian Wei You</i> | |
| A Reconfigurable Antenna Driven by Ion Wind Generator..... | 2317 |
| <i>Xuesong Guo, Chengjing Gao, Hongbin Ma, Yang Pan, Zhuoyu Zhang, Jiangtao Huangfu</i> | |
| Study on the Multidimensional Characteristics of Microwave Scattering from Nearshore Sea Waves | 2324 |
| <i>Jianbo Cui, Yunhua Wang, Yanmin Zhang, Pengbo Du</i> | |
| Performance Evaluation Method of LiDAR in Rainfall Conditions..... | 2331 |
| <i>Xiaolei Zhang, Yafei Shen, Li Shen</i> | |
| Analysis of Signal Response and Detection Performance of Azimuth Transient Electromagnetic Logging While Drilling | 2339 |
| <i>Xiaozhuang Wang, Jie Gao, Wei Su, Shizhen Ke, Jun Zhu</i> | |
| Coherent Electron Transport in a Non-Single-Connected Normal Metal-Insulator-Superconductor Heterostructure | 2344 |
| <i>K. Yu. Arutyunov, A. S. Gurskiy, E. A. Sedov, E. P. Pozdnyakova, D. L. Shapovalov, A. M. Chekushin, M. A. Markina, M. A. Tarasov</i> | |
| Design of Low-Cost All Metal Electromagnetic Lens Based on Near-Field Energy Focusing..... | 2349 |
| <i>Qifei Zhang, Linyan Guo</i> | |
| Modeling the Performance of Electromagnetic Pulse Generation Circuit Based on Avalanche Transistor Switches..... | 2353 |
| <i>Zhenbo Cheng, Chuanxiang Tang, Hao Cai, Wei Zhao, Yuqing Chen</i> | |
| Autoencoder-Denoised MEMS-Based Computational Spectrometer..... | 2359 |
| <i>Jing Zhou, Hui Zhang, Heng Chen, Nan Wang, Yiming Ma</i> | |
| Magnetic System for Gyrotron: Present Status and Nearest Future | 2364 |
| <i>M. Yu. Glyavin, M. V. Proyavin</i> | |
| A Full-Color Holographic Movie Based on Silicon Nitride Metasurface..... | 2370 |
| <i>K. Iwami, M. Yamaguchi, S. Ikezawa</i> | |
| Millimeter Wave Broadband Antenna in Package for 5G Communication | 2374 |
| <i>G. Du, M. Chen, Y. Li, X. Mou, X. Sun</i> | |
| Ultra-Thin Energy Harvesting Metasurface with Polarization-Insensitive and Wide-Angle-Of-Incident Performance..... | 2382 |
| <i>G. Du, Y. Li, Y. Zhang, X. Mou, X. Li</i> | |
| Design of a Dual-Polarized High Isolation Multilayer Patch Antenna and Array | 2387 |
| <i>G. Du, Y. Zhang, M. Chen, X. Mou, Z. Yang, X. Sun</i> | |

| | |
|--|------|
| EMC Near-Field Scanning System with Fast Scanning Method..... <i>Y. Zhao, R. P. Lu, Z. Q. Song, X. Y. Mou, Y. W. Hu, G. H. Du</i> | 2394 |
| Research on Human Posture Recognition Technology Based on Millimeter-Wave Radar | 2399 |
| <i>Y. Zhao, Z. Q. Song, R. P. Lu, X. Y. Mou, S. H. Liao</i> | |
| Design of a Low-Cost Gaussian White Noise Source for ADC Dither Experiments | 2404 |
| <i>G. H. Du, S. H. Liao, X. W. Jin</i> | |
| Development of Powerful Gyrotrons with Improved Parameters in IAP RAS/GYCOM..... <i>G. G. Denisov, A. G. Litvak, M. Y. Glyavin, A. S. Sedov, E. A. Soluyanova, E. M. Tai</i> | 2410 |
| Thermal Resonant Response of a Double Subwavelength Gratings in the PT-Symmetry Mode | 2413 |
| <i>E. V. Shalymov, A. A. Zinchik, E. A. Efremova, I. R. Krylov, V. I. Shoey, U. V. Prokhorova, V. Yu. Venediktov</i> | |
| Status and Enhancement of 5G-A Millimeter Wave Wireless Devices RF Testing | 2420 |
| <i>Yuanyuan Liu, Xiangqian Sun, Rui Zhang, Siyang Sun, Yu Zhou</i> | |
| Multicore Fiber Lasers with Fs-Inscribed Grating Arrays: Recent Developments and Perspectives | 2426 |
| <i>A. G. Kuznetsov, A. V. Dostovalov, A. Yu. Kokhanovskiy, S. A. Babin</i> | |
| Microstrip Ultra-Wideband Omnidirectional Vertically Polarized Antenna..... <i>Chao Zou, Longjian Zhou, Qiang-Ming Cai, Xin Cao, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Yu-Teng Zheng, Bo Pu, Jun Fan</i> | 2433 |
| Intelligent Inversion of Magnetic Resonance Sounding Data Using Convolutional Neural Network..... <i>Meng Wei, Yujing Yang, Tingting Lin</i> | 2439 |
| Narrowband HMSIW-SSPP Hybrid Bandpass Filter Operating at Millimeter-Wave Band | 2446 |
| <i>Yiming Zhang, Yuanqing Yao, Jun Hu, Sailing He</i> | |
| A Three-Dimensional Electromagnetic Scattering Simulation Tool..... <i>H. Liu, L. Xu, B. Q. Liu</i> | 2450 |
| Compact High-Power Sub-THz and THz FELs Based on Planar Micro-Undulators and Relativistic Electron Beams..... <i>N. S. Ginzburg, I. V. Bandurkin, A. E. Fedotov, V. Yu. Zaslavsky, N. Yu. Peskov, M. N. Vilkov, A. M. Malkin, A. S. Sergeev, P. V. Loginov, N. I. Buharov</i> | 2455 |
| Optimization of Radiation Output in Surface-Wave Oscillators Based on 2D-Periodical Slow-Wave Structures of Planar Geometry | 2460 |
| <i>E. D. Egorova, N. S. Ginzburg, A. M. Malkin, N. Yu. Peskov, A. S. Sergeev</i> | |
| Improved Variational Mode Decomposition for Contactless Heartbeat Monitoring | 2464 |
| <i>Jingyuan Zhang, Xinyu Li, Jian Wei You</i> | |
| Broadband Radar Cross-Section Reduction Based on Polarization Conversion Metasurface..... <i>Jiawei Zhang, Shaojun Guo, Chao Zhang, Yanwen Zhao, Tongsheng Shen</i> | 2470 |
| Research on the Application of Comprehensive Physical Exploration in the Detection of Heavy Metal Contaminated Sites — Take the Case of Jijie Town in Yunnan Province as an Example | 2475 |
| <i>Sen Dai, Zhe Wang, Qiuping Zeng, Gang Zhang</i> | |
| An Accurate Technique for Extended Target Radar Echo Simulation Based on the Scattering Center Model | 2478 |
| <i>Shuirong Chai, Fangyin Zhu, Zhenxiang He, Yufeng Zou, Lixin Guo</i> | |

| | |
|--|------|
| Dual-Channel Chip-To-Chip Communication Employing Field Enhancement Spoof Surface Plasmon Polaritons Transmission Line..... | 2483 |
| <i>Wen Jin, Zhikai Li, Yiqian Shan, Yuan Liang, Ke Yang, Liangming Lian</i> | |
| Geomagnetic Data Processing | 2489 |
| <i>Sheng He, Gang Zhang</i> | |
| Segmentation of the Longmenshan Fracture Zone Based on Deep Electrical Structural Characteristics | 2492 |
| <i>Yongjie Tang, Gang Zhang</i> | |
| Design and Evaluation of Rare-Earth-Doped Fiber Amplifier for WDM-PON Transmission Systems..... | 2495 |
| <i>Dmitrijs Prigunovs, Ricards Kudojars, Patriks Morevs, Mareks Parfjonovs, Andis Supe, Svitlana Matsenko, Aleksandr Krotov, Dmitrii Redka, Vjaceslavs Bobrovs, Toms Salgals</i> | |
| Tight Focusing of Vector Beams Without Longitudinal Component of the Electric Field | 2501 |
| <i>S. S. Stafeev, V. V. Kotlyar</i> | |
| Wafer-Thick GaAs Photonic-Electronic Platform for Fast Terahertz Beam Steerers | 2505 |
| <i>A. Shurakov, A. Prikhodko, I. Belikov, G. Gol'Tsman</i> | |
| Enhanced Through-The-Wall Radar Imaging Based on ADMM-Net | 2510 |
| <i>Qiyue Hu, Lele Qu, Yan Yang</i> | |
| Design of a Three-Stage Depressed Collector for 220 GHz Travelling Wave Tubes | 2518 |
| <i>Jiawei Tang, Guoxiang Shu, Xinlun Xie, Huaxing Pan, Shaochen Ma, Mingze Li, Siyuan Liu, Wenlong He</i> | |
| Surface-Wave Oscillators with Advanced Bragg Reflectors as a Way to Increase Frequency Stability and Tuning | 2521 |
| <i>N. Yu. Peskov, V. Yu. Zaslavsky, K. A. Leshcheva, E. D. Egorova</i> | |
| Dual-Polarization Multiplexing and Nonlinear Equalization Assisted in LED-Based Underwater Wireless Optical Communication..... | 2527 |
| <i>Yitong Xie, Fei Zhang, Junwei Zhang, Tianyi Zhang, Yuan Wang, Jiahua Tian, Xiaojian Hong, Chao Fei, Guowu Zhang, Gaoxuan Wang, Sailing He</i> | |
| Design and Simulation of a 220GHz Sheet Beam Electron Gun..... | 2534 |
| <i>Huaxing Pan, Guoxiang Shu, Xinlun Xie, Fu Gao, Shaochen Ma, Jiawei Tang, Siyuan Liu, Mingze Li, Wenlong He</i> | |
| Typhoon Wind Speed Retrieval from HY-2C Microwave Radiometer Based on LightGBM | 2537 |
| <i>Xuchen Dai, Biao Zhang, Yifan Zhang, Lanjie Zhang</i> | |
| Drone Cooperation, NAT Traversal and Performance..... | 2541 |
| <i>Dmitrijs Rjazanovs, Elans Grabs, Ernests Pētersons, Daniils Aleksandrovs-Moisejs, Tianhua Chen, Dmitrijs Čulkovs, Māris Aleksandrs Ipatovs</i> | |
| Development of Laser Communication Algorithm for Moving Objects | 2547 |
| <i>Deomits Andrejevs, Elans Grabs, Dmitrijs Čulkovs, Viktors Jeralovičs, Loreta Juškaite, Tianhua Chen, Dmitrijs Rjazanovs, Aleksandrs Ipatovs</i> | |
| Circular Polarized Patch Antenna Array as an Element of the Antenna Field at 1.6GHz..... | 2551 |
| <i>M. S. Mikhailov, F. Habib Rammah, A. A. Komarov</i> | |

| | |
|---|------|
| Design of Chebyshev's Bandpass Filter Based on Square Open Loop Resonator (SOLR) at 5.8GHz | 2556 |
| <i>M. S. Mikhailov, F. Habib Rammah, A. A. Komarov</i> | |
| Design of a Circular Polarized Filter-Antenna | 2562 |
| <i>M. S. Mikhailov, F. Habib Rammah, A. A. Komarov</i> | |
| Multifunctional and Multi-Frequency Acoustic Metasurface Based on Reconfigurable Slitted Round Tubes..... | 2568 |
| <i>S. Y. Peng, A. L. Song, Y.X. Xiang</i> | |
| A 94.6 to 105.2GHz CMOS Power Amplifier Achieving 17dBm Psat, 12.5dBm OP1dB and 11.5% PAE with a Digital Power Detection Loop | 2576 |
| <i>Liangming Lian, Yuxin Zhang, Yiqian Shan, Yuan Liang, Wen Jin, Ke Yang</i> | |
| High Isolation Base Station Antenna Array Based on Fully Connected Neural Network Optimization..... | 2582 |
| <i>Xiaochi Lu, Haotian Li, Dexin Zhao</i> | |
| The Influence of a Strong Electromagnetic Wave and Phonon Confinement on the Acousto-Magneto-Electric Effect in Low-Dimensional Doped Semiconductor Superlattices | 2589 |
| <i>N. Q. Thang, N. Q. Bau, N. D. Nam, N. V. Nghia, N. T. Huong</i> | |
| Design of Reflective Metasurface and Signal Enhancement in a Mine Tunnel..... | 2595 |
| <i>Yifei Wang, Xiaojun Huang</i> | |
| Spin-Orbit Conversion of Vector Light Field Just After Spherical Lens | 2600 |
| <i>V. V. Kotlyar, A. A. Kovalev, S. S. Stafeev, A. G. Nalimov, E. S. Kozlova</i> | |
| EO-Tunable Long-Period Waveguide Grating Based on Electro-Optic Polymer..... | 2605 |
| <i>Xingyue Wang, Yingzhou Yu, Kaixin Chen, Jieyun Wu</i> | |
| Fast Simulation of SAW Devices Using the Improved Hierarchical Cascading Technique | 2612 |
| <i>Bangwei Xu, Shaoqing Duan, Lei Kuang</i> | |
| A Kernel-Independent Fast Direct Solution of Surface Integral Equations for Conducting Objects..... | 2617 |
| <i>Yuhan Zuo, Mengmeng Li</i> | |
| Spin-Orbital Conversion in Tightly Focused Optical Vortices with Vector Polarization..... | 2621 |
| <i>S. S. Stafeev, V. V. Kotlyar</i> | |
| Problems and Solutions for Increasing of the Operating Frequency of Gyrotrons..... | 2625 |
| <i>V. E. Zapevalov</i> | |
| Microwave Scattering Properties from Oil Film Contaminated Sea Surface with Kirchhoff Approximation..... | 2630 |
| <i>Hualei Fan, Chao Yang, Yusheng Jin, Weiqi Du</i> | |
| Systematic Evaluation of a Sub-Terahertz CMOS Wireless Link with an Interposer-Based Mushroom Antenna in a Heterogeneous Technology | 2636 |
| <i>Guangyu Zhong, Zhikai Li, Yiqian Shan, Yuan Liang, Wen Jin, Ke Yang</i> | |
| Optimization of an Extended Antenna Field..... | 2642 |
| <i>A. M. Mikhailov, M. S. Mikhailov, A. A. Komarov, S. V. Orobchenko</i> | |

| | |
|--|------|
| Arduino-Based Implementation and Design of Modern Temperature Measurements Sensor Environments..... | 2647 |
| <i>Daniils Aleksandrovs-Moisejs, Elans Grabs, Tianhua Chen, Romualds Beļinskis, Nikolajs Bogdanovs, Toms Kārkliņš, Jānis Klūga, Mihails Stetjuha, Aleksandrs Ipatovs</i> | |
| Design of a Multi-Barrel Terahertz Gyrotron for DNP/NMR Spectroscopy | 2656 |
| <i>V. E. Zapevalov, A. S. Zuev, O. P. Plankin, E. S. Semenov</i> | |
| Theoretical and Experimental Studies of Eigenmodes of Surface-Wave Bragg Resonators | 2660 |
| <i>A. M. Malkin, V. Yu. Zaslavsky, N. S. Ginzburg, M. D. Proyavin, D. I. Sobolev, I. V. Zheleznov, A. A. Orlovsky, A. S. Sergeev</i> | |
| Research on Few-Sample Target Recognition Algorithm Based on GAN Network | 2666 |
| <i>Bo Peng, Lei Kuang</i> | |
| Motion Sensors Data Fusion for Accurate Measurement in AHRS Systems..... | 2671 |
| <i>Jānis Klūga, Elans Grabs, Tianhua Chen, Arnīs Āncāns, Mihails Stetjuha, Dmitrijs Rjazanovs, Aleksandrs Ipatovs</i> | |
| A Matrix Riccati Equation for Fast Modeling of Wave Propagation and Absorption in Complex Inhomogeneous Media with Spatial Dispersion and Anisotropy..... | 2675 |
| <i>E. D. Gospodchikov, A. G. Shalashov</i> | |
| A Survey and Practical Application of SLAM Algorithms..... | 2682 |
| <i>Roberts Beņķis, Elans Grabs, Tianhua Chen, Artjoms Ratkuns, Dmitrijs Čulkovs, Arnīs Āncāns, Aleksandrs Ipatovs</i> | |
| Thomson Scattering of Essentially Non-Gaussian Microwave Beams in Inhomogeneous Magnetized Plasma..... | 2692 |
| <i>E. D. Gospodchikov, T. A. Khusainov, A. G. Shalashov</i> | |
| Advancing Subsurface Imaging: A Novel Deep Learning Approach for Diffraction Separation in GPR Analysis | 2702 |
| <i>X. Wang, H. Liu, J. Chen</i> | |
| Microwave Bifunctional Polarization-Selective Metagratings..... | 2707 |
| <i>Ruimeng Zhang, Jiahui Ji, Ziang Jiang, Shixiong Wang, Jianjia Yi</i> | |
| A Wideband Circularly Polarized Vivaldi Array Antenna with Axial Ratio Enhancement | 2712 |
| <i>Min Wang, Xuan Li, Wei Luo, Hao Chen, Shu-Lin Chen</i> | |
| Vortex Beam Generation Using Ultrathin Huygens' Metasurface with 360° Phase Control | 2717 |
| <i>Changfan Min, Ying Zhao, Yifeng Li</i> | |
| Pipeline Monitoring Based on Magnetic Inductive Coils Detection System..... | 2723 |
| <i>Hongbin Ma, Xingyu Liu, Yang Pan, Yifang Sun, Jiangtao Huangfu</i> | |
| Millimeter-Wave Low-Profile Spoof Surface Plasmon Polaritons Endfire Antenna Using Traveling-Wave Feeding Mechanism..... | 2728 |
| <i>Yiming Zhang, Yuanqing Yao, Jun Hu, Sailing He</i> | |
| High Selectivity Filtering Power Divider Based on SAW Resonator..... | 2733 |
| <i>Zhongxian Zheng, Jitao Chen, Jianxing Li, Sen Yan, Juan Chen, Wenjie Zhang</i> | |
| Model Agnostic Data Enhancement Algorithm in 2D Chiral Metamaterials: From Prediction to Inverse Design..... | 2738 |
| <i>J. You, Z. Zhao, X. Zheng</i> | |

| | |
|--|------|
| An Energy Efficient CMOS THz Inter-Chip Interconnect with Spoof Surface Plasmon Polariton (SSPP) Waveguide and SSPP Oscillator..... | 2745 |
| <i>Zhikai Li, Wen Jin, Yiqian Shan, Yuan Liang, Guangyu Zhong, Ke Yang</i> | |
| Predictive Analysis of IoT Systems Performance..... | 2750 |
| <i>Igor Tasic, Tianhua Chen, Elans Grabs, Aleksandrs Ipatovs, Maria-Dolores Cano</i> | |
| Multitarget Vital Signs Detection Based on MIMO-FMCW Radar | 2759 |
| <i>Yuanwen Yang, Lele Qu, Yan Yang, Qiyue Hu, Tianhong Yang</i> | |
| Modelling the UAV-Based Radio Relay System in Complex Propagation Conditions Using the Parabolic Equation Method | 2769 |
| <i>M. S. Lytaev</i> | |
| Evolutionary Optimization of Radiative Losses in Low-Dimensional Systems of Dipole Emitters | 2778 |
| <i>I. A. Volkov, S. A. Mitsai, S. K. Zhogolev, D. F. Kornovan, A. S. Sheremet, R. S. Savelev, M. I. Petrov</i> | |
| Synthesis of Ultra-Wideband Beam Scanning Sparse Planar Antenna Arrays by Iterative Convex Optimization with Fermat Spiral Initialization..... | 2783 |
| <i>Yang Liu, Liyang Chen, Yanhui Liu</i> | |
| Magnetoelectric Basic Logic Element for Neuromorphic Computing | 2789 |
| <i>V. A. Misilin, V. A. Kiselev, A. A. Mikhailov, R. V. Petrov, A. O. Nikitin</i> | |
| Pattern-Diversity Dielectric Resonator Antenna with TM01δ Mode and Hybrid HEM11δ Mode..... | 2794 |
| <i>Shuhao Hu, Nan Yang, Kai Lu, Peng Fei Hu</i> | |
| A Design Method for Ring Type Dual-Band Complex Filtering Impedance Transformer..... | 2799 |
| <i>Chunxiao Li, Hongda Xu, Xiaolong Wang, Chun-Ping Chen, Gennadi Milinevsky, Geyu Lu</i> | |
| Sample Entropy-Based Characterization of Electrical Impedance in Epilepsy | 2804 |
| <i>Xiaoxiao Bai, Jiaming Xu, Jingrong Yang, Lei Wang</i> | |
| Dual-Band Bandpass Filter for 5G Communication..... | 2811 |
| <i>Jiang Jiang, Yu Han, Chengdong Huang, Daiyao Zhang, Weikang Zhou, Liguo Zhou</i> | |
| Design of a 3.75 GHz Improved Bandpass Filter Based on GaAs IPD Technology | 2817 |
| <i>Weikang Zhou, Xianhu Luo, Yu Han, Chengdong Huang, Jiang Jiang, Liguo Zhou</i> | |
| Using Complementary Split-Ring Resonators for Super-Compact Filters on the Substrate Integrated Waveguide..... | 2823 |
| <i>Hui Zhang, Yanling Li, Jianwei Zhan, Qian Miao, Fei Cao</i> | |
| Improvement of Evaluation Method of Automobile Electromagnetic Radiation on Human Health and Its Protection..... | 2827 |
| <i>Bing Chen, Yang-Chun Gao, Xiao-Jiao Li, Ya-Wen Dong, Song Mao, Hong-Ling Yi, Man Xiong</i> | |
| Design of Flexible Wearable Antenna Based on Artificial Magnetic Conductor Structure | 2836 |
| <i>Yong Zhou, Jiajie Zhuang, Jiahao Zhou</i> | |
| Application of Mur Absorbing Boundary Condition for Time Domain Integral Equation..... | 2845 |
| <i>Jing Yang, Mengtong Qiu, Zhizhe Zhu, Yayun Dong, Fei Cao, Chuan He</i> | |
| Comparison of Multi-Resonant Patch Antenna Topologies..... | 2850 |
| <i>E. D. Malev, M. S. Mikhailov, A. M. Mikhailov, A. A. Komarov</i> | |

| | |
|--|------|
| Orientation Selection Analysis of a Special Electromagnetic Shield in HEMP Residual Electric Field Test | 2857 |
| <i>Zhizhen Zhu, Jing Yang, Xin Nie, Yuewu Shi, Yifu Zhou</i> | |
| Comparison of Circular Polarized Patch Antenna Topologies..... | 2863 |
| <i>E. D. Malev, M. S. Mikhailov, A. M. Mikhailov, A. A. Komarov</i> | |
| Inversion of Martian Arctic Sedimentary Layer and Basal Unit | 2871 |
| <i>Xin Shu, Hongxia Ye</i> | |
| Compact and Efficient Output Converter for Gyrotron Mode with High Longitudinal Wave Number | 2876 |
| <i>G. G. Denisov, D. I. Sobolev, M. D. Proyavin, A. P. Gashturi, M. V. Morozkin, V. E. Kotomina, M. V. Kamensky, A. A. Orlovsky</i> | |
| Low Voltage Sheet Beam W-Band Klystron Design | 2880 |
| <i>Bingchuan Xie, Rui Zhang, Yong Wang</i> | |
| A Parameter Extraction Method for Cone-Shaped Space Targets Based on Scattering Center Model..... | 2884 |
| <i>S. R. Wang, M. M. Li</i> | |
| The Sharpness Method Based on Window Interception Improves the Stability of Mars TEC Estimation..... | 2889 |
| <i>Yunlong Dong, Hongxia Ye</i> | |
| Bound States in the Continuum: Stability Against Structural Disorder..... | 2897 |
| <i>K. V. Semushev, N. A. Vlasov, A. I. Solomonov, A. A. Bogdanov, M. V. Rybin, Z. F. Sadrieva, E. E. Maslova</i> | |
| An Improved Numerical Algorithm for the Coupling Simulation of Shielded Cable | 2901 |
| <i>Zhihong Ye, Zihan Meng, Teng Hu</i> | |
| Potential of a Dual-Polarization Ground Penetrating Radar for Underground Cylinder Diameter Estimation..... | 2908 |
| <i>Bin Zhang, Guiquan Yuan, Hai Liu, Feng Ding, Yao Wang, Xu Meng</i> | |
| A Novel Design of an Aperiodic Array with Grating Lobe Suppression Based on the Einstein Tile | 2915 |
| <i>Yun Fei Qiang, Wei Wang, Rui-Xin Wu</i> | |
| AE-D2NN: Autoencoder in Diffractive Neural Network Form..... | 2919 |
| <i>Peijie Feng, Zongkun Zhang, Mingzhe Chong, Yunhua Tan</i> | |
| Design of a 2.4GHz Directional Antenna Array for Wi-Fi Applications | 2926 |
| <i>Junyu Zhou, Yuhui Zhao, Yizhou Jin, Zixuan Liu, Weiliang Zeng, Hui Liu</i> | |
| Enhanced Wideband Circularly Polarized Fabry-Perot Antenna with Dual-Layer Partially Reflective Surface for X-Band Satellite Communications | 2929 |
| <i>Muhammad Usman Raza, Sen Yan</i> | |
| Development and Assessment of a Lensed Fiber for Applications in Integrated Photonics..... | 2935 |
| <i>Arvids Sedulis, Deniss Zurikovs, Kristaps Rubuls, Ints Murans, Dmitrijs Prigunovs, Toms Salgals, Dilan Ortiz, Mareks Parfjonovs, Lilita Gegere, Armands Ostrovskis, Oskars Ozolins, Vjaceslavs Bobrovs, Sandis Spolitis</i> | |
| Mode-Locking Regimes in a Helical Waveguide Gyro-BWO | 2940 |
| <i>M. N. Vilkov, N. S. Ginzburg, I. V. Zotova, S. V. Samsonov, R. M. Rozental, A. A. Bogdashov, A. S. Sergeev</i> | |

| | |
|---|------|
| The Design and Realization Technology of the Amplitude Flatness of Multi-Chip Interconnect in Ka Band Broadband Inverter..... | 2944 |
| <i>Meixia Ma, Jinhua Yu</i> | |
| A 2.53 ~ 2.84 GHz Low-Phase-Noise Voltage-Controlled Oscillator with Integrated Low Dropout Regulator in 0.18 μ m CMOS Technology | 2953 |
| <i>Yuxin Zhang, Wen Jin, Yiqian Shan, Yuan Liang, Guangyu Zhong, Liangming Lian</i> | |
| Substrate Integrated Waveguide Miniaturization Filter with Interdigital Complementary Split-Ring Resonator..... | 2959 |
| <i>Yu Jie Huang, Yong Mao Huang</i> | |
| Design of a Polygon AMC Reflector for Dual-Band Dual-Polarized 5G Antenna..... | 2964 |
| <i>Weiliang Zeng, Jiahao Huang, Xiahua Dong, Yanwen Zhang, Junyu Zhou, Qingchong Liu, Hui Liu</i> | |
| CSRR Loaded HMSIW Filtering Power Divider with Embedded Snake-Shaped Slots..... | 2970 |
| <i>Chen Wang, Yong Mao Huang</i> | |
| A W-Band High-Gain Low-Noise Amplifier in 0.13 μ m SiGe BiCMOS for Millimeter-Wave Radar Application | 2976 |
| <i>Xian-Hu Luo, Xu Cheng, Yunbo Rao, Jiang-An Han, Bin-Bin Cheng, Xian-Jin Deng</i> | |
| A Small Metal Insensitive UHF RFID Tag for Temperature Measurement Based on LTCC Technology | 2979 |
| <i>Zixuan Liu, Junyu Zhou, Jiapeng Wu, Yunseng Diao, Binghang Dai, Weipeng Tan, Jun Li, Junlong Li, Hui Liu</i> | |
| Design of a Directional Borehole Radar System | 2983 |
| <i>Shangyang Zhang, Hai Lui, Yao Wang, Xu Meng</i> | |
| Design of a 1 in 8 Out Dual-Frequency Power Divider | 2989 |
| <i>Guanbao Long, Junyu Zhou, Songjie Zhao, Peng Xu, Ye Li, Hui Liu</i> | |
| Spectrum Situational Awareness Model Based on Wave Propagation Loss Characteristics and Distributed Electromagnetic Spectrum Detection Method | 2993 |
| <i>Geyu Hou, Zhenjia Chen, Ran Chen</i> | |
| Design of an N3-Band FBAR Filter Chip for Mobile Communications | 2999 |
| <i>Chen Zhao, Wenyu Yan, Shangran Wang, Zihao Lin, Hui Liu</i> | |
| Topology Construction Method of Distributed AD Hoc Network for Complex Maritime Electromagnetic Spectrum Environment..... | 3005 |
| <i>Songkun Chu, Zhenjia Chen, Min Wang</i> | |
| A Dual-Band Dual-Polarized Antenna for 5G Base Station | 3012 |
| <i>Weiliang Zeng, Junyu Zhou, Zixuan Liu, Junlong Li, Minfeng Yao, Qingchong Liu, Hui Liu</i> | |
| Tight Focusing of Optical Vortices with Hybrid Polarization..... | 3016 |
| <i>V. D. Zaitsev, S. S. Stafeev, V. V. Kotlyar</i> | |
| A Hybrid Excitation Method of Finite-Gap Port Model in SIE for Electromagnetic Radiation Analysis..... | 3022 |
| <i>Zi-Qiang Wu, Qiang-Ming Cai, Xin Cao, Longjian Zhou, Haoran Li, Zhen-Yong Du, Yixiang Li, Yuyu Zhu, Yu-Teng Zheng, Bo Pu, Jun Fan</i> | |

| | |
|--|------|
| Dual-Band Artificial Magnetic Conductor for Wi-Fi Antenna | 3027 |
| <i>Junyu Zhou, Yanwen Zhang, Xiahua Dong, Jiahao Huang, Qingchong Liu, Yizhou Jin, Hui Liu</i> | |
| Simulation and Analysis of Solid-State Switch-Based High Voltage Pulse Power Supply Using Marx Generator | 3031 |
| <i>Aashish Ranjan, Anand Abhishek, Niraj Kumar, N. M. Ryskin, V. N. Titov, R. A. Torgashov</i> | |
| Problems of Detecting Anomalous See Waves by Navigation Radars | 3039 |
| <i>V. A. Permyakov, A. I. Baskakov, M. S. Mikhailov, S. V. Permiakov</i> | |
| Measurement of Radiophysical Properties and Electromagnetic Parameters of Material Samples in the Millimeter Microwave Range..... | 3046 |
| <i>A. A. Politiko, V. A. Dyakonov, V. S. Anshin, I. A. Gromov, S. E. Prosyakin, M. S. Mikhailov</i> | |
| Design and Modeling of Monopulse Antenna System | 3055 |
| <i>K. S. Kharlamp'Ev, I. A. Gromov, M. S. Mikhailov</i> | |
| Inverse Design of Stacked Cylinders Scatterers by Evolutionary Optimization | 3063 |
| <i>V. D. Igoshin, A. Y. Kokhanovskiy, M. I. Petrov</i> | |
| A-Prior-Knowledge-Informed Microwave Medical Imaging for Breast Cancer Diagnosis..... | 3068 |
| <i>Lide Hu, Yahui Ding, Zheng Gong, Yifan Chen</i> | |
| Development of Building Indoor Air Quality Monitoring Based on IoT Sensor Network..... | 3076 |
| <i>Ruslans Sudniks, Arturs Ziemelis, Sandis Spolitis, Agris Nikitenko, Andis Supe</i> | |
| Intelligent Traffic Routing Algorithm for Wireless Sensor Networks | 3083 |
| <i>Jurijs Titovičs, Romualds Belinskis, Nikolajs Bogdanovs, Sandis Spolitis, Elans Grabs, Tianhua Chen, Aleksandrs Ipatovs</i> | |
| Performance Analysis of NRZ and Duobinary Modulated WDM-PON Transmission Systems Utilizing FEC Codes..... | 3088 |
| <i>Ricards Kudojars, Dmitrijs Prigunovs, Ruslans Sudniks, Aleksandr Krotov, Dmitrii Redka, Toms Salgals, Vjaceslavs Bobrovs, Svitlana Matsenko</i> | |
| Optical Hall Effect at the Tight Focus of Hybrid Vector Beams..... | 3096 |
| <i>V. D. Zaitsev, S. S. Stafeev, V. V. Kotlyar</i> | |
| Properties of Vortex Beams with a Squared Laguerre Polynomial..... | 3102 |
| <i>E. S. Kozlova, A. A. Kovalev, A. A. Savelyeva, V. V. Kotlyar</i> | |
| Sub-Terahertz Planar Relativistic Surface-Wave Oscillator with Two-Dimensional Distributed Feedback Based on High-Current Explosive Emission Electron Beam | 3108 |
| <i>V. Yu. Zaslavsky, I. V. Zhelezov, A. S. Sergeev, A. V. Palitsin, Yu. V. Rodin, M. B. Goykhman, A. V. Gromov</i> | |
| Study of the Terahertz Absorptance in 2D-Based Nanoribbon Heterostructures..... | 3113 |
| <i>O. Samy, Amine El Moutaouakil</i> | |
| Tunable 6-Mirror Gyrotron for Direct Positronium Measurements | 3117 |
| <i>V. Yu. Zaslavsky, M. Yu. Glyavin, I. V. Zotova</i> | |
| Resolution of Ground-Based Microwave Radar Systems for Monitoring Space Debris..... | 3121 |
| <i>F. N. Kovalev, A. N. Kovalev, I. V. Lesnov, M. V. Efimova, V. F. Vdovin</i> | |

| | |
|---|------|
| Engineering Topological States in Arrays of Two-Mode Nanostructured Dielectric Waveguides | 3128 |
| <i>A. O. Mikhin, V. Rutckaia, R. S. Savelev, I. S. Sinev, A. Alù, M. A. Gorlach</i> | |
| Study on the Evaluation Index of Vehicle Tracking on Two-Lane Road by Using Fractal Image Analysis..... | 3134 |
| <i>Yifan Wu, Syota Yazawa, Kiyozumi Niizuma, Takashi Kuroiwa</i> | |
| Miniaturized Power Divider Based on Parallel Coupled Microstrip Lines | 3138 |
| <i>Wan Jiang, Xiaobo Chang</i> | |
| Conical Beam Scanning Antenna Based on Leaky Wave Antenna Technology | 3142 |
| <i>Wenjie Zhang, Yuanxi Cao, Jianxing Li, Sen Yan, Juan Chen</i> | |
| Numerical Analysis of Transient Electromagnetic Responses in Cuboidal Cavities Exposed to X-Ray Radiation | 3147 |
| <i>X. Meng, G. Li, L. Zhang</i> | |
| Enhancement of Photoluminescence of Colloidal Quantum Dots in Plasmonic Metasurfaces Supporting Bound State in the Continuum..... | 3153 |
| <i>A. Seredin, K. Baryshnikova, M. Petrov, A. Sergeev, D. Pavlov, A. Kuchmizhak, K. Sergeeva, A. Sokolova, A. Rogach</i> | |
| Talbot Metasurfaces: A Self-Focusing Tool with Polarization Conversion Functionalities..... | 3157 |
| <i>Abijith K. Reju, N. Yogesh</i> | |
| A Wideband Circularly Polarized Slot Antenna for UWB Application | 3164 |
| <i>Junlong Li, Caili Yu, Guogang Huang, Zixuan Liu, Hui Liu</i> | |
| A Compact Circularly Polarized Ring Patch Antenna for RFID Reader Application..... | 3168 |
| <i>Junlong Li, Guogang Huang, Caili Yu, Mingzhi Zheng, Hui Liu</i> | |
| Simulation of Microwave Frequency Combs Generation in a W-Band Helical Waveguide Gyro-TWT Locked by a Saturable Absorber | 3172 |
| <i>M. N. Vilkov, N. S. Ginzburg, I. V. Zotova, S. V. Samsonov, A. S. Sergeev</i> | |
| Wideband Terahertz Waveguide Matched Load with Magnetic Metal Surfaces | 3177 |
| <i>Bo Zhang, Yong Zhang</i> | |
| A Design of High-Power Microwave Antenna Array Based on the TEM-TE10 Mode Transition Method | 3184 |
| <i>Zichong Chen, Xiaojun Mao, Yun Jiang, Rui Yin, Shangyi Jiang, Peng Bai, Yang Liu</i> | |
| Modelling and Analyses of the Range Gate Pull-Off (RGPO) Effect on Radar Tracking | 3190 |
| <i>Yanfeng Wang, Qihua Wu, Tiehua Zhao, Xiaobin Liu, Feng Zhao, Shunping Xiao</i> | |
| Optimization of Compressive Sensing Reconstruction Algorithms Based on Deep Learning | 3197 |
| <i>Zhe Wang, Youyu Zhao, Shixi Wen, Junjie Feng</i> | |
| Design of LED Lighting System with Automatic Dimming, Mixing and Situational Control..... | 3203 |
| <i>Yu-En Wu, Xu-Hui Jiang</i> | |
| A Noninterrupted Phase Synchronization Scheme of Multistatic SAR Based on Short-Term Shift-Orthogonal Signal..... | 3213 |
| <i>Tao Zhou, Guodong Jin, Daiyin Zhu</i> | |

| | |
|--|------|
| Generation of Sub-Nanosecond Microwave Pulse with High Compression Factor Using Reflection Structure | 3219 |
| Zhiyuan Zhang, Ruoyang Pan, Weijie Wang, Zhiqiang Wu, Guo Liu, Yelei Yao, Wei Jiang, Zeiwei Wu, Jianxun Wang, Yong Luo | |
| Mutual Coupling Error Correction Algorithm of MIMO Radar Based on Deep Learning..... | 3223 |
| Hongbo Fei, Linwei Wang, Aijun Liu, Changjun Yu | |
| Polarization Based Optical Microscopy for Better Resolution..... | 3229 |
| Nagendra P. Yadav, Guozhen Hu, Xiaofeng Cai, Zhengpeng Yao, Peng Yang | |
| A Frequency Sensor of Reconfigurable Intelligent Metasurface for 5G Communication..... | 3233 |
| Yixin Cui, Linyan Guo | |
| Error Analysis of RCS Dynamic Measurement System | 3240 |
| Jingyi Wang, Run Huang, Yanchun Zuo, Qi Zhao, Xing Su, Wei Liu | |
| Ka-Band Lens Antenna Based on Metasurface | 3246 |
| Shibin Jiang, Shaowei He, Lijun Jiang, Kun Zheng, Weiming Zhu | |
| A Broadband Meta-Grating Based on Dispersion Engineerable Metasurface..... | 3251 |
| Guanxing Zang, Shaowei He, Lijun Jiang, Kun Zheng, Weiming Zhu | |
| Buoy Loss Model for Satellite-To-Sea Communication Cooperating 6D Motion..... | 3257 |
| Chongyu Lv, Sheng Fang, Boyu Hua, Taotao Zhang, Manxi Wang, Longjun Wang, Qiuming Zhu | |
| Coupling Reduction for Microstrip Antenna Array with Low RCS Performance | 3262 |
| Xianliang Zeng, Weijun Wu, Shuang Li, Li Tao, Jianpu Qiao, Bo Luo | |
| Prediction of Ocean Velocity During Typhoon Using a GA-BP Neural Network Model..... | 3267 |
| Jinze Gao, Xuekun Chen, Aijun Liu, Changjun Yu | |
| Adverse Effect Reduction of Pores on Shielding Effectiveness of Electromagnetic Shielding Fabric Via Split Ring Resonator | 3274 |
| Xiuchen Wang, Zhuowu Yu, Yajing Wang, Zhe Liu | |
| Research on Forward Modeling of Robust Scattering Centers from Ships on Time-Varying Sea Surface..... | 3279 |
| Ru-Meng-Chen, Jia-Ning Yin, Si-Yuan He | |
| Goal Decision-Making in Active SLAM Using 2D Lidar Based on DRL Driven by Intrinsic Rewards..... | 3286 |
| Wenjie Na, Zhihao Liu, Mengqi He, Chao Li, Chengju Liu, Qijun Chen | |
| Mode Exchange of High-Speed DP-QPSK Signals Using Spatial Light Modulator..... | 3296 |
| Wei Yan, Baojian Wu, Yu Tang, Yuhang Wang, Kun Qiu | |
| Estimation of Far-Field Errors Due to Probe Jitter in Planar Near-Field Measurement Based on Interval Analysis Method | 3302 |
| Jiaqian Ding, Junhao Zheng, Tongyu Ding, Xiaoming Chen | |
| Research and Design of High-Power and High Aperture Efficiency Open Waveguide Array Antenna | 3310 |
| Yihong Wei, Xiangqiang Li, Yiyu Su, Jianqiong Zhang, Qingfeng Wang | |

| | |
|---|------|
| Five-Component Scattering Power Decomposition for Hybrid Compact Polarimetric SAR Data | 3318 |
| <i>Linlin Zhang, Chuan Zhang, Gui Gao, Xi Zhang, Jia Liu</i> | |
| A Spherical Conformal Reflectarray Sensor Array for Long-Distance Monitoring of Liquid Quality..... | 3328 |
| <i>Xiao Yu Li, Xiao Jie Lu, Zhen Wang, Mei Song Tong</i> | |
| Stereo Vision SLAM Based on Feature Extraction Network | 3332 |
| <i>Lei Zhang, Wenjie Na, Chenpeng Yao, Chengju Liu, Qijun Chen</i> | |
| A Novel Narrow-Band Bandpass Frequency Selective Surface | 3342 |
| <i>Zhen Wang, Xiao Yu Li, Yi Ruo Wang, Mei Song Tong</i> | |
| Electromagnetic Scattering Calculation of Corner Reflector Moving with Waves | 3346 |
| <i>Ying'ao Liu, Wei Liu, Yanchun Zuo</i> | |
| Fault Diagnosis System for Automotive Air Conditioning Actuators Utilizing COPOD Algorithm..... | 3351 |
| <i>Hongwei Liu, Wenjing Peng, Jing Xiao, Qingyao Wang, Fang Chen, Luo Bo, Chonghua Fang</i> | |
| Measurement of Dielectric Characteristics of Bulk Cellulose-Containing Materials at a Frequency of 2.45GHz | 3355 |
| <i>A. A. Vikharev, A. V. Gromov, T. O. Krapivnitskaia, A. B. Alyeva, S. A. Ananicheva, A. A. Orlovskiy, M. Yu Glyavin, N. Yu Peskov, I. V. Izotov</i> | |
| Modeling of Electrodynamiс Components of a Complex for Microwave Pyrolysis..... | 3359 |
| <i>A. A. Vikharev, T. O. Krapivnitskaia, A. B. Alyeva, S. A. Ananicheva, M. Yu Glyavin, N. Yu Peskov</i> | |
| Dual-Band Helical Filter Based on Helical Coaxial Stepped Impedance Resonators | 3363 |
| <i>Chenxin Ma, Zhanzhi Liu, Hongtao Gu, Gang Zhang, Wanchun Tang</i> | |
| A 57.3 to 66.2 GHz Millimeter-Wave Wireless Link with CMOS Power Amplifier and Wideband Phase-Locked Loop | 3368 |
| <i>Yuan Liang, Yuxin Zhang, Ke Yang, Zhikai Li, Guangyu Zhong, Liangming Lian</i> | |
| Silicon Photonic Integrated Broadband Continuously Tunable Optical Delay Line | 3374 |
| <i>Meng Chao, Xinxin Su, Xindi Yang, Han Liang, Zhenling Wu, Xiuyou Han, Mingshan Zhao</i> | |
| Coplanar Antenna Decoupling Using Soft Surface with Staggered Rectangular Holes | 3378 |
| <i>Jianpu Qiao, Hang Ji, Weijun Wu, Xianliang Zeng</i> | |
| Possibilities of Creating a Relativistic Terahertz Gyrotron with a Multi-Megawatt Power Level..... | 3381 |
| <i>Yu. Yu. Danilov, A. N. Leontyev, A. M. Malkin, E. S. Semenov, O. P. Plakin, R. M. Rozental</i> | |
| Nonadiabatic Effects in the Electron-Optical System of a Relativistic Millimeter-Wave Gyrotron..... | 3388 |
| <i>A. N. Leontyev, V. E. Nechaev, O. P. Plakin, E. S. Semenov, R. M. Rozental</i> | |
| Influence of Accelerating Voltage Fluctuations on the Width of the Frequency Locking Area of a 2 Megawatt-Level Gyrotron | 3393 |
| <i>A. P. Fokin, A. N. Leontyev, R. M. Rozental</i> | |
| A Time-Modulated Metasurface with Polarization Division Multiplexing for Wireless Communication Systems | 3398 |
| <i>Xiao Jie Lu, Xiao Yi Wang, Mei Song Tong</i> | |
| A Sensorless Control Method for Built-In Permanent Magnet Synchronous Motor Based on High- Frequency Pulse Sinusoidal Voltage Injection Method | 3403 |
| <i>Yingjie Gao, Shujia Yan, Xinbo Liu, Shanshan Liu, Mei Song Tong, Qiang Chen</i> | |

| | |
|---|------|
| FEMSiP Thermal Prediction Network Model with In-Stage BPF Gain Measurement Giving Identifiable Spatial Resolution | 3409 |
| <i>X. Liu, X. Wang, K. Yang, C. Zhou</i> | |
| A SISL High Gain Filtering Dielectric Resonator Antenna for 5G Millimeter-Wave Applications | 3415 |
| <i>Hongyan Yuan, Ningning Yan, Yu Luo, Kaixue Ma</i> | |
| Prediction of Ionospheric F2 Layer Heights Obtained from HFSWR During Typhoons Utilizing GA-BP Neural Network Model | 3421 |
| <i>Xuekun Chen, Hongjuan Yang, Jinze Gao, Changjun Yu</i> | |
| Pedestrian Gait Recognition Method Based on Micro-Doppler and Power Spectrum..... | 3428 |
| <i>Benteng Lyu, Aijun Liu, Changjun Yu, Shuai Xia</i> | |
| A DOA Estimation Method of Distributed Multi-Shipborne High-Frequency Surface Wave Radar Under Ship Swing State..... | 3436 |
| <i>Wenzhuo Hao, Xiuhong Wang, Guixian Zhang</i> | |
| Dynamic Imaging Simulation of Targets in Terahertz Band Based on BRDF..... | 3446 |
| <i>X. Fan, G. Lei, L. G. Wang, Y. Yu, W. J. Wang, Z. Q. Yang</i> | |
| Space-Coiled Photonic Structures for Waveshaping and Light Confinement Applications | 3452 |
| <i>S. M. Biju, S. Gokul, P. Sandra, N. Yogesh</i> | |
| An ANN-ANN Iterative Optimization Algorithm for Pattern Synthesis of Arbitrary Conformal Arrays | 3458 |
| <i>Hailong Sun, You-Feng Cheng, Guo Bai, Xuanming Zhong, Cheng Liao</i> | |
| A Four-Element Ultra-Wideband MIMO Antenna with High Isolation for IOT Applications | 3463 |
| <i>Lu Yi Liu, Peng Rui Zhang, Ajay K. Poddar, Ulrich L. Rohde, Mei Song Tong</i> | |
| A Miniaturized Ultra-Wideband Antenna Based on Mandelbrot Fractal Geometry..... | 3470 |
| <i>Lu Yi Liu, Hou Yi Ding, Amir Boag, Mei Song Tong</i> | |
| A Ring-Shaped Miniaturized Reflectarray Unit Based on Mandelbrot Fractal Geometry | 3476 |
| <i>Hou Yi Ding, Yuan Chu Xu, Yi Ruo Wang, Mei Song Tong</i> | |
| A Single-Layer Unit of Reflectarray Antenna Based on Mandelbrot Fractal Geometry for Dual-Band Communications | 3480 |
| <i>Hou Yi Ding, Lu Yi Liu, Yunyun Hu, Mei Song Tong</i> | |
| A Flexible Chipless RFID Tag with Polymer Coatings Used for Harsh Environments..... | 3484 |
| <i>Lu Yi Liu, Ajay K. Poddar, Ulrich L. Rohde, Mei Song Tong</i> | |
| A Miniaturized Multiband Antenna Based on Koch-Minkowski Composite Fractal Structure..... | 3489 |
| <i>Jian Shi, Dan Ni Lin, Mei Song Tong</i> | |
| A Chipless Flexible Strain Sensor Based on Improved U-Shaped Resonator Array | 3494 |
| <i>Han Zhang, Guo Chun Wan, Mei Song Tong</i> | |
| A Dynamic Frame Slot ALOHA Algorithm Based on Deep Learning for Collision Prevention of RFID Systems..... | 3501 |
| <i>Han Zhang, Guo Chun Wan, Mei Song Tong</i> | |
| A Novel Multi-Parameter Intelligent Compensation Method for Accurate Detection of Dissolved Oxygen Concentration..... | 3506 |
| <i>Xu Cong Zhang, Guo Chun Wan, Mei Song Tong</i> | |

| | |
|--|------|
| Fluoride Interfaces Enhance the Performance of Perovskite Light-Emitting Diodes..... | 3512 |
| <i>Yucai Yuan, Shiyu Xing, Gan Zhang, Shiang Zhang, Yaxiao Lian, Weidong Tang, Ke Zhou, Zhixiang Ren, Guoling Zhang, Baodan Zhao, Dawei Di</i> | |
| Multifunctional Additives for Bright, Efficient and Stable Lead-Bromide Perovskite LEDs | 3517 |
| <i>Shiyu Xing, Yucai Yuan, Gan Zhang, Shiang Zhang, Yaxiao Lian, Weidong Tang, Ke Zhou, Zhixiang Ren, Guoling Zhang, Baodan Zhao, Dawei Di</i> | |
| Neuromorphic Networks with Exciton Polariton Lattices..... | 3524 |
| <i>E. S. Sedov, A. V. Kavokin</i> | |
| Dual-Functional Metamaterial Device Controlled by a Singular Switch | 3531 |
| <i>Yongdiao Wen, Gang Li, Tie Li</i> | |
| Measurement of Eastern Rwanda's Wetlands to Assess the Water Quality: Case of Lake Cyohoha North..... | 3534 |
| <i>W. Habarurema, G. Rushingabigwi, A. Vodacek, L. Sibomana, G. B. Ishimwe, A. Uwonkunda, C. Musanase, K. Sumwiza, F. Maniraguha, C. D. Hirwa</i> | |
| Wideband RCS Reduction of Fabry-Perot Antenna Based on Diffuse Scattering Method | 3541 |
| <i>Guoqiang Feng, Peng Xie</i> | |
| Water-Based Metamaterial with Thermal Tunability for Dual-Band Absorption..... | 3547 |
| <i>Shangru Li, Helin Yang, Shuyuan Gong</i> | |
| Simulations and Measurements of Selective Properties of Rectangular Grooves in Open Cavities | 3551 |
| <i>A. A. Ananichev, I. V. Bandurkin, A. E. Fedotov, A. P. Fokin, D. I. Sobolev, M. D. Proyavin</i> | |
| Effect of Nitrogen on Carbon Dioxide Conversion in Nonequilibrium Plasma Supported by Microwave Radiation of a Gyrotron at Atmospheric Pressure | 3557 |
| <i>N. V. Chekmarev, S. V. Sintsov, D. A. Mansfeld, A. V. Vodopyanov</i> | |
| Polarization Domain Walls in Strong Birefringent Fiber Resonators..... | 3563 |
| <i>Ning Wang, Tianye Huang, Jianxing Pan, Chaoyu Xu, Gang Xu, Zhichao Wu, Xiang Li, Jie Tu, Huang Yu, Zuowei Yin, Yin Jie, Bao Huang, Jing Zhang</i> | |
| A Low-Scattering Water-Based Metasurface Array Antenna | 3568 |
| <i>Yuejie Yang, Helin Yang, Shangru Li</i> | |
| Few-Shot ISAR Target Recognition Method Based on Improved Prototype Networks..... | 3573 |
| <i>Shuai Xia, Aijun Liu, Changjun Yu, Benteng Lyu, Hongbo Fei</i> | |
| Optimization of Variable Thickness Rotationally-Symmetric Dielectric Radome Based on Physical Optics | 3582 |
| <i>Huan Yu, Wenchao Chen, Zijian Cai, Fuheng Zhang, Peng Xin, Hao Gu</i> | |
| High Power Talbot Effect Based T0unable Divider of Millimeter Wave Beam..... | 3587 |
| <i>M. Yu. Shmelev, G. G. Denisov, D. I. Sobolev</i> | |
| Unsupervised Deep Learning Method with MS-SSIM Loss for Clutter Suppression in Ground Penetrating Radar Image | 3591 |
| <i>F. F. Hou, M. Q. Fang, H. Liu</i> | |
| The Evolution in Phased Array Design and Measurement..... | 3597 |
| <i>Hongbing Sun, Qiang Zhang, Shuliang Li, Hao Zhou, Xiao Hu</i> | |

| | |
|--|------|
| A Study of Performance Assessment in Automotive Millimeter Wave Radar Industry..... | 3606 |
| <i>H. Chen, X. Zhang, Y. Shen, L. Shen</i> | |
| Design and Analysis of High-Precision Frame-Type Optomechanical Gyroscope | 3615 |
| <i>Chengwei Xian, Pengju Kuang, Zihan Huang, Senyu Zhang, Zhe Li, Guangjun Wen, Yongjun Huang</i> | |
| Polarization Control Method for the Main Lobe Based on Phase-Only Beamforming..... | 3622 |
| <i>Dongwei Lu, Jiazh Ma</i> | |
| A Metasurface with Switchable Reflection, Transmission and Absorption Functionalities | 3627 |
| <i>Xia Ma, Yanni Wang, Feiran Bai, Chenjiang Guo</i> | |
| A New Subarray Partition Method for Generating Arbitrary Shaped Beam Patterns..... | 3633 |
| <i>Yuhang Li, Qinghe Zhang</i> | |
| Multi-Objective Optimization Design of Reflective Dual-Band Linear-Circular Polarizer Based on Surrogate Method..... | 3639 |
| <i>S. X. Wu, Z. Y. Wang, Q. H. Zhang</i> | |
| Design of a Compact UWB BPF with an Embedded Folded-Stub Loaded Square Loop Resonator | 3648 |
| <i>Lingling Yang, Yongzhi Cheng, Haihong Liu</i> | |
| Space Satellite Target Identification Based on Squeeze-And-Excitation Network | 3655 |
| <i>Dong Zeng, Shaoran Wang, Ruixin Lai, Mengmeng Li, Dazhi Ding</i> | |
| Application of Technological Gyrotrons for Plasma-Chemical Decomposition of Carbon Dioxide..... | 3659 |
| <i>N. V. Chekmarev, D. A. Mansfeld, S. V. Sintsov, E. I. Preobrazhenskii, A. V. Vodopyanov, A. P. Fokin, A. A. Ananichev</i> | |
| Broadband Polarization Reconfigurable Metasurface Antenna Using Characteristic Mode Analysis..... | 3664 |
| <i>Feiran Bai, Xun Qu, Xia Ma, Jun Ding</i> | |
| A Compact Surface Wave Launcher with Higher Directivity for Leaky Wave Antenna of Producing Hologram..... | 3669 |
| <i>Yi Ruo Wang, Zhen Wang, Ajay K. Poddar, Ulrich L. Rohde, Mei Song Tong</i> | |
| A High-Stability Crystal Oscillator with a Controllable Oscillation Amplitude..... | 3673 |
| <i>Lei Zhao, Zhi Chong Wan, Meisong Tong</i> | |
| Radar-Infrared Bi-Stealth Vortex Beam Generator Using Hybrid Metasurface | 3678 |
| <i>Yanzhao Wang, Meiling Zeng, Huiling Luo, He-Xiu Xu</i> | |
| Disaster Monitoring Analysis Using Multi-Source Remote Sensing Data | 3684 |
| <i>Zihua Tong, Chenghui Zheng, Yuwei Liu, Yan Li, Junjie Wang, Zhen Wu, Yan Jia</i> | |
| Optical Super-Resolution Imaging Under Different Fluorescence Temporal Fluctuations | 3693 |
| <i>Zhiping Zeng, Jin Qiu, Biqing Xu, Xinyi Chen</i> | |
| The Multi-Beam Technology in LEO Satellite Communications..... | 3700 |
| <i>Hongbing Sun, Qiang Zhang, Lei Sun, Daqun Yu, Jianxin Li, Hua Wang</i> | |
| The Impact of Measurement Atmosphere on the Ion Migration in Mixed-Halide Perovskites | 3705 |
| <i>Shengnan Liu, Zhixiang Ren, Puyang Li, Ke Zhou, Baodan Zhao, Dawei Di</i> | |
| Effects of PEAI Post-Treatments on the Ion Migration in Lead Iodide Perovskites | 3711 |
| <i>Puyang Li, Shengnan Liu, Wenjing Qi, Xiaokang Fu, Ke Zhou, Baodan Zhao, Dawei Di</i> | |

| | |
|---|------|
| A New Design Approach for CMT-Based Low RCS Metasurface and Antenna..... | 3716 |
| <i>Yanni Wang, Xia Ma, Feiran Bai, Chenjiang Guo</i> | |
| Scattering Center Parametric Modeling of Two-Dimensional Rough Surface..... | 3723 |
| <i>Xiaohong Liang, Anqi Wang, Lixia Yang, Zhixiang Huang</i> | |
| Synthesized Quasi-Optical Converter for 175–250GHz Gyrotron with Two Output Windows | 3727 |
| <i>A. P. Gashturi, G. G. Denisov, A. P. Fokin, M. Yu. Glyavin, D. I. Sobolev, A. S. Zuev</i> | |
| A Metal-Only Wideband Reflectarray Element for Dual-Polarized Operation | 3731 |
| <i>Hao Chen, Nan Hu, Min Wang, Wenqing Xie, Wenhao Wu</i> | |
| A Frequency-Scanning Antenna Based on a S-Shaped Single-Ridge Waveguide..... | 3735 |
| <i>Min Wang, Hao Chen, Nan Hu, Wenqing Xie, Xuan Li</i> | |
| Research on Radiation Characteristics of Array Antennas in the Time-Domain Based on NSGA-II Constrained Multi-Objective Algorithm..... | 3739 |
| <i>Xinyu Jiang, Youjie Yan, Kaiyue Zhang, Liangjie Bi, Lin Meng</i> | |
| Research on Retina-Like Scanning Imaging Based on MEMS Mirror..... | 3745 |
| <i>Long Liang, Hui Wang, Jie Cao, Qun Hao, Yang Li, Yaohui Liang</i> | |
| Mode-Division Multiplexing Signals Through Both Wired and Wireless Optical Channels | 3753 |
| <i>Shiyu Zong, Feng Wen, Tianfeng Zhao, Kun Qiu</i> | |
| Reconstruction of Spatially Seamless Soil Moisture Data from SMAP Product Using Deep Learning | 3759 |
| <i>H. Y. Fan, Z. S. Li, Y. Jin, Y. Jia, S. G. Jin</i> | |
| Simulation on the Membrane Potential Variations by THz Unipolar Stimulation with Triangle Envelope..... | 3766 |
| <i>Wenfei Bo, Rong Che, Lemeng Guo, Xiaobo Zhang, Qiang Liu, Bo Tao, Baosong Duan, Yuansheng Li, Yubin Gong</i> | |
| Anomalous Electromagnetic Radiation Detection Method for Distributed Electromagnetic Spectrum Detection System Based on RF I/Q Signal in Pre-Earthquake Period | 3770 |
| <i>Yupei Fan, Zhenjia Chen, Ting Su</i> | |
| A Low Noise Hybrid Microwave Photonic Module for Passive Phased Array | 3777 |
| <i>Nan Zhao, Yuan Huang, Yifan Zhou, Mingming Sun, Xinmin Zhang</i> | |
| Design of Ultra-Wideband Amplitude-Adjustable Electromagnetic Absorber..... | 3782 |
| <i>Ran Liu, Ding Zhang, Yu-Tong Zhao, Bian Wu</i> | |
| Susceptibility of Relay Module to Conducted EMI..... | 3788 |
| <i>Jiayue Xing, Peng Huang, Bing Li</i> | |
| A Low-Power Collaborative Control Method for Vehicle-Grade Ambient Lighting System..... | 3793 |
| <i>Wen Bo Fu, Lan Chen, Jia Hui Wang, Mei Song Tong</i> | |
| A Low-Cost Displacement Sensor Based on Chipless RFID Tag with Microstrip Notch Circuit | 3800 |
| <i>Jia Hui Wang, Lan Chen, Mei Song Tong</i> | |
| Design of a Broadband High-Gain Patch Antenna for 5G Millimeter-Wave Applications | 3804 |
| <i>Tianhang Zhang, Ruina Lian, Di Wu, Mian Qin, Jinlong Zhang</i> | |

| | |
|--|------|
| A Multi-Polarized Reflectarray Antenna Employing Planar Magnetoelectric Dipole Elements | 3808 |
| <i>Sen Li, Hong Ma, Yang Cai, Lijun Bu, Siyu Qi, Yufan Cao, Tao Wu</i> | |
| A Novel Reconfigurable Polarization Conversion Metasurface Based on Water Structure | 3814 |
| <i>Fan Ding, Qing Xu, Yang Fu, Houyuan Cheng, Helin Yang</i> | |
| Design and Implementation of X-Band Multi-Channel Broadband Transceiver System Based on RFSoC | 3821 |
| <i>Enming Lin, Rui Guo, Haohui Yi, Jietao Li</i> | |
| The Influence of Radiation Distance on Microwave Coupling Efficiency in Microwave-Assisted Rock Breakage | 3829 |
| <i>Xiaoyun Zhao</i> | |
| Simulation and Analysis of Sea Surface Electromagnetic Bias for Interferometric Imaging Radar Altimeter..... | 3833 |
| <i>Bowen Xue, Yunhua Zhang, Xiao Dong</i> | |
| Investigation on Low-Frequency Breakdown of Electric Field Integral Equation Using 16-Byte Floating-Point Number | 3840 |
| <i>Xiang Chen, Mingxuan Zhang, Zhenhong Fan, Dazhi Ding</i> | |
| Semiconductor Optical Amplifier Based on Optical Reservoir (SOA-OR) for Mode-Division Multiplexing Signal Compensation | 3844 |
| <i>Huiwen Luo, Xiyong Liu, Tianseng Zhao, Kun Qiu, Feng Wen</i> | |
| Reservoir Computing Networks by Using Gain Saturation in a Semiconductor Optical Amplifier (SOA) Applied to Nonlinear Channel Equalization | 3850 |
| <i>Xiyong Liu, Hanwen Gao, Huiwen Luo, Feng Wen</i> | |
| Microwave-Photonics-Aided Doppler Channel Modeling | 3855 |
| <i>M. Zhang, X. Deng, W. Pan, Z. Q. Gao, X. H. Zou, L. S. Yan</i> | |
| Efficient Simulation Method for Composite Electromagnetic Scattering Characteristics of Urban Buildings and Background Environments | 3860 |
| <i>Yu Chen, Jihong Gu, Jie Yang, Zhou Cong, Dazhi Ding</i> | |
| Terahertz 2-To-1 Data Selector Based on VO ₂ -Integrated Cascaded Metasurfaces..... | 3864 |
| <i>W. Xiong, Y. Ren, J. Ran</i> | |
| Urban Land Use Efficiency and Spatial Dynamics: A Case Study of Nanjing's Sustainable Development | 3868 |
| <i>Z. S. Li, Y. Zhang, H. Y. Fan, Y. Jia, Y. Jin</i> | |
| A High-Power Lateral P-I-N Silicon-Germanium Photodiode..... | 3875 |
| <i>Chao Cheng, Jintao Xue, Zhiyuan Yu, Jinyi Wu, Shenlei Bao, Biniao Wang</i> | |
| Laser Synthesis of Linear Carbon Structures for Nanophotonics..... | 3879 |
| <i>A. V. Osipov, V. D. Samyshkin, A. S. Abramov, D. S. Bodunov, A. V. Povolotskiy, E. S. Sedov, A. O. Kucherik</i> | |
| Comparisons of Different Interior Penalty Terms on Discontinuous Galerkin-Based Mixed Potential Integral Equation | 3885 |
| <i>Zhou Zhou, Mingxuan Zhang, Zhenhong Fan, Dazhi Ding</i> | |
| 220 GHz and 205 GHz Orthogonal Modulators Used in a Real Time Communication System | 3891 |
| <i>Ge Liu, Yue He, Jun Jiang</i> | |

| | |
|--|------|
| Design of a Variable Polarizer for High Power Microwave Applications | 3895 |
| <i>Yunfei Sun, Zhenqiang Cao, Qiang Zhang, Juntao He</i> | |
| Performance Optimization of 3-Gain-Stage InGaAs/InAlAs Avalanche Photodetector..... | 3900 |
| <i>T. Sun, X. Guan, X. Y. Yang, P. F. Lu, F. Zhou</i> | |
| A High Efficiency C-Band Relativistic Magnetron with All-Cavity Extraction..... | 3907 |
| <i>Kunpeng Chen, Zeyang Liu, Haodong Xu, Bin Ding, Yuwei Fan</i> | |
| An All-Metal Cross-Slot Multilayer Circular Polarizer Conversion Unit for High-Power Microwave Applications..... | 3911 |
| <i>Zhaokun Ma, Yunfei Sun, Juntao He</i> | |
| An Improved Approach to Channel Mismatches Estimation for Bistatic Multichannel SAR | 3918 |
| <i>Chuanxin Zhou, Pengbo Wang, Tao He, Tian Qiu</i> | |
| A Novel Accuracy Enhancement Approach for Single-Photon 3D Imaging | 3924 |
| <i>Yuyang Zhao, Tianpeng Xie, Pengfei Zhou, Chenghao Jiang, Jingguo Zhu</i> | |
| Discriminative Fusion Methods for FMCW LiDAR: Leveraging All-Phase FFT and Time-Shifted Phase Difference..... | 3931 |
| <i>Ye Yuan, Jingguo Zhu, Chenghao Jiang, Fude Huang, Ming Wu, Ruqing Liu, Dingfu Zhou</i> | |
| Application of TAdam in Method of Moments for Rough Surface Scattering..... | 3939 |
| <i>Meng Yuan, Anqi Wang, Lixia Yang, Zhixiang Huang</i> | |
| Modeling Processes of Radio Wave Propagation in Urban Areas | 3943 |
| <i>A. A. Novikov, K. S. Sychev, A. A. Pimenov, A. S. Filimonov, M. S. Mikhailov</i> | |
| Multibeam Antenna Array Simulation..... | 3949 |
| <i>K. S. Sychev, A. A. Novikov, A. A. Pimenov, A. S. Filimonov, M. S. Mikhailov</i> | |
| Direction-Finding and Adaptive Beamforming Methods | 3955 |
| <i>K. S. Sychev, A. A. Novikov, A. A. Pimenov, A. S. Filimonov, M. S. Mikhailov</i> | |
| Research on the Super Resolution of Electromagnetic Inverse Scattering | 3960 |
| <i>Yahui Ding, Yongpin Chen, Jun Hu</i> | |
| Shadow Fading Model for UAV-To-Ground Channel Under Built-Up Scenarios..... | 3969 |
| <i>Yurao Ge, Haoran Ni, Xiaomin Chen, César Briso-Rodríguez, Hanpeng Li, Farman Ali, Qiuming Zhu</i> | |
| Simulation of a High-Power V-Band Transit-Time Oscillator Under a Low Magnetic Field..... | 3975 |
| <i>Zulong Chen, Lei Wang, Junpu Ling, Lili Song, Juntao He</i> | |
| The Utilization of Drones as a Catalyst for Igniting Passion in STEM Education in Malaysia | 3980 |
| <i>D. W. K. Ng, B. H. Kwan, Y. N. Phua, K. J. Ong, F. A. Rahman</i> | |
| Design of Piezoelectric Ceramic Power Amplifier Based on Multi-Phase-Shifted Half-Bridge Topology..... | 3985 |
| <i>Delin Tan, Haoran Li, Li Wu, Yuyu Zhu, Xuebing Leng, Rongyan Liu, Congjin Wang</i> | |
| Detection and Demodulation Design for Radar and Communication Integrated LFM-MSK Signal on FPGA..... | 3993 |
| <i>Jietao Li, Rui Guo, Enming Lin, Xingguo Li</i> | |

| | |
|--|------|
| Research on 5kW Power Synthesis Medium-Long Wave Radio Station Amplifier | 4003 |
| <i>Congjin Wang, Haoran Li, Yuyu Zhu, Li Wu, Piaoyi Huang, Yonghao Lu, Xinglong Liu</i> | |
| Research on Construction Method of Maritime Environment Model Based on Distributed Electromagnetic Spectrum Monitoring System..... | 4011 |
| <i>Lihui Wang, Yonghui Zhang, Zhenjia Chen, Po Shao, Ran Chen, Geyu Hou</i> | |
| Project of Powerful Long-Pulse THz-Band FEL with Talbot-Type Cavity: Design and Optimization..... | 4017 |
| <i>D. D. Krygina, Yu. S. Oparina, A. V. Savilov, N. Yu. Peskov</i> | |
| Edge Detection of Plant Root Images Based on Improved Canny Algorithm..... | 4023 |
| <i>Tingfang Tan, Lihui Wang, Wenlong Zhou</i> | |
| Broadband Photonic Terahertz Frequency-Hopping Source Based on Two-Stage Optical Injection Locking..... | 4031 |
| <i>Zhencan Yang, Fan Yang, Yuchao Liu, Mo Li, Jian Zhang</i> | |
| A Novel Digital Piezoelectric Ceramic Power Amplifier of T-Type Three-Levels Topology | 4034 |
| <i>Jing Chen, Haoran Li, Yuyu Zhu, Chunxi Jiang, Congjin Wang</i> | |
| An Exploration of Charge-Neutral Atmospheric Propagation Path Error Correction Method for Interferometric Radar Altimeter | 4042 |
| <i>F. Su, Y. Wang, Y. Bai, D. Sun, Y. Zhang</i> | |
| Research on Construction Method of Dual-Path Model Based on Complex Marine Environment | 4051 |
| <i>Lihui Wang, Yonghui Zhang, Zhenjia Chen, Po Shao, Ran Chen, Songkun Chu</i> | |
| Dynamic Small Targets Detection Using Multi-Temporal SAR Images | 4058 |
| <i>Yaosen Lv, Fengming Hu, Feng Xu</i> | |
| Development of $3^\circ \times 3^\circ$ Free-Space Collimated 1030nm Semiconductor Laser Pointer..... | 4063 |
| <i>Dongxin Xu, Wenjun Yu, Qi Wu, Huasheng Hu, Qinlong Jin, Yi Qu, Guojun Liu, Zhongliang Qiao, Zaijin Li, Lina Zeng, Lin Li, Zhibin Zhao</i> | |
| Laboratory Setup for Thermal Processing of Organic Materials with the Microwave Radiation..... | 4078 |
| <i>A. A. Vikharev, T. O. Krapivnitckaia, S. A. Ananicheva, A. N. Denisenko, A. B. Alyeva, M. Yu. Glyavin, N. Yu. Peskov</i> | |
| Using T-Shaped Metal Structure for Far-End Crosstalk Mitigation in PCIe5 High-Speed Connectors | 4082 |
| <i>Haoxin Luo, Haoran Li, Yuyu Zhu, Lanqing Yang, Xin Cao, Qiang-Ming Cai, Longjian Zhou, Jun Fan</i> | |
| Visible Chalcogenide Metadevices..... | 4088 |
| <i>Hao Dai, Yilin Shi, Jieren Song, Lan Li, Hongtao Lin</i> | |
| Study of a Miniaturized Folded Waveguide Terahertz Traveling Wave Tube with the Cold Cathode Electron Source | 4092 |
| <i>R. R. Jiang, G. X. Wu, J. Shi</i> | |
| Antenna Element Design for Emitting UWB Signals | 4097 |
| <i>P. M. Nikitina, A. M. Ignatov, V. V. Trubetskoy, S. A. Serov, M. S. Mikhailov</i> | |
| Atmospheric Numerical Prediction Based on Graph Convolution, Waveguide Discrimination, and Electromagnetic Transmission..... | 4102 |
| <i>Yuxuan Wang, Jiangting Li, Tong Xu, Yan Zheng, Zhangyi Li</i> | |

| | |
|--|------|
| Creating a Printed UWB Antenna for Local Navigation | 4107 |
| <i>A. M. Ignatov, P. M. Nikitina, V. V. Trubetskoy, S. A. Serov, M. S. Mikhailov</i> | |
| An In-Orbit Calibration Method for Spaceborne SAR 2-D Antenna Pattern Measurement Based on Fly-Around Calibration Satellite | 4112 |
| <i>Tian Qiu, Pengbo Wang, Tao He, Yanan Guo, Chuanxin Zhou</i> | |
| Prediction of Marine Atmospheric Duct and Its Loss Based on LSTM | 4118 |
| <i>Yi Yan, Jiangting Li, Shuji Sun, Zhouxiang Yu, Zhangyi Li</i> | |
| Research Progress on Sub-Band Fusion Technology for Ultra-Wideband Radar Signals | 4123 |
| <i>Denghui Huang, Ying Zhang, Huapeng Zhao, Muchen He, Yipeng Wang, Xinxin Qin</i> | |
| A Full-Bridge LLC Resonator with Hybrid Control Mode for High-Voltage Magnetron Power System | 4134 |
| <i>Gang Lei, Zuxue Xia, Wenhai Xia, Haoran Li, Rui Cheng, Yuyu Zhu</i> | |
| A Novel E-Electric Field Sensor Used for Large Dynamic Range of the Transient Electric Field Measurement | 4142 |
| <i>Li Zou, Xiangqiang Li, Jianqiong Zhang, Qingfeng Wang</i> | |
| Design of UWB Bow-Tie Antenna for High Power Electromagnetic Environment Monitoring | 4149 |
| <i>Junli Lu, Xiangqiang Li, Jianqiong Zhang, Qingfeng Wang</i> | |
| The Design of a Sheet Beam Electron Optical System for a Ku Band Continuous Wave Traveling Wave Tube | 4155 |
| <i>Pengcheng Yin, Jinchi Cai, Jin Xu, Lingna Yue, Hairong Yin, Yong Xu, Guoqing Zhao, Wenxiang Wang, Yanyu Wei</i> | |
| A High-Precision Multi-Target Vital Signs Detection Method Based on FMCW Radar..... | 4159 |
| <i>Miaomiao Zhao, Zhongxiang Zhang, Wenxia Bao</i> | |
| Bias-Independent Frequency Response Measurement of Electro-Optic Modulation Chips Utilizing Fixed Low-Frequency Photodetection and Three-Port Microwave De-Embedding | 4167 |
| <i>Junseng Zhu, Xinhai Zou, Ying Xu, Chao Jing, Yali Zhang, Zhiyao Zhang, Shangjian Zhang, Yong Liu</i> | |
| Multi-Band Polarization-Insensitive Terahertz Metamaterial Absorber Based on Composite Circular Ring Structure..... | 4173 |
| <i>Dongyi Sui, Daotong Li, Xinyao Liu, Lanlan Yang, Naoki Shinohara</i> | |
| A Novel Dual-Band and Broadband Antenna..... | 4177 |
| <i>Yihan Zhu, Zhongxiang Zhang, Xingang Ren</i> | |
| Time-Varying Baseline Characteristics Analysis for Active and Passive Glacier Deep Exploration with Multi-Satellites Formation Flying | 4181 |
| <i>H. M. Dai, R. Li, L. Deng</i> | |
| Nonvolatile Reconfigurable Phase-Change-Materials Integrated Silicon Photonics..... | 4190 |
| <i>Kai Xu, Maoliang Wei, Bo Tang, Junying Li, Yiting Yun, Kunhao Lei, Yingchun Wu, Lan Li, Hongtao Lin</i> | |
| Brief Research of Traditional and AI-Based Models for IMD2 Cancellation | 4194 |
| <i>A. A. Degtyarev, N. V. Bakholdin, A. Y. Maslovskiy, S. A. Bakhurin</i> | |

| | |
|--|------|
| A Spatiotemporal Correlation Sea Clutter Generation Method Based on Measured Data Characteristics | 4201 |
| <i>Peng Zeng, Yushi Zhang, Xiaoyun Xia, Jinpeng Zhang, Pengbo Du, Zhaohe Zeng, Zhiheng Hua</i> | |
| D-Band Directly Coupled Bandpass Filter Based on Micro-Coaxial Structure | 4210 |
| <i>Xinyao Liu, Daotong Li, Lanlan Yang, Dongyi Sui, Naoki Shinohara</i> | |
| Dual Circularly Polarized Hybrid Dielectric Resonant Antenna Based on Cross Slot Feeding | 4214 |
| <i>Gui-Zhi Tian, Hong-Bo Chu, Huan-Huan Peng, Gao-Sheng Li</i> | |
| Inversion of Microphysical Parameters Based on Dual-Polarization Radar..... | 4219 |
| <i>Wenhui Yan, Wei Cheng, Tiantian Yu, Yue Sun, Hui Xiao, Shuangshuang Bian, Jinzhi Liao</i> | |
| Analysis of Microphysical Characteristics of Icing Clouds Based on Aircraft Probing..... | 4226 |
| <i>Wenhui Yan, Wei Cheng, Tiantian Yu, Yue Sun, Hui Xiao, Shuangshuang Bian, Jinzhi Liao</i> | |
| Irradiation Effects of Gallium Ions on MoS ₂ Field Effect Transistors | 4232 |
| <i>Yu Zhang, Yazhou Wei, Feiliang Chen, Mo Li, Jian Zhang</i> | |
| High Power Near-Infrared Supercontinuum Generation in All-Fiber Polarization-Maintaining Erbium-Doped Amplifier..... | 4235 |
| <i>Zipeng Xu, Chuanfei Yao, Xuan Wang, Linjing Yang, Pingxue Li</i> | |
| Tunable High-Power Soliton Generation Up to 3.5 μm in a Large Core Diameter Fluorotellurite Fiber | 4240 |
| <i>L. J. Yang, C. F. Yao, X. Wang, Z. P. Xu, P. X. Li</i> | |
| Stochastic Parabolic Equation for the Radio Wave Propagation Modeling in Uncertain Tropospheric Ducts..... | 4245 |
| <i>M. S. Lytaev</i> | |
| Silicon Waveguide Cross-Sectional Dimension Estimation Based on Effective Refractive Index Extraction | 4251 |
| <i>Enge Zhang, Xiaoran Zhu, Lei Zhang</i> | |
| Tailoring Highly Confined Electric-Field Based Optical Skyrmions | 4257 |
| <i>J. Chen, X. Shen, Y. Zeng, Q. Zhan</i> | |
| On-Chip Spectrometer with a Microring Resonator and a Lattice Filter..... | 4265 |
| <i>Shiqi Zhang, Tongxin Yang, Xiuli Fu, Lei Zhang</i> | |
| A Design of Linear Polarization Convert 2-Bit Reconfigurable Reflectarray Element at Ku Band..... | 4269 |
| <i>Haoran Ye, Xurui Zhang, Yan Zhang</i> | |
| Mode Purity Analysis for the Vortex Beam Emitter | 4276 |
| <i>Fan-Hong Li, Kai-Xin Wang, He-Yi Li, Tao He, Jin Huang, Zi-Wen Zhang, Juan-Feng Zhu</i> | |
| Robust Target Detection of Multi-Band Coherent Processing UWB Systems | 4279 |
| <i>Jiale He, Zongyao Zhao, Jianhua Pei, Yuhang Dong</i> | |
| Full-Space Hologram at W-Band by Independent Phase Encoding of Metasurface..... | 4284 |
| <i>Z. J. Wang, B. Y. Wen, Z. P. Yin</i> | |
| The Study of the Main Junction of the VDMOS Termination..... | 4292 |
| <i>Xiaopei Chen, Lixiang Wang, Quanyuan Feng, Suping Huang</i> | |

| | |
|--|------|
| Development of Printed Antenna Models for GNSS C-Band Antennas..... | 4297 |
| <i>V. V. Trubetskoy, A. M. Ignatov, P. M. Nikitina, S. A. Serov, M. S. Mikhailov</i> | |
| Using Coaxial Ground Full-Touch Structure to Reduce Far-End Crosstalk in PCIe5 High-Speed Connectors..... | 4303 |
| <i>Yuhui Liu, Lanqing Yang, Qiang-Ming Cai, Xin Cao, Longjian Zhou, Haoran Li, Haoxin Luo, Yuyu Zhu, Jun Fan</i> | |
| Using Load Transient Waveform to Analyze Fault Propagation Mechanism in DC-DC Switching Power Supply | 4307 |
| <i>Junliang Wan, Pengfei Yu, Qiang-Ming Cai, Xin Cao, Longjian Zhou, Haoran Li, Yuyu Zhu, Jun Fan</i> | |
| Metamaterial Regime in Quasicrystal Structure..... | 4313 |
| <i>E. E. Maslova, K. V. Semushev, M. V. Rybin</i> | |
| Design of U-Band Frequency Doubler Based on Schottky Diode MA4E1317..... | 4320 |
| <i>X. Fang, B. Zhang, Y. H. Qin, Y. B. Wen</i> | |
| Investigation of the Features of Radio Wave Propagation Over the Sea Surface | 4324 |
| <i>A. A. Pimenov, A. S. Filimonov, A. A. Novikov, K. S. Sychev, A. A. Gladchenko, M. S. Mikhailov</i> | |
| A Ray Model of Radio Wave Propagation in Tropospheric Waveguides | 4331 |
| <i>A. A. Pimenov, A. S. Filimonov, A. A. Novikov, K. S. Sychev, A. A. Gladchenko, M. S. Mikhailov</i> | |
| Development of a 4×4 Microstrip Antenna Array in the X-Band..... | 4337 |
| <i>A. S. Filimonov, A. A. Pimenov, A. A. Novikov, K. S. Sychev, A. A. Gladchenko, M. S. Mikhailov</i> | |
| A Novel Design of Dualband Microstrip Patch Antenna for 5G Mobile Communication | 4344 |
| <i>Shuo Tao Li, Jia Hui Wang, Lan Chen, Mei Song Tong</i> | |
| A Design of Wireless Sensor Network with Ultra-Low Power for Air Quality Detection | 4349 |
| <i>Peng Cheng Kong, Lan Chen, Dan Ni Lin, Mei Song Tong</i> | |
| An Encoded Reconfigurable Chipless RFID Sensor with an U-Shaped Structure | 4354 |
| <i>Kai Qing Wang, Lan Chen, Mei Song Tong</i> | |
| Microcomb-Based Transversal Microwave Photonic Applications..... | 4359 |
| <i>Yuhang Song, Yifu Xu, Yixuan Zheng, Yunping Bai, Mengxi Tan, Kun Xu, David J. Moss, Xingyuan Xu</i> | |
| A Compact Ku-Band 24-Cavity Relativistic Magnetron with TEM Mode Output | 4363 |
| <i>Bin Ding, Di-Fu Shi, Junpu Ling, Kunpeng Chen</i> | |
| Automatic Detection for the Boundary of Earthquake Triggered Landslides with Sentinel-1 SAR Imagery..... | 4369 |
| <i>Lifu Chen, Zengqi Li, Chuang Song, Jin Xing, Zhenhong Li</i> | |
| Characteristics of Coaxial Grid Discharge Plasma and Its Effect on Microwave Transmission | 4375 |
| <i>H. L. Wang, X. B. Lyu, Z. Y. Li, C. X. Yuan</i> | |
| A Wavefront Modulation Method with Converged Energy for Radar Forward-Looking Imaging | 4384 |
| <i>Feng Kuang, Kang Liu, Hongyan Liu, Jianqiu Wang, Yang Yang</i> | |

| | |
|--|------|
| High-Resolution Magnetotelluric Data Inversion Constrained with Seismic Texture..... | 4392 |
| <i>Hongyu Zhou, Rui Guo, Zuzhi Hu, Maokun Li, Fan Yang, Shenheng Xu, Yanling Shi</i> | |
| Electromagnetic Field Prediction in 2D Inhomogeneous Distributions of Permeability with Galerkin Neural Operator | 4401 |
| <i>Xiu-Zhen Gong, Zheng-Yu Huang, Eng Leong Tan, Xue-Zhi Zheng, Yi-Ru Zheng, Han-Yan Duan, Feng Jiang</i> | |
| Co-Design of Si-Photonic Segmented Mach-Zehnder Modulators and Distributed CMOS Drivers for Co-Packaged Optics..... | 4405 |
| <i>Siyuan Ma, Yingjie Ma, Qianli Ma, Guike Li, Nanjian Wu, Xi Xiao, Nan Qi</i> | |
| Hierarchical Cascading Technique for Single Periodic SAW Models..... | 4415 |
| <i>Shaoqing Duan, Lei Kuang</i> | |
| Solving Poisson's Equation in Electromagnetics with Limited Data and Arbitrary Domain Deformation Using Physics-Enhanced Neural Operator | 4418 |
| <i>Zheng Zong, Zhun Wei</i> | |
| A Compact Relativistic Magnetron with Extract Ring | 4428 |
| <i>Yuying Wang, Tianming Li, Renjie Cheng, Jiaoyin Wang, Haiyang Wang, Hao Li, Yihong Zhou, Biao Hu</i> | |
| Effect of Ionospheric Faraday Rotation on Polarimetric Scattering Similarity | 4432 |
| <i>Xun Wang, Yunhua Zhang, Dong Li, Jiesang Yang</i> | |
| An Iterative Neural Network for Imaging Multi-Layer Targets in Single-Photon Applications..... | 4441 |
| <i>Zixuan Zhang, Yuyang Zhao, Jingguo Zhu</i> | |
| Enhanced Fourier Series for Precise Signal Analysis..... | 4447 |
| <i>Hsin-Jung Lee, Cheng-Che Lee, Yi-Min Yang, Wei-Yu Lee, Chieh-Hsiung Kuan</i> | |
| Empirical Model for Fast Estimation of Decorrelation Induced by Ocean Waves in Interferometric Radar Altimeter | 4452 |
| <i>Yining Bai, Yunhua Wang, Ge Chen, Yonggang Ji, Hanwei Sun</i> | |
| A High Power Stealthy Radome Based on Frequency Selective Surface for Radar Cross Section Reduction | 4462 |
| <i>X. Liu, Q. Zhang, Y. F. Sun, G. Yang, Z. Q. Cao, C. W. Yuan</i> | |
| Equivalent Circuit Analysis of the Multi-Sheet-Beam Folded Waveguide Slow-Wave Structure..... | 4466 |
| <i>Yanan Ma, Fengying Lu, Rui Zhang, Yong Wang</i> | |
| Research on 1.55 μm Waveband Discrete External Cavity Tunable Semiconductor Lasers | 4471 |
| <i>Xuan Li, Linyu Zhang, Wei Luo, Zaijin Li, Dongxin Xu, Yi Qu, Zhongliang Qiao, Lin Li</i> | |
| Design of Series Active Linear Filter for High-Voltage Pulse Power Supply of Gyrotron Cathode | 4481 |
| <i>Chunhui Yang, Xiaotao Han, Tao Jiang, Junxian Fan, Shaozhe Zhang</i> | |
| Indoor Health Monitoring with VLC-Based Passive Posture Monitoring..... | 4487 |
| <i>Jiarong Li, Zixuan Xie, Chenxin Liang, Chihuan Xu, Changshuo Ge, Zhancong Xu, Jingyang Wang, Liguan Ruan, Weihua Gui, Xiaojun Liang, Wenbo Ding</i> | |
| Integrated Photonic Processing Core for Dual-Band Microwave Radar Imaging | 4495 |
| <i>Weichao Ma, Ruixuan Wang, Jianwei Liu, Wangzhe Li</i> | |

| | |
|--|------|
| An Efficient Algorithm for Low-PAPR Comb Jamming Signal Synthesis | 4500 |
| <i>Yongjun Chen, Da Li, Wenjun Wu, Bo Tang</i> | |
| LiFall: Passive Indoor Fall Detection System Based on Illumination and Visible Light Communication Networks | 4507 |
| <i>Zhanccong Xu, Chenxin Liang, Jingyang Wang, Liguang Ruan, Jiarong Li, Yuhua Dong, Wenbo Ding, Jian Song</i> | |
| Inversion of Bohai Sea Ice Thickness Based on HY-1D Data..... | 4515 |
| <i>Wenlong Bi, Ran Yan, Ning Wang, Yifan Li, Xinyu Li, Jin Wang, Meijie Liu</i> | |
| An Efficient Antenna Optimization Method Based on a Parameter Dimensionality Reduction Approach..... | 4522 |
| <i>Jiangling Dou, Chenyang Zhao, Jian Song, Qingwang Wang, Tao Shen</i> | |
| Simulations of GaAs Photoconductive Switch by Using Improved Carrier Velocity Formula Under Ultra-High Electric Field | 4530 |
| <i>Haijuan Cui, Yaotian Luo, Jianping Xiao, Jiuxun Sun</i> | |
| A Low-Profile Broadband Reconfigurable Reflectarray with Reflective Feed | 4536 |
| <i>Changhao Li, Mengkai Xi, Luyu Zhao</i> | |
| MIMO Radar Waveform Design for More Precise Amplitude Estimation..... | 4541 |
| <i>Ping Huang, Wenjun Wu, Bo Tang</i> | |
| Compact Quasi-Resonant Flyback Synchronous Rectifier Converter and Control Method | 4547 |
| <i>Xiaoyan Wei, Quanyuan Feng, Tao Li</i> | |
| Design of a Capacitive-Based Isolated Signal Transmission Circuit..... | 4553 |
| <i>Tao Li, Quanyuan Feng, Xiaoyan Wei</i> | |
| A Low Power Oscillator with Temperature Compensation | 4560 |
| <i>Huchao Li, Xiaoyan Wei, Quanyuan Feng</i> | |
| A Large-Scale Compact Base Station Antenna Array with Improved Radiation Performance | 4565 |
| <i>Jiayue Jiang, Luyu Zhao</i> | |
| Theoretical Study of Morphology of Holes Drilled by a Double-Pulsed Laser Train | 4573 |
| <i>Jiaqi Wang, Di Song, Meng Zhang, Liancong Gao, Xinyang Wu, Dongdong Wang, Jiao Yang, Yaqing Jin, Jiawei Guo, Xiaoxu Liu, You Wang</i> | |
| A Type of In-Band Full-Duplex Antenna System with High Isolation for 5G NR Bands | 4580 |
| <i>Xiaosheng Zhang, Zhe Xu, Luyu Zhao</i> | |
| Gain Enhancement Using SSR Metasurface for 5G Application | 4585 |
| <i>Ferdi K. Lumbantobing, Levy Olivia Nur, Bambang Setia Nugroho</i> | |
| Poincare Beams in Sharp Focus | 4591 |
| <i>V. D. Zaitsev, S. S. Stafeev, V.V. Kotlyar</i> | |
| Machine Learning Algorithm Based Plant Root Contour Extraction in Edge Devices | 4596 |
| <i>Peng Zhao, Ting Fang Tan, Lihui Wang</i> | |
| A Low-Profile UHF-RFID Tag Antenna with Interdigitated Inductive-Coupling-Fed for Metallic Objects..... | 4603 |
| <i>Xuan He, Quanyuan Feng, Tao Li, Zhangmin Wang</i> | |

| | |
|--|------|
| Ku-Band Antenna Array Based on a Fabry-Perot Cavity | 4609 |
| <i>S. V. Polenga, E. A. Strigova, A. V. Stankovskiy, R. O. Ryazantsev, A. D. Poligina</i> | |
| A Transverse Scanning Periodic Leaky Wave Antenna Loaded with Metamaterials | 4617 |
| <i>Tao Li, Quanyuan Feng, Xuan He, Zhangmin Wang</i> | |
| A Miniaturized Low-Profile Wideband Pattern Diversity Metasurface Antenna for 5G-NR | 4623 |
| <i>Zhangmin Wang, Quanyuan Feng, Xuan He, Tao Li</i> | |
| Novel EBG Absorber in the Application of Ka Band Cavity Microwave Modules | 4628 |
| <i>Yue Zhang, Yunfei Liu, Kuang Zhang</i> | |
| Design of a High CMTI Level Shifting Circuit for GaN Gate Driver Ics | 4632 |
| <i>Zujing Zhang, Quanyuan Feng, Jiaxiong Deng</i> | |
| Design of a New Low-Power Relaxation Oscillator Without Comparator..... | 4640 |
| <i>Jiaxiong Deng, Quanyuan Feng, Zujing Zhang</i> | |
| Rigorous Multi-Modal Analysis of Partially Filled Waveguides for Accurate Permittivity and Permeability Retrievals | 4645 |
| <i>Bo O. Zhu, Xiao Yu Li, Mei Song Tong</i> | |
| Research Progress of Narrow Linewidth Blue Semiconductor Lasers | 4651 |
| <i>Linyu Zhang, Xuan Li, Wei Luo, Zaijin Li, Dongxin Xu, Yi Qu, Zhongliang Qiao, Lin Li</i> | |
| Terahertz Broadband Cross-Polarized Metasurface Based on Square Split-Ring Resonators..... | 4661 |
| <i>Huayan Sun, Zhe Chen, Yongping Xu, Zeyu Huang</i> | |
| Turkey-Syria Mw 7.8 Earthquake Deformation Monitoring Using Lutan-1 SAR Data..... | 4665 |
| <i>Xiang Zhang, Xinming Tang, Tao Li, Hui Zhao, Xuefei Zhang, Jing Lu, Sen Lv</i> | |
| Design of Quasi-Optical Mode Converter for 800-GHz TE8,5 Mode Gyrotron | 4670 |
| <i>Liangqian Xie, Houxiu Xiao, Xianfei Chen, Yu Huang</i> | |
| A Segmented Compensation Wide Operating Range Bandgap Reference Voltage Source | 4676 |
| <i>Hao He, Quanyuan Feng, Zujing Zhang</i> | |
| WiFi Testing and Analysis Based on Interference Scenarios..... | 4682 |
| <i>Kai Zhao, Huawei Xu, Linyi Huang, Binhu Liu</i> | |
| Wireless Performance Test and Evaluation for New Generation WiFi Router | 4689 |
| <i>Binhu Liu, Kai Zhao, Linyi Huang, Huawei Xu</i> | |
| Statistical Research on Human Posture Characteristics Based on RFID | 4696 |
| <i>Y. Zhao, Z. Song, Y. Wan, H. Ren, P. Chen, G. Du</i> | |
| Optimization of the Reverse Recovery Characteristics of 500V VDMOS | 4700 |
| <i>Lixiang Wang, Xiaopei Chen, Quanyuan Feng</i> | |
| Bridging and Unified Understanding of Huynen Decomposition and H/A/Alpha Decomposition for PolSAR Data Based on SU Group Theory | 4704 |
| <i>Liting Liang, Yunhua Zhang, Dong Li</i> | |
| Conformal Compact Metasurface for Enhancing Performance of Brain Ultra-Low-Field Magnetic Resonance Imaging System..... | 4713 |
| <i>Yu Liu, Xia Xiao, Xiangzheng Kong, Yanwei Pang</i> | |

| | |
|--|------|
| Research Progress on Littman Tunable External Cavity Semiconductor Lasers in the Near-Infrared Band | 4719 |
| <i>Wei Luo, Xuan Li, Linyu Zhang, Zaijin Li, Dongxin Xu, Yi Qu, Zhongliang Qiao, Lin Li</i> | |
| Analysis of the Influence of Ground Reflection on Far-Field RCS Measurement in Non-Darkroom Environment | 4729 |
| <i>Jinshi Liu, Xiangbao Zhu, Lin Qin, Haoyu Wen, Jiahao Zheng, En Li</i> | |
| Gradient Index Porous Core Photonic Crystal Fiber for Sub-Wavelength Field Confinement | 4734 |
| <i>K. Renuka Rani, N. Yogesh, Barkathulla Asrafali, Zhengbiao Ouyang, K. Chitra</i> | |
| Characterization of Narrowband Generation Regime of a Random Fiber Raman Laser..... | 4738 |
| <i>O. A. Gorbunov, I. D. Vatnik, S. V. Smirnov, D. V. Churkin</i> | |
| Reconfigurable Microwave Signal Processor Based on Branch-Line Coupler and Loop Resonator | 4742 |
| <i>Junzai Chen, Xiaoyi Wang</i> | |
| Investigation of an Ultrashort Second-Order Cylindrical Vector Beam Focusing by Phase and Amplitude Binary Zone Plates | 4745 |
| <i>E. S. Kozlova, V. V. Kotlyar</i> | |
| Annular Flows in Ring Polariton Condensates..... | 4750 |
| <i>E. S. Sedov, V. A. Lukoshkin, V. K. Kalevich, P. G. Savvidis, A. V. Kavokin</i> | |
| Study on the Detection Performance of Polarization Light Based on Metasurfaces with Different Configurations | 4757 |
| <i>Chao Ye, Han Gao</i> | |
| Sierpinskii Metamaterial for Near-Perfect Terahertz Tunable Broadband Absorber Using Vanadium Dioxide | 4764 |
| <i>B. Asrafali, Fahim Khan, M. Pavithra, Renuka Rani, Yaoxian Zheng, N. Yogesh, Yinbing An, Zhengbiao Ouyang</i> | |
| Application of X-Band High Isolation Phased Array Payload in Satellite Data Transmission Communication | 4769 |
| <i>Zhenyang Liu, Kuo Zhang, Hongfei Bao, Yang Song</i> | |
| Sub-Micron T-Gate AlGaN/GaN HEMTs Using Diluted ZEP520A | 4776 |
| <i>Hsin-Jung Lee, Cheng-Che Lee, Shao-Yu Lo, Chieh-Hsiung Kuan</i> | |
| Design of the Real-Time Control System for a Large-Scaled Phased Array Based on High-Speed Serial Bus | 4781 |
| <i>Wei Wang</i> | |
| Optically Pumped Stimulated Emission in HgCdTe-Based Quantum Wells: Toward Continuous Wave Lasing in Very Long-Wavelength Infrared Range | 4788 |
| <i>V. V. Rumyantsev, K. A. Mazhukina, V. V. Utochkin, A. A. Dubinov, V. Ya. Aleshkin, M. A. Fadeev, D. I. Kuritsin, K. E. Kudryavtsev, A. A. Razova, N. N. Mikhailov, S. A. Dvoretsky, V. I. Gavrilenco, S. V. Morozov</i> | |
| A Broadband Polarization Degeneracy of the Waveguide Modes in Silicon Metasurface | 4795 |
| <i>Z. F. Kondratenko, Abanoub Mikhail, S. M. Asadulina</i> | |
| A Low-Cost Large Element Spacing Beam Scanning Antenna Array Based on Multilayer Dielectric Lens | 4799 |
| <i>Liuyuanzhi Han, Xiao Ding</i> | |

| | |
|--|------|
| Zone Plate Based Method for Measurement of Shift Or Thickness | 4805 |
| <i>S. S. Stafeev, A. G. Nalimov, E. S. Kozlova, V. V. Kotlyar</i> | |
| A Chip-Scale Magnetic Field Sensor Based on Frequency Readout Cavity Optomechanical System..... | 4809 |
| <i>Zhe Li, Chengwei Xian, Pengju Kuang, Jinglong Xiong, Zihan Huang, Senyu Zhang, Guangjun Wen, Kai Chen, Yongjun Huang</i> | |
| Enhanced Terahertz Emission from Alcohol Solutions Induced by Ultrashort Laser Pulses..... | 4815 |
| <i>Y. Zhang, T. Shen, H. Wang, H. Li, T. Wang, G. He, C. Chang, L. Li</i> | |
| Wide-Angle Meta-Reflector Using a Non-Periodic Metasurface..... | 4820 |
| <i>Huiling Luo, Yanzhao Wang, Huanhuan Gao, Yanzhang Shao, He-Xiu Xu</i> | |
| Protection of Atomic Coherence in the Geomagnetic Environment..... | 4825 |
| <i>Peiyu Yang, Guzhi Bao, L. Q. Chen, Weiping Zhang</i> | |
| K-Band Variable Polarization Antenna Based on Waveguide Continuous Transverse Stubs for High-Power Microwave Application | 4832 |
| <i>Zhenqiang Cao, Yunfei Sun, Qiang Zhang, Xuan Liu, Guang Yang, Juntao He</i> | |
| Comparison of Characteristics of Drilled Holes Using a Gaussian Beam and a Flat-Top Beam in Laser Perforation | 4839 |
| <i>Di Song, Jiaqi Wang, Xi Yang, Yalan Wang, Qing Luo, Song Wang, Menglin Guo, Juhong Han, He Cai, Guofei An, You Wang</i> | |
| An Extended Maxwell Equation System..... | 4846 |
| <i>Xiufang Wang, Kemin Sheng, Hao Wang</i> | |
| On RIS-Aided NLOS Underwater Wireless Optical Communication Systems..... | 4849 |
| <i>Zhou Gan, Mitchell Cox, Yuhan Dong</i> | |
| A Multi-Objective Antenna Optimization Method Based on Preferred Parameter Spaces..... | 4856 |
| <i>Jiangling Dou, Siyu Lin, Jian Song, Qingwang Wang, Tao Shen</i> | |
| A Balanced Filtering Phase Shifter with Wide Operating Bandwidth | 4863 |
| <i>Jinwei Shi, Jin Shi, Mengjie Yue, Kai Xu, Wei Zhang</i> | |
| A Hybrid Optical Fiber Interferometer Based on Capillary and Three-Core Fiber for Refractive Index Detection | 4868 |
| <i>Jie Cao, Feng Xu, Ruichen Dai, Mengjiao Ding, Yunhe Zhao</i> | |
| SIW Transition Structure of Double-Layer Substrates and Its Application in 3dB Coupler | 4873 |
| <i>Xiong Zou, Ya Fan, Di Zhang, Qiang Chen, Huan Qian</i> | |
| Faults Detection in Phased Array: Compressed Vs MUSIC Methods..... | 4881 |
| <i>Mario Del Prete, Maria Antonia Maisto, Antonio Cuccaro, Raffaele Solimene</i> | |
| Microwave Energy Harvesting Metamaterial Absorber at Mobile Phone Communication Waveband (2.44 GHz)..... | 4886 |
| <i>C. Abdul Varis, Amogh Suseelan, P. V. Arjun, B. Asrafali, Z. Ouyang, N. Yogesh</i> | |
| Plasmonic Self-Complementary Metasurface Supporting Broadband Polarization Degeneracy | 4889 |
| <i>Abanoub Mikhail, Z. F. Kondratenko, S. M. Asadulina</i> | |
| High Temperature Thermal Deformation Stability Analysis of High Power TWT Ceramic Components..... | 4893 |
| <i>P. C. Wang, W. Jiang, Q. Q. Chen, Y. Luo, J. X. Wang</i> | |

| | |
|---|------|
| Investigation of Particle Spectra and Atmospheric Vertical Velocity Inversion Under Non-Precipitating Conditions | 4898 |
| <i>J. Fu, F. Tao, T. T. Yu, Q. X. Zhen</i> | |
| Data Mining Methods and Intelligent Analysis Application for Foundation Treatment in Power Grid Engineering | 4910 |
| <i>Weiya Guan, Hong Chen, Jianfeng Zhang</i> | |
| Tunable Asymmetric Transmission in Bulk Dirac Semimetal Based Terahertz Metamaterial | 4917 |
| <i>M. Pavithra, B. Asrafali, Zhengbiao Ouyang, K. Ravichandran, N. Yogesh</i> | |
| A 170–260 GHz Broadband Sub-Harmonic Mixer Using Monolithic Integration Technology | 4923 |
| <i>D. F. Ji, K. P. Dai, Y. H. Qin, W. B. Wang, X. M. Yu, H. Q. Tao</i> | |
| Increasing the Sensitivity Gains Via Four-Dimensional Geometric Shaping-Based Coded Modulation for Optical Communication | 4927 |
| <i>Bin Chen, Yajie Sheng, Yi Lei, Jiwei Xu, Weiqin Zhou, Kai Tao</i> | |
| The Estimation Method of Multi-Target Parameters for OTFS Radar Sensing..... | 4932 |
| <i>Quanran Chang, Jixuan Wang, Tuanwei Tian, Hao Deng, Xiaolin Du</i> | |
| Sensitivity-Tunable Glucose Sensor Based on Tilted Fiber Bragg Gratings | 4939 |
| <i>Ruichen Dai, Feng Xu, Jie Cao, Xin Wang, Mengjiao Ding, Yunhe Zhao</i> | |
| Design of P Band Filter Antenna with High Out-Of-Band Suppression..... | 4943 |
| <i>Jiangling Dou, Yinsu Yuan, Jian Song, Qingwang Wang, Tao Shen</i> | |
| Comparative Study of Wind Field Measurements by Networked Weather Radars in the Hangzhou Area | 4950 |
| <i>Zhangwei Wang, Jing Liang, Jie Fu, Hao Chen, Han Wang, Xiaoqiong Zhen, Tiantian Yu</i> | |
| Material Characterization Via Microwave Spectroscopy: Singular Spectrum Analysis..... | 4963 |
| <i>Roberto Dima, Maria Antonia Maisto, Raffaele Solimene</i> | |
| Two-Dimensional Microwave Through-Wall Imaging Algorithm Based on Total Variational Compressive Sensing..... | 4967 |
| <i>C. Zhou, C. X. Yang, M. S. Tong</i> | |
| Ship Detection by Tiangong-2 Interferometric Imaging Radar Altimeter | 4972 |
| <i>Xueyan Kang, Yunhua Zhang, Xiao Dong, Wenshuai Zhai</i> | |
| Four-Channel Wavelength Selective Switch Based on Vernier Second-Order Microring Resonators with Asymmetric Coupling Regions..... | 4977 |
| <i>Tao Song, Lei Zhang, Xu Yang</i> | |
| An Improved Doppler Radar Imaging Model for Retrieving Ocean Current Velocity from SAR Image Under DCA Framework..... | 4982 |
| <i>Yanlei Du, Junjun Yin, Jian Yang</i> | |
| Realization of Planar Focusing Configuration Based on Hyperbolic Metasurface | 4989 |
| <i>S. Gokul, S. M. Biju, P. Sandra, M. Pavithra, K. Ravichandran, B. Asrafali, Zhengbiao Ouyang, N. Yogesh</i> | |
| Microwave Continuous Blood Glucose Monitoring Using Microgels-Based Sensor | 4995 |
| <i>Zheng Gong, Boyu Ren, Yifan Chen</i> | |

| | |
|--|------|
| On-Chip Spectrometer with Cascaded Micro-Ring Resonator and Mach-Zehnder Interferometers | 5002 |
| <i>Tongxin Yang, Shiqi Zhang, Lei Zhang</i> | |
| Polarization-Insensitive 1×2 Multi-Mode Interference Coupler on SOI | 5010 |
| <i>Liuwei Chen, Enge Zhang, Lei Zhang</i> | |
| A Graphene-Based Broadband Absorber at Terahertz Regime..... | 5014 |
| <i>Kai-Da Xu, Dongxu Wang, Qiang Chen</i> | |
| Analysis and Design of Vector Holographic Metasurfaces | 5018 |
| <i>A. Pitilakis, O. Tsilipakos, A. C. Tasolamprou, A. Tsioliaridou, N. V. Kantartzis, S. Ioannidis, C. Liaskos, M. Kafesaki</i> | |
| Code Design of Metasurface Based on BPSO for Holographic Imaging System | 5026 |
| <i>Shu-Dian Wang, Fang-Fang Wang</i> | |
| Modelling J-Coupling in NMR Spectra at Low and Ultra-Low Magnetic Fields | 5031 |
| <i>Rifat Gimatdin, Pavel Kupriyanov, Georgy Mozzhukhin, Vladimir Chizhik, Bulat Rameev</i> | |
| NQR Detection of Ammonium Nitrate in Partially Shielded Volumes..... | 5035 |
| <i>G. Mozzhukhin, P. Kupriyanov, E. Doğan, A. Maraşlı, B. Çolak, C. Okay, M. Maksutoğlu, S. Kazan, B. Rameev</i> | |
| Opto-Mechanical Manipulation of CrPbBr ₃ Perovskite Particles..... | 5039 |
| <i>A. Kokhanovskiy, M. Vdovichenko, G. Romanenko, N. Kostina, Q. Song, I. Koryakina, A. Blazhenov, O. Dalevskaya, L. Brylevskaya, M. Zyuzin, S. Makarov, M. Petrov</i> | |
| Tri-Layered Metasurface for Diode-Like Asymmetric Reflection of Circularly Polarized Electromagnetic Waves | 5042 |
| <i>V. Shanto, B. Aravind, M. Pavithra, K. Ravichandran, B. Asrafali, Z. Ouyang, N. Yogesh</i> | |
| Highly Dense FBG Temperature Sensor at Multi-Core Fiber Calibrated with Artificial Neural Network..... | 5047 |
| <i>A. Kokhanovskiy, A. Dostovalov, D. Sakhno, E. Golikov, Z. Munkueva, S. Babin</i> | |
| Generation of Dark Field Spatial Patterns Using Phase Profile Coded Metasurfaces for Optical Trapping Applications | 5050 |
| <i>B. Aravind, V. Shanto, M. Pavithra, K. Ravichandran, B. Asrafali, Z. Ouyang, N. Yogesh</i> | |
| Design Method for Broadband Metasurfaces with a Function of a Two-Dimensional Axicon Lens | 5057 |
| <i>T. Nagayama</i> | |
| A Low-Power Design of Common-Mode Feedback Circuit for Fully-Differential Operational Amplifiers..... | 5063 |
| <i>Shi Qian Wang, Yunyun Hu, Mei Song Tong</i> | |
| A Novel Polarization-Reconfigurable Dielectric Resonator Antenna Based on Liquid Material..... | 5068 |
| <i>Dan Ni Lin, Ajay K. Poddar, Ulrich L. Rohde, Mei Song Tong</i> | |
| A High-Precision Automated Calibration Method for LED Color Parameters..... | 5073 |
| <i>Zhi Chong Wan, Guo Chun Wan, Mei Song Tong</i> | |
| A Novel Wearable Multi-Sensor System for BioSignal Collection and Analysis..... | 5079 |
| <i>Zhi Chong Wan, Guo Chun Wan, Mei Song Tong</i> | |

| | |
|--|------|
| Uncertainty of Radar Backscattering Coefficients from Bare Soil Surface Due to Roughness Sample Variances..... | 5085 |
| <i>Z. H. Wang, Y. Yang, K. S. Chen</i> | |
| Inversion of Ocean Winds from C-Band Dual-Polarized SAR Images | 5090 |
| <i>Y. Cheng, Y. Yang</i> | |
| A Nonconformal Volume Integral Equation Method for Electromagnetic Scattering from Multi-Layer Dielectric Radome..... | 5096 |
| <i>Qifeng Cheng, Tao Liu, Lei Han, Qiang-Ming Cai, Longjian Zhou</i> | |
| A Target Detection Algorithm for UAV Aerial Photography Based on Improved Yolov5..... | 5102 |
| <i>Cheng Chi, Shujia Yan, Yingjie Gao, Mei Song Tong</i> | |
| Chiral Metamaterial for Sensing Dielectric Objects Based on Cross-Polarization Conversion Ratio at Microwave Frequencies..... | 5106 |
| <i>Akshay S. Nair, Adithya Danaj, B. Asrafali, Z. Ouyang, N. Yogesh</i> | |
| Multibeam Lasing Action from Bound States in the Continuum of Photonic Crystal Slab Waveguides..... | 5111 |
| <i>J. T. Wang, D. Lei, M. Tang, N. C. Panoiu</i> | |
| Structure-Coupled Variational Bayesian Method for Building Layout Reconstruction..... | 5117 |
| <i>Zixiang Yin, Xiaolu Zeng, Xiaopeng Yang, Jiancheng Liao, Junbo Gong</i> | |
| Control Points Rearrangement of Spline-Based CPW-Fed Spearhead Monopole Antenna Using Particle Swarm Optimizer | 5124 |
| <i>Agus Dwi Prasetyo, Trasma Yunita, Deny Hamdani, Achmad Munir</i> | |
| Switchable Reflective Metasurfaces Composed of Line Resonators for Beam Control Function in X-Band Range | 5129 |
| <i>Dwi Andi Nurmantris, Achmad Munir</i> | |
| Investigation on X-Band Wave Absorber Performance Characterized Using Two Horn Antennas..... | 5134 |
| <i>Budi Syihabuddin, Junas Haidi, Mohammad Ridwan Effendi, Achmad Munir</i> | |
| Topological Integrated Antenna for 6G Terahertz Wireless Communication | 5138 |
| <i>Ridong Jia, Sonu Kumar, Thomas Caiwei Tan, Abhishek Kumar, Yi Ji Tan, Manoj Gupta, Pascal Sriftgiser, Arokiaswami Alphones, Guillaume Ducournau, Ranjan Singh</i> | |
| Experimental Results of Drone Detection Based on Passive Bistatic Radar Using Radar Illuminator | 5144 |
| <i>Jiameng Pan, Jian Chen, Qinglong Bao, Xianghong Deng</i> | |
| Measurement of Polarization Efficiency on a Switchable Polarized Triangular Antenna Array | 5151 |
| <i>Trasma Yunita, Chairunnisa, A. Adya Pramudita, Achmad Munir</i> | |
| Study on a Novel High-Resolution and Wide-Swath SAR System with Mixed Baseline | 5157 |
| <i>Zongming Zhang, Taoli Yang, Chenghao Lu</i> | |
| Capacitor-Based Branch-Line Couplers for Simple Configuration of Flexible Phase-Difference Butler Matrices | 5164 |
| <i>Zulfî, Sulistyaningsih Sulistyaningsih, Joko Suryana, Achmad Munir</i> | |
| On the Feasibility of Uniform-Kaiser Weighting Configuration on Power-Weighted Planar Array Design..... | 5168 |
| <i>Hartuti Mistialustina, Chairunnisa Chairunnisa, Achmad Munir</i> | |

| | |
|--|------|
| Equivalent Circuit of 3D Printed SIW Bandpass Filter Loaded by Artificial Dielectric Material..... | 5172 |
| <i>Muhammad Farhan Maulana, Hartuti Mistialustina, Zulfi, Achmad Munir</i> | |
| Study on Reflection and Transmission Characteristics of Electromagnetic Waves Propagation in Different Medium Based on Constitutive Parameters | 5176 |
| <i>Sulistyaningsih, Umar Khayam, Achmad Munir</i> | |
| Analysis of Permeability Characteristic of Planar Antenna with Spiral Resonator (SR) Shape..... | 5182 |
| <i>Yamato Tan, Evyta Wismiana, Mochamad Yunus, Agus Dwi Prasetyo, Junas Haidi, Achmad Munir</i> | |
| Investigation of Magneto-Dielectric Material Properties Using Substrate Integrated Waveguide Structure | 5187 |
| <i>Junas Haidi, Agustinus Agung Nugroho, Achmad Munir</i> | |
| Utilization of LC Circuit as Impedance Matching for Spiral Resonator-Based Planar Antenna | 5193 |
| <i>Mochamad Yunus, Agustini Rodiah Mahdi, Yamato Tan, Muhammad Farhan Maulana, Dwi Andi Nurmantris, Achmad Munir</i> | |
| Prediction of Ionospheric F2 Layer Height with Bi-Parametric Deep Learning Network Based on HFSWR Data..... | 5198 |
| <i>Xuekun Chen, Hongjuan Yang, Changjun Yu</i> | |
| Characterization of Slotted Microstrip Patch Array Antenna for UAV Communication System | 5204 |
| <i>Achmad Munir; Novelita Rahayu, Radial Anwar, Dwi Andi Nurmantris, Muhamad Hilman Fauzi, Farohaji Kurniawan</i> | |
| A Pair of Rectangular Slots for Bandwidth Improvement of Microstrip Antenna Fed by Proximity Coupling | 5209 |
| <i>Mohammad Ridwan Effendi, Fadjriyah, Rheyuniarto Sahlendar Asthan, Sulistyaningsih, Rama Rahardi, Achmad Munir</i> | |
| Knowledge Enhanced Graph Neural Network for Advanced Classification of Depression in fMRI Imaging..... | 5214 |
| <i>Yu Miao Yin, Ren Zhou Gui, Ya Qi Wang, Wen Bo Zhu, Mei Song Tong</i> | |
| Pre-Training Deep Neural Network for Decoding Multiple Brain Regions Can Enhance Image Reconstruction..... | 5219 |
| <i>Wen Bo Zhu, Ren Zhou Gui, Ya Qi Wang, Yu Miao Yin, Mei Song Tong</i> | |
| VTVBrain: A Two-Stage Brain Encoding Model for Decoding Key Neural Responses in Multimodal Contexts | 5225 |
| <i>Yaqi Wang, Renzhou Gui, Wenbo Zhu, Yumiao Yin, Meisong Tong</i> | |
| Symmetrized Dot Pattern Infrared Absorption Spectroscopy..... | 5234 |
| <i>Weilin Ye, Yifei Huang, Linfeng He, Lifu Duan, Zhidan Zheng</i> | |
| An Insulator Image Segmentation Method Based on Simple Non-Iterative Clustering with Edge Information..... | 5240 |
| <i>Junyou Chen, Shujia Yan, Yingjie Gao, Mei Song Tong</i> | |
| Bandstop Cavity Filter Based Decoupling Method for 1×2 MIMO Slot Antennas | 5244 |
| <i>Mingqi Li, Nan Yang, Kai Lu, Peng Fei Hu, Yunliang Long</i> | |
| Conversion and Superposition of Optical Stokes Skyrmiion Topologies | 5249 |
| <i>Houan Teng, Jinzhan Zhong, Jian Chen, Xinrui Lei, Qiwen Zhan</i> | |

| | |
|---|------|
| Research on the Propagation Characteristics of Electromagnetic Waves in Non-Uniform Evaporation Duct at Sea Based on Three-Dimensional Parabolic Equation | 5253 |
| <i>Tianhang Nie, Hanjie Ji, Yiwén Wei, Lixin Guo</i> | |
| Design of Multi-Beam Anti-Sorting Waveform for MIMO Radar Based on Spatial Angle Encoding | 5261 |
| <i>Xinan Zheng, Jian Chen, Qinglong Bao, Jiameng Pan, Ziqiao Yuan</i> | |
| Multi-Target Tracking Method of Non-Cooperative Bistatic Radar System Based on Improved PHD Filter | 5268 |
| <i>Chun Li, Qinglong Bao, Jiameng Pan</i> | |
| Efficient Relation Extraction of Automobile Faults Based on Hidden Knowledge in Prompt Tuning Templates..... | 5275 |
| <i>Kai Zhang, Shujia Yan, Qiang Chen, Yingjie Gao, Mei Song Tong</i> | |
| Development Strategy of Teaching Textbooks in Military Academies Under the Background of Digitalization | 5281 |
| <i>Zhi-Ming Deng</i> | |
| Comprehensive Evaluation of Shielding Effect of Electronic Enclosures Based on EM Norms | 5284 |
| <i>Jin Tian, Jiang-Wei Guo, Lu Sun, Chuan-Bao Du, Yang Qiu</i> | |
| Planar Monopole Graphene Assembled Film Based Antenna for Wi-Fi 6E Applications..... | 5289 |
| <i>Zhi Luo, Biao Chen, Rongguo Song, Haoran Zu, Daping He</i> | |
| A Dual-Mode Microstrip Antenna for Sensing Applications..... | 5294 |
| <i>Xingyun Zhang, Fang Liu, Jingxuan Yang, Qunting Ren, Yang Bai</i> | |
| Equivalent Circuit Modeling for Antenna Feed Networks in HPEM Environments | 5298 |
| <i>Zhuo Wang, Chuanbao Du, Wei Wang, Zhitong Cui, Youhuo Huang</i> | |
| Research on the Over-The-Horizon Propagation Loss of Radar Waves in Non-Uniform Marine Evaporation Duct Based on Standard Parabolic Equation..... | 5304 |
| <i>Hanjie Ji, Lixin Guo, Yiwen Wei, Jinpeng Zhang, Tianhang Nie</i> | |
| Analysis of HEMP Coupled Responses for RF Front-End Circuit of Wireless Communication Equipment | 5311 |
| <i>Yinjie Zhang, Chuanbao Du, Mintao Zhang, Wanzhi Ma, Congguang Mao, Xin Nie</i> | |
| Wide Bandwidth Microstrip Patch Antenna with Improved Cross-Polarization | 5321 |
| <i>Bing-Bing Huang, Neng-Wu Liu</i> | |
| Analysis of the Influence of Forwarding Waveform with Time-Domain Mismatch on Time Difference Direction Finding..... | 5325 |
| <i>Qi Zhao, Zhonghao Lu, Shunping Xiao</i> | |
| A 3-D Frequency Selective Structure with Rapid Roll-Off Based on Vertical Metallic Pillars..... | 5331 |
| <i>Pei Zhang, Da Li, Er-Ping Li</i> | |
| A Low-Frequency, Frequency Response-Stable Scattering Calibration Target Based on a Dihedral Structure | 5336 |
| <i>Lei Zhao, Junpeng Shi, Kang Zhu</i> | |
| Direction-Of-Arrival Estimation for Constant Modulus Signals Via Convex Optimization | 5341 |
| <i>Xunmeng Wu, Zai Yang, Zongben Xu</i> | |

| | |
|---|------|
| A Polarization Convert Reflective Surface Based Wideband Antenna Array Decoupling Structure..... | 5346 |
| <i>Yao Zhang, Xiao Ling He, Huan Yang Chen, Qing Huo Liu</i> | |
| Application of Scattering Parameters in Source Waveform Reconstruction of Bounded Wave Simulator | 5358 |
| <i>Zhuo Wang, Chuanbao Du, Zhitong Cui, Linshen Xie, Jingli Guo, Youhuo Huang</i> | |
| A Forward Modeling for Ultradep Azimuthal Resistivity Logging in Planar-Stratified Formation | 5362 |
| <i>Guoyu Li, Xizhou Yue, Tianlin Liu, Pengyun Zhang, Kai Zhao, Decheng Hong</i> | |
| Discussion on a Non-Traditional Antigravity Theory and the Realization Path is Envisaged..... | 5367 |
| <i>Shandong Zhao, Yijia Zhao</i> | |
| Reconstruction of Ocean Temperature Field Based on a Temperature Profile | 5373 |
| <i>Xuanwei Wan, Gang Zheng, Xiaofeng Li, Lizhang Zhou</i> | |
| Quantum-Enhanced Electrometer Based on Microwave-Dressed Rydberg Atoms | 5376 |
| <i>Dong Zhang, Shuhe Wu, Guzhi Bao, Weiping Zhang</i> | |
| A Fast Ray-Tracing-Based Method for Non-Uniform Structured Mesh Generation..... | 5379 |
| <i>Zhitao Rao, Ming Fang</i> | |
| Development of Wavelength Demultiplexers Based on a Binary Search Inverse Design Algorithm..... | 5384 |
| <i>Heng Zhong, Ming Fang</i> | |
| Performance Analysis of Beamforming with Conjugate Field Matching in Phased Array Receiver | 5388 |
| <i>K. Wang, L. Cao, H. Yan, M. Z. Chen, X. F. Duan, J. H. Li</i> | |
| Modified General Reflection/Transmission Coefficients for Electromagnetic Field in Cylindrically Multilayered Medium..... | 5393 |
| <i>Xianghong He, Xizhou Yue, Guoyu Li, Tianlin Liu, Kai Zhao, Decheng Hong</i> | |
| A Divergence-Free Finite Element Method for Approximating the Two-Dimensional Maxwell Eigenvalues from Upper..... | 5398 |
| <i>Jiayu Han, Xiaolin Fan, Yu Zhang</i> | |
| A Novel Multi-Subaperture Motion Compensation Algorithm Based on Extended Quadratic Error Model for UAV SAR Imaging..... | 5405 |
| <i>Weidi Xu, Pengjie You, Xiaoliang Yang, Lin Wang, Shuo Feng</i> | |
| Mangrove and Salt Marsh Detection in a Mangrove-Saltmarsh Ecotone Using Segment Anything Model from Drone Imagery..... | 5411 |
| <i>Di Dong, Huamei Huang, Bingxin Guo, Jia Yang, Qing Gao, Zheng Wei, Yuchao Sun</i> | |
| Quantum Computing Method to Solve the Finite Element Equation in EM Problems | 5418 |
| <i>Tian Jian Peng, Jia Nan Zhang, Jian Wei You, Tie-Jun Cui</i> | |
| Dual Circularly Polarized Reflectarray with Independent Manipulation of Radiating Beams..... | 5422 |
| <i>Yanxin Xu, Wanping Zhang, Yumei Chang, Bo Li</i> | |
| Microwave Photonic Radar Structured Imaging Based on Scattering Inversion and Structure Reconstruction..... | 5430 |
| <i>Yu Hai, Zhaoyi Shao, Wei Pu, Junjie Wu, Anle Wang, Yulin Huang, Jianyu Yang</i> | |
| Entangled Light Enabled Quantum Magnetic Gradiometer | 5438 |
| <i>Shuhe Wu, Guzhi Bao, Liqing Chen, Weiping Zhang</i> | |

| | |
|---|------|
| Monitoring Coastal Blue Carbon Ecosystems by Combing Satellite and UAV Remote Sensing Data in Southern China..... | 5441 |
| <i>Di Dong, Huamei Huang, Qing Gao</i> | |
| Robust Photonic Zero Modes in Non-Hermitian Systems Without a Global Symmetry..... | 5446 |
| <i>L. Ge</i> | |
| Electromagnetic-Thermal Co-Simulation Based on Subgrid Method | 5449 |
| <i>Guanghuan Zhang, Kaikun Niu, Zhixiang Huang</i> | |
| Strong Electromagnetic Pulse Interference Loading Method on Electrical Equipment Under Operation State | 5454 |
| <i>Feng Qin, Zhitong Cui, Wei Chen, Xin Nie, Wei Wu, Yixiong Wang</i> | |
| System-Level Electromagnetic Effect Analysis of Control System by Pulsed Current Injection (PCI) Test..... | 5462 |
| <i>Congguang Mao, Feng Qin, Chuanbao Du</i> | |
| Sample Size Uncertainty Analysis in the System Vulnerability Assessment Results for IEMI..... | 5465 |
| <i>Keyue Wang, Jinru Sun, Xueling Yao, Congguang Mao</i> | |
| TV-Driven MMW 3-D Radar Imaging of Non-Line-Of-Sight Environments..... | 5468 |
| <i>Xiang Cai, Shunjun Wei, Yanbo Wen, Jiangbo Hu, Mou Wang, Jun Shi, Xiaoling Zhang</i> | |
| Effect of Material and Creepage Distance on the Flashover Characteristics of Insulators Under HEMP | 5473 |
| <i>Yixiong Wang, Wei Chen, Feng Qin, Xin Nie</i> | |
| Photonics of Topological Transition from Dielectric Ring to Split Ring..... | 5481 |
| <i>M. E. Bochkarev, N. S. Solodovchenko, K. B. Samusev, M. F. Limonov</i> | |
| Scattering Spectra and Hot Spots in Dielectric Ring and Ring-Disk Dimer..... | 5487 |
| <i>A. P. Chetverikova, K. A. Bronnikov, N. S. Solodovchenko, M. E. Bochkarev, K. B. Samusev, M. F. Limonov</i> | |
| The Phenomenon of Rabi Spectrum Broadening Caused by the Colored Noise | 5491 |
| <i>Ni An, J. M. Gou, X. W. Dang</i> | |
| Transfer Learning-Driven Retrieval of Subsurface Temperature and Salinity for Mesoscale Eddies in the Oyashio Current..... | 5496 |
| <i>Yingjie Liu, Le Gao, Haoyu Wang, Fei Jiang, Xiaofeng Li</i> | |
| Research on a Compact Symmetrical 90° TE01 Bend Based on Dielectric-Coated Metallic Circular Waveguide | 5503 |
| <i>Meiling Ou, Dagang Liu, Hao Li</i> | |
| Co-Simulation of Microwave Photonics and Wireless Communication..... | 5507 |
| <i>Z. Q. Gao, J. Y. Deng, X. Deng, X. H. Zou, H. Y. Meng, H. Bai, Y. X. Long, M. Zhang, J. Ye, L. S. Yan</i> | |
| Design of S-Band High-Power Low Sidelobe Horn Antenna Based on Finite Size..... | 5515 |
| <i>Aming Zhao, Hailong Li, Liangjie Bi</i> | |
| Study on the Output Characteristics of External-Cavity Tunable Diode Lasers..... | 5519 |
| <i>Liwen Sheng, Chonglin Ge, Lingfeng Xiao, Yiqi Zhang, Jinpeng Lang, Lin Huang, Zhihui Zhang, Zhiming Liu</i> | |

| | |
|--|------|
| Design of Dual-Passband Frequency Selective Surfaces Based on Metal Honeycomb Structures | 5523 |
| <i>Na Li, Ye Han, Bo Li</i> | |
| Suppression of Mode Competition in High-Efficiency Phase-Locking Between High-Power Magnetrons..... | 5529 |
| <i>Qiong Zheng, Liangjie Bi, Hailong Li, Dagui Shen</i> | |
| Target Identification Method on Ship Formation Imaging for HFSWR..... | 5533 |
| <i>Jiaqi Wang, Aijun Liu, Changjun Yu</i> | |
| Research on Vortex Light Atmospheric Detection Based on Dataset Optimization Algorithm..... | 5539 |
| <i>Wenjie Jiang, Mingjian Cheng, Lixin Guo, Bowen Tao</i> | |
| Electromagnetic-Acoustic Beam Compressor by Double-Physical-Fields Null Medium | 5544 |
| <i>Ran Sun, Fei Sun, Yichao Liu, Zeyu Zhang, Chao Yang</i> | |
| Multi-Source Satellite Observation on Internal Solitary Waves in the Lombok Strait | 5547 |
| <i>Chuyuan Zhuang, Xiaofeng Li, Dongliang Shen, Xudong Zhang</i> | |
| A Wide Beamwidth Slot Type SIW 28G Antenna | 5552 |
| <i>Xia Zhou, Xiuqi Lai</i> | |
| Deep Learning-Driven Forecasting of Daily Sea Surface Temperatures in the South China Sea..... | 5556 |
| <i>J. F. Qi, B. W. Xie, D. Z. Yang, D. L. Li, B. S. Yin</i> | |
| Artificial Photonic Hetero-Synapses Based on ZnO/IGZO Heterojunction for Neuromorphic Computing..... | 5562 |
| <i>Wenxiao Wang, Yang Li, Jiewei Chen</i> | |
| Quality Assessment of MAXSS Global Merged Wind Products Under Tropical Cyclone Conditions | 5566 |
| <i>Weicheng Ni, Kaijun Ren, Yanlai Zhao, Wuxin Wang</i> | |
| Aperture Miniaturized Magneto-Electric Dipole with Dual Linearly Polarization for 28/38 GHz Millimeter-Wave Applications..... | 5571 |
| <i>Yanhong Xu, Wanshan Hu, Zheng Wang, Haoxiang Li</i> | |
| Comparative Analysis of Statistical Characteristics Between Bi-SAR Images and Mon-SAR Images | 5578 |
| <i>Xiaoting Wang, Yue Song, Zihao Ren, Wei Pu, Junjie Wu</i> | |
| Threshold Evaluation of Smooth Surface Dielectric Composite Large-Area Explosive Emission Cathode..... | 5584 |
| <i>Tingxu Chen, Tianming Li, Liu Yang, Hao Li, Haiyang Wang, Yihong Zhou, Keqiang Wang, Biao Hu</i> | |
| Skylight Polarization Orientation Method for Occlusion Scene..... | 5589 |
| <i>Yucong Zhou, Han Gao</i> | |
| An Ultra-Wideband Tapered Slot Antenna for Medical Microwave Imaging Applications | 5597 |
| <i>A. Raza, Y. Chen, Z. Gong, Y. Ding, R. Kumar</i> | |
| An Efficient Power Transfer Technique of SIMO Antennas Network..... | 5603 |
| <i>Elyas Palantei, Zulfahmi Rizal, Intan Sari Areni, Muthia Dwiwulandari, Regita Pramestia N.M.N, Josaphat Tetuko Sri Sumantyo</i> | |
| A Deep-Learning-Based Frontal Detection in the China Sea | 5608 |
| <i>Le Gao, Yi Yang, Meng Jiao Wang, Xiao Feng Li</i> | |

| | |
|---|------|
| Wavefront Shaping Through Nonconformal Mapping | 5613 |
| <i>Guo Ping Wang, Dingran Xia, Kedi Wu</i> | |
| Next-Gen Medical Collaboration Integrating Blockchain for Image Sharing | 5622 |
| <i>Rajesh Kumar, Y. Chen, Z. Gong, Z. Al-Huda, Ali Raza</i> | |
| A Dual-Gas Sensor for Simultaneous and Fast Optical Sensing of HONO and CH ₄ in Ambient Air Based on a Quantum Cascade Laser..... | 5631 |
| <i>Xiaojuan Cui, Shuaikang Yin, Siru Yang, Xiaohan Cui, Qizhi Zhu, Xin Shi, Yang Hong</i> | |
| An Estimation Method of Time Domain Radiation Pattern for UWB Array Antenna | 5638 |
| <i>Binwen Wang, Hui Ning, Qilong Liu, Youjie Yan</i> | |
| Extraction of Nearshore Aquaculture Raft Regions Through Spatial-Frequency Domain Feature Fusion Network | 5644 |
| <i>Y. Zhou, M. D. Chao, J. W. Tang, Q. Li, L. X. Feng</i> | |
| Coastal Sea Fog Detection Based on Multi-Channel Fusion Transformer | 5649 |
| <i>K. R. Chen, Y. Zhou, X. F. Li</i> | |
| An Effective Finite Element Method for Maxwell Eigenvalue Problem in a Radial Inhomogeneous Medium | 5655 |
| <i>Wei Wang, Jihui Zheng, Jiayu Han</i> | |
| Simple and High-Precision Polarization Rotation Measurement Based on a High-Order Vector Vortex Beam | 5666 |
| <i>Guojian Li, Aning Ma</i> | |
| BiSAR Image Autofocus Method Based on Target Scattering Parameters..... | 5673 |
| <i>Yue Song, Zihao Ren, Wei Pu, JunJie Wu, Jianyu Yang</i> | |
| Simulation Design of Hairpin Microstrip Bandpass Filter at L-Band | 5680 |
| <i>Qingyao Wang, Luo Bo, Xinyang Shi, Chonghua Fang</i> | |
| Anti Atomic Bomb Nuclear Weapon | 5685 |
| <i>Ganquan Xie, Jianhua Li</i> | |
| Research on the Oversized and Compact TE01 Mode Bend with Hexagonal Waveguide for High- Power Microwave Applications..... | 5691 |
| <i>Keqiang Wang, Chaoxiong He, Hao Li, Jianing Zhao, Tianming Li, Guangjun Wen, Haiyang Wang, Biao Hu</i> | |
| Expert System Research for Electromagnetic Simulation Algorithm Recommendation..... | 5696 |
| <i>Jiaxin Shi, Jun Hu, Huapeng Zhao, Ran Zhao, Ming Zhang, Lizhong Song</i> | |
| Rapid FSS Design Method Based on Fourier Transform | 5700 |
| <i>Huanran Qiu, Jiaqi Han, Qiang Feng, Rui Xi, Ying Li, Hongsheng Chen, Bin Zheng, Long Li</i> | |
| Multispectral Wideband Microwave Meta-Absorber with Optically Transparency and Infrared Camouflage | 5704 |
| <i>Hui-Ting Sun, Liang-Wei Song, Jun Wang, Zun-Tian Chu, Rui-Chao Zhu, Yu-Xiang Jia, Yi-Na Cui, Jia-Fu Wang, Shao-Bo Qu</i> | |
| Adjacent Multi-Extended Targets Tracking in Traffic Scenes | 5712 |
| <i>Yunlian Tian, Wunjun Li, Wei Yi</i> | |

| | |
|---|------|
| Naive Bayesian Classifier-Based Collaborative Tracking and Recognition for Multi-Radar Systems | 5719 |
| <i>Shuoyang Ma, Ye Yuan, Wei Yi</i> | |
| Microwave Photonic ISAR Imaging Algorithm Based on Improved TSPN-TV-ADMM Algorithm..... | 5728 |
| <i>Haoyu Wang, Yu Hai, Junjie Wu, Wei Pu, Anle Wang</i> | |
| Cross-Domain SAR Object Detection by Efficiently Fine-Tuning SAM..... | 5734 |
| <i>Kaiou Hu, Hongjie Wan, Fei Ma, Fan Zhang</i> | |
| Terrain Classification with Airborne Multi-Band PolSAR Data Based on Polarization Feature Registration | 5741 |
| <i>Shuo Li, Hong Yang, Qiang Yin, Fan Zhang</i> | |
| Millimeter-Wave Antenna-On-Display (AoD) Design on the Encapsulation Layer of an OLED Display for 5G and B5G Smartphones | 5747 |
| <i>Huan-Chu Huang, Jie Wu, Shuang Cui, Yiming Jia</i> | |
| Optical and Electrical Analysis of an Advanced 4T All-Perovskite Tandem Solar Cell..... | 5752 |
| <i>Zhaosheng Xia, Xingang Ren, Shengyang Wei, Zhixiang Huang</i> | |
| A Polarization Reconfigurable Beam Scanning Antenna Based on Stacked Microstrip Antenna Array..... | 5758 |
| <i>X. Gu, Z. Q. Tian, C. Xu, M. S. Song</i> | |
| Marine Wireless Communication Channel Propagation Loss Model in Rough Sea Environment Based on Wind Speed and Direction Parameters..... | 5763 |
| <i>Yanlong Liu, Wanchao Li, Lihui Wang, Zhenjia Chen, Xiao Zhao</i> | |
| A Compact High-Gain Array Antenna Based on Gap Waveguide Feed in W-Band..... | 5770 |
| <i>Pengsheng Nie, Yijie Cao, Lili Sheng, Weiping Cao</i> | |
| Virtual Simulation Experiment Training Platform of Radio Measurement Technology Based on Electromagnetic Spectrum Monitoring Method Combined Online and Offline..... | 5776 |
| <i>Songkun Chu, Zhenjia Chen, Lihui Wang</i> | |
| Quantum Enhanced Optical Phase Metrology Beyond the Standard Quantum Limit..... | 5782 |
| <i>Yilun Xue, Bing Yu, Wangbin Xue, Juan Chen, Yan Li, Mengwei Cao, Junwei Chu, Jihong Fan</i> | |
| Noise Analysis of Quantum Correlation Imaging Based on Fourier Wavefront Coding | 5792 |
| <i>X. G. Xiao, R. C. Li, J. Gao, H. Qiang, J. H. Li</i> | |
| Comparison of One-Photon Absorption and Two-Photon Absorption Imaging Through Dynamic Scattering Media..... | 5799 |
| <i>Wei Liu, Libing Hou, Yingchun Wu, Tan Wang, Bingtao Guo, Zhanming Li, Qiyao Sun, Shan Li, Weiguo Zhang, Wenbo Duan</i> | |
| A Dual-Function Quasi-Static Magnetic Device with Cloaking and Concentrating Functions Simultaneously | 5804 |
| <i>Hanchuan Chen, Yichao Liu, Fei Sun</i> | |

Author Index