2016 11th International Symposium on Antennas, Propagation and EM Theory (ISAPE 2016)

Guilin, China
18-21 October 2016
### A. Antennas

| A1 | Main Beam Angle Control Microstrip Antenna Based on Phase Gradient Metasurface | L. M. Li, W. H. Li, H. Y. Shi, et al. | 1 |
| A2 | Design and Implementation of a Novel C Band Broadband Phased-array Antenna Element | P. Wei, L. K. Liu, C. X. Jian | 5 |
| A3 | A Low-Profile Broadband UHF Base Station Antenna Based On Lumped-Element Matching Network | W. J. Wu, B. R. Guan | 9 |
| A4 | Capacitor-Loaded Circularly Polarized Annular-Ring Slotted Microstrip Patch Antenna | J. X. Li, B. He, L. M. Li, et al. | 13 |
| A5 | Wideband Two Bowtie Dipole Array Antenna Integrated with a Tapered Balun | J. X. Li, L. M. Li, A. X. Zhang, et al. | 16 |
| A6 | Design of A Novel Meander Line Reader Antenna for UHF Near-Field RFID | Y. S. Liang, Y. Yao, J. S. Yu, et al. | 19 |
| A7 | A Wideband Segmented Line Dipole Antenna With Stable Radiation Patterns | X. N. Jia, D. Z. Piao | 22 |
| A8 | Design of the top-loaded quadrifilar helix antenna for low profile applications | X. Huang, J. Pan | 25 |
| A10 | On the directivities of harmonic and spurious emission of phased array antennas | C. Wang, K. X. Lv, M. L. Huang, J. Dong | 31 |
| A11 | Dual Band Directional Bowtie Antenna Loaded with a Square Loop | H. J. Zhang, L. Chang, J. Q. Zhang, Z. Z. Chen | 35 |
| A12 | A Novel Split Ring Slot Antenna with Multiband Characteristics Based on SIW | M. Dong, D. Y. Shen, C. J. Ma, et al. | 39 |
| A13 | Design of a dual-band combined Microstrip antenna for wireless communication applications | W. J. Wu, S. L. Zuo, D. E. Wen | 43 |
| A16 | Two Designs of Bidirectional Same-Sense Circularly Polarized Antennas with Cavity Structures | Y. F. Hou, Y. Li, T. Q. Zhai, et al. | 51 |
| A17 | Dual-Polarized Omnidirectional Antennas with Folded Structures | P. Q. Liu, Y. Li, Y.F. Hou, et al. | 53 |
| A18 | A Novel Widebeam Planar Patch Antenna for WLAN Applications | X. Shuai, S.Q. Xiao, X. Fan, C. Gong | 55 |
| A20 | An Improving Broadband Circularly Polarized CPW Fed Slot Antenna | X. H. Yu, W. Li, W. P. Cao, et al. | 60 |
| A21 | Dumbbell Slots Coupling Circular Polarization High Gain Antenna | W. P. Cao, |
A22 Design of a Dual-band Dual-polarized Slot Antenna for Ku-band Video Satellite Application..............................................................H. Z. Li, Y. Zhang, G. Q. Zhang 66
A23 A Novel Omnidirectional Horizontally Polarized Antenna for 4G LTE Communications............................................................Y. Y. Shi, Z. Z. (David) Chen, Y. Q. Yu, et al. 70
A24 Underwater Radiation Fields of Magnetic Dipole Array with 3 ×3 elements ..................................................................................X. P. Liu, K. S. Zheng, Z. M. Mu, Y. Liu 72
A26 Broadband Vertically/Horizontally Dual-Polarized Antenna for Base Stations.................................................................X. N. Gao, Y. H. Cui, R. L. Li 79
A27 Wideband and High-Gain Magneto-Electric Dipole Antenna ......................................................................................X. X. Li, D. Y. Shen, T. Y. Zhang, et al. 81
A29 Dual-Band Polarized Diversity microstrip MIMO Antenna with High Isolation for WLAN Application .............................................H. X. Li, T. X. Wei, J. Ding, C. J. Guo 88
A30 Wideband Printed Slot Antenna using Shape Blending...........................................................A. T. Wu, B. R. Guan, Z. H. Zhang 92
A31 A Compact Printed MIMO Antenna for UWB Application with WLAN Band-Rejected................................................................Y. Liu, C. W. Sun 95
A32 A multi-mode and multi-frequency handset antenna.............................................................................................................W. Zhao, L. Xu, C. C. Dong 98
A36 A Wideband Omnidirectional Antenna Array ..........................................................................................................................H. Wang, S. He, Y. F. Yu 112
A37 A New Compact Edge Coupled Filter-antenna ..................................................................................................................C. F. Kang, H. Zhang, Y. Wang, L. Xu 115
A38 Design of a dual(UHF/S) bands Antenna Handset..................................................................................................................B. Z Fan, L. Xu, H. Zhang, Y. Wang 118
A39 Multi-band Planar Printed Antenna for WLAN/WiMAX Applications......................................................................................G. Qian, L. Xu, H. Zhang, Y. Wang 121
A42 Design of a W Band Filter Antenna Array with Low Sidelobe Level Using Gap Waveguide....................................................X. X. Liu, H. Wang, S. L. Quan, et al. 132
A43 Design of high-gain lens antenna based on phase-gradient metasurface............................................................................Z. Li, J. X. Su, Z. R. Li 135
| A44 | Multi-sleeve Monopole Antenna For APP-terminal Communication | X. H. Yu, G. Huang, W. P. Cao, et al | 139 |
| A45 | A Design of Dielectric Lens Loaded Antenna Array for Beam Steering | Y. Yuan, X. C. Guo, Z. Xu | 141 |
| A46 | Wideband Loop Antenna Based on Composite Right/Left-handed Transmission Line | W. P. Cao, Y. N. Cao, S. M. Li, et al | 145 |
| A47 | broadband Terahertz antenna using Graphene | H. D Zhang, Y. N. Jiang, J. Wang, et al | 149 |
| A48 | High-gain Spoof Surface Plasmon Polariton Planar Antenna Based on the Phase Gradient Metasurface | X. B Liu, J. S. Zhang, Z. Xu, et al | 153 |
| A49 | Design of a dual-band microstrip antenna | L. Hong, H. Z. Xiang, S. D. Zhi | 156 |
| A50 | Non-uniform Slotted Leaky Wave Antenna Array for Broad-Beam Radiation Based on Substrate Integrated Waveguide | Y. J. Geng, J. H. Wang | 159 |
| A52 | A Compact Vivaldi Antenna for Wideband Application | X. X. Shi, Y. G. Zhou, X. D Huang | 167 |

B. Propagation

| B1 | A Novel Polarization Measurement Method for Large Transmitting Antenna/Antenna Array | Y. G. Cui, P. P. Ban, S. J. Hao | 175 |
| B3 | A method to calculate the Statistic Characters of the Transient Electromagnetic Pulse Coupling into Stochastic Transmission Lines | Y. J. Yan, L. Meng, X. L. Liu | 183 |
| B4 | Artificial negative refraction index material consisting of dielectric perpendicular rings | Z. T. Zhang, Z. T. Yu, H. L. Yang, X. J. Huang | 187 |
| B8 | Electromagnetic Scattering from Rough Sea Surface Covered with Oil films | X. C. Ren, Y. Q. WANG | 202 |
| B10 | Ultra-wideband polarization conversion metasurface | C. Y. Kong, Z. R. | 209 |
Li, Z. Wu


B14 A Dual-Band Microstrip Antenna for Aviation and Mobile Application ......................................................Z. Q. Luo, L. Wang, D. M. Deng, et al 224


B16 The design of a five-band antenna based on coplanar waveguide ........................................C. C. Dong, L. Xu, Y. Wang, H. Zhang 231

B17 Radar Echo Simulation using Wideband Sweep Frequency Data ......................................................C. Jia, T. Zhao, C. Z. Dong 234

B18 Propagation of electromagnetic wave in a magnetized and non-uniform plasma ........................................L. J. Guo, L. X. Guo 238

B19 Design of Ultra-wideband bow-tie antenna in UHF band ..................................................S. M. Li, D. X. Wang, W. P. Cao, M. Li 242

B20 Low-profile Double-frequency Fabry-Perot (F-P) Cavity Antenna ........................................W. P. Cao, H. M. Zhang, S. M. Li 245

B21 Ultra-wideband bow-ties for hidden target detection ..........................................................S. M. Li, K. Wang, W. P. Cao, M. Li 248

B22 A Novel, Dual-band, Miniaturized Antenna with Fractal-curve Patch and TSV-CPW feeder ....................................................Y. Zhou 251

B23 A Novel Omnidirectional Circular Polarized Antenna Array ..................................................S. Q. Wang, L. Xu, H. Zhang, Y. Wang 254

B24 One Method to Improve Gain of Holographic Surface Antennas ........................................C. Gong, S. Q. Xiao, Z. T. Zhang, et al. 257

B25 A Study on Fluctuant Target detection Based on Fluctuation Factor ..................................................Y. L. Huang, C. X. Zhang, K. Y. Liu 260

B26 A new measurement of atmospheric coherent length using differential image motion ........................................J. Ao, J. Q. Liu, C. B. Ma 264

B27 Backward Scattering from the 2-D Time-varying Rough Overturning Wave Crest by MoM ......................................................Y. Zhang, L. X. Guo, W. Liu 268


B29 PIN tuned Phase-Gradient-Metasurface Transmitarray for Beam Steering Application ......................................................W. Li, S. Xia, Z. R. Li, Z. Xu, et al. 276

B30 A Study of Multi-frequency GNSS Ionospheric Scintillations at Guilin, China ......................................................S. Y. Wang, Y. H. Zou 279

B31 The Array Design of the Distributed Space-based Radar Based on Sunflower Arrays ......................................................P. J. Jin, Z. J. Li, J. K. Wang 283

B32 Electromagnetic Scattering for Multilayered Spheres Induced by Laser Sheet
### C. EM Theory

<table>
<thead>
<tr>
<th>Paper Number</th>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Application perspective of Qujing incoherent scatter radar acting as a high Power source at 500MHz.</td>
<td>Z. H. Ding, R Zhang, L. D. Dai, et al.</td>
<td>323</td>
</tr>
<tr>
<td>C2</td>
<td>Three-band polarization-independent spoof plasmon polariton coupler</td>
<td>J. S. Zhang, X. B. Liu, A. X. Zhang</td>
<td>327</td>
</tr>
<tr>
<td>C3</td>
<td>Study of a Hybrid Antenna Consists of Solid and Liquid Materials</td>
<td>G. S. Li, X. J. Wei, N. Zhao, et al.</td>
<td>330</td>
</tr>
<tr>
<td>C5</td>
<td>A Study of Multipath Scattering from Low-altitude Target above Complex Ocean Surface</td>
<td>P. Peng, L. X. Guo, C. M. Tong</td>
<td>337</td>
</tr>
<tr>
<td>C6</td>
<td>A dynamic electromagnetic scattering simulation method based on polarization transform</td>
<td>T. Zhao, C. Z. Dong</td>
<td>340</td>
</tr>
<tr>
<td>C8</td>
<td>Research on the method of combining period extraction with eigenvalue entropy</td>
<td>C. Z. Tang, H. M. Ren, Y. Li</td>
<td>351</td>
</tr>
<tr>
<td>C10</td>
<td>The Comparison of Scattering from model on the Lake to Target on the Sea Based on FSV.</td>
<td>C. H. Fang, L. Tao, H. Tan</td>
<td>358</td>
</tr>
</tbody>
</table>
C11 A Powerful Analytic-Numerical Algorithm for Scattering from a 3-D Object Above a 2-D Conductive Rough Surface.......................................................H. J. He, L. X. Guo 361
C12 A Vector Parabolic Equation Method for Propagation Predictions over Flat Terrains.................................................................X. W. Guan, L. X. Guo, Q. L. Li 365
C13 An analytical solution to the scattering by gyrotropic anisotropic spherical shell..........................................................P. F. Wang, Y. L. Geng 369
C15 Multipath Effects on Time Reversal OFDM Communications between Wireless Sensors..................................................Z. X. Chen, Y. F. Zhao, D. S. Zhao 376
C16 An Analysis of Doppler Frequency Shift in 2D Modified Space Plasma................................................................................X. Sun, L. X. Guo, J. T. Li 380
C18 Difference Field Scattering Properties between Inlaid Redundant Particles and Slightly Rough Optical Surface.............................C. X. Ge, Z. S. Wu, J. Bai, et al. 387
C19 Energy Efficiency of Wireless Body Area Networks Coexistence..................................................................................................R. X. Liu, Y. L. Wang 391
C21 Rectangular Grating Surface Plasmon Interference Model Equivalent Numerical Experiment...............................................L. Gong, Z. S. Wu, Z. J. Li, et al. 400
C22 A Narrow-Angle Parabolic Equation Model in Atmospheric Ducts...............................................................Y. J. Wang, L. X. Guo, Q. L. Li 404
C24 A special transmission characteristic of the electromagnetic wave in the plasma sheath surrounding a near-space vehicle and its analysis.....X. Yang, B. Wei, Q. Wang 412
C25 Improvement of the Radiation and Impedence Performance for the SIW H-Plane Horn Antenna..................................................S. Q. Zhang, Z. Li, J. H. Wang 415
C26 Simulation of asymmetry incoherent scatter spectra with the ion acoustic wave.................................................................B. Xu, Z. G. Wang, Z. W. Xu, et al. 418
C30 Study on the absorption properties of A curved metamaterial absorber.................................................................J. Chen, H. L. Yang, S. Hu, et al. 431
C31 Electromagnetic Scattering Characteristics of Ablation Rough Surface in Plasma Sheath......................................................S. F. Yang, J. T. Li, L. X. Guo 435
C33 The study of bandwidth and dual-band for near-field broadband electric field coupling antenna.................................................................K. H. Fan, B. Wei 443
C34 General theory on electromagnetic Scattering of an off-axis Hermite-Gaussian beam by a rotationally uniaxial anisotropic spheroid............Z. J. Li, Z. S. Wu, J. Bai, et al. 447
C35 The Nested Complex Source Beam Method with Singular Value Decomposition..................................................L. N. Song, J. Hu, L. W. Guo, et al. 451
C36 Study and Design of Ultra-Broadband Loaded Monopole Antenna.............................................................................W. P. Cao, P. Liu, S. M. Li, et al. 453
C37 On Configuration and Working Model of Massive MIMO Antennas..............................................................H. Tang, Z. P. Nie 456
C39 Analysis of the Doppler Effect of Wind Turbines.................................F. Gao, Z. Y. Niu 464
C40 Noncontact Measurement of Rotational Movement Using IR-UWB Radar..........................................................X. K. Hu, T. Jin 468

D. Computational Electromagnetics

D1 Research on reducing grating lobe of adjoining regular subarray Using genetic algorithms (GA).......................................................B. J. Lu, L. Sang, X. X. Li, T. Li 475
D6 On the radar detection analysis under the interference environment based on the Monte Carlo method ........................................C. Wang, K. X. Lv, M. L. Huang, et al. 492
D7 Investigatiaon on the Far-field Characteristic of Radar Radiant Source in Ship Fleet..................................................Q. F. Liu, D. G. Xie, J. W. Liu 496
D8 Optimal design of LTCC filter by extracting human experience using fuzzy algorithm ....................................................W. J. Wu, W. Zhang, Q. F. Liu, C. Ni 500
D9 Extraction of Equivalent Dipole-Moment Model Based on Improve Mapped Matrix .....................................................W. Liu, Z. W. Yan, W. J. Zhao 504
D11 An Accelerated Algorithm for Ray Tracing Simulation Based on High-Performance
D12 Designing a radome with frequency selective surface by using the physical optics method. R. Zhang, G. Z. Lu, D. D. Zeng, et al. 516
D14 Fast Solution of Linear Systems With Many Right Hand Sides Using MPI Parallel Interpolative Decomposition. S. L. Huang, H. Xu, X. M. Pan, et al. 523
D15 Extraction of Distributed Capacitance for Microstrip lines Using Conformal Technique Based on Finite-Difference Method. X. L. Sun, X. M. Wang 527
D17 Implementation of a Second-order ABC in TDFEM for 2D Electromagnetic Problems. Z. Che, L. Xu, N. Wang 534
D18 Analysis of a combined waveform of linear frequency modulation and phase coded modulation. H. M. Li, J. Y. Zhao 539
D19 An Improved Hybrid FEM/MOM Combining MLFMA for Composite Electromagnetic Scattering. H. L. Sun, C. M. Tong, G. H. Wu 542
D20 Dual-layered Metalens for Polarization-agile Orbital Angular Momentum Waves. Y. F. Hou, Y. Li, Z. J. Zhang, Z. H. Feng 546
D21 Modeling of 1D Graphene Based on LTJEC-FDTD Method. M. Ahmad, L. X. Yang 550
D22 The analysis on Doppler spectrum of 2-D sea clutter in Multi-band. T. Wu, Z. S. Wu, Y. Y. Wei, et al. 554
D24 A Robust Interference Alignment Algorithm and The System Design. N. Li, Y. Liu, L. J. Zhai 561
D26 Parallel FDTD Method for EM Scattering from a Rough Surface with a Target. C. G. Jia, L. X. Guo, W. Liu 569
D30 Some acceleration Techniques for Antenna Simulation in FDTD. X. Q. Zhu, J. G. Wang, Z. G. Chen 584
D32 Experimental Research on Multiple Stages EMP Protection Measure for HF Transmitter. D. D. Wang, L. Gao 592
E. Electromagnetic Compatibility

E1 A Dual-band Reconfigurable FSS Composite Structure Based on MEMS Switches .................................................................Z. B. Lu, J. J. She, X. Q. Yan 630
E3 Simulation study of high power microwave damage effect on GaAs HEMT.................................................................P. W. Xue, J. Y. Fang, Z. P. Li, J. Sun 636
E4 Ultra broadband metamaterial absorber with oblique incidence based on effective medium theory...........................................X. J. Huang, S. Q. Yu, J. Chen, H. L. Yang 640
E7 Research on Electromagnetic Coupling between Concave Layout Array ........................................................................D. G. Song, Q. Zhang, B. Ma 652
E9 Wideband 3D Frequency Selective Rasorber with Two Absorption Bands......................................................................Y. F. Yu, T. W. Deng, Z. X. Shen 657
E11 Discussion on the Application of Integrated RF System in the New Armored Platform.................................................K. Ma, X. Yang, J. Gao 664
E12 One case about comparison of PMSE heating effect with two different radar echoes layers ............................................Safi Ullah, H. L. Li, Abdur Rauf, et al. 668
E14 Channel pre-distortion compensation techniques in SAR echo simulator.................................................................C. Ni, H. Tan, Q. F. Liu 674
E15 Analysis and Control of Shielding Effectiveness for a Rectangular Enclosure with a Rectangular Aperture........................................X. J. Ying, Y. Liao, G. C. Shi, Y. Zhang 678
E17 Graphene-based Wideband Absorbing Screen with Radar Cross Section Reduction .........................................................C. N. Gao, Y. N. Jiang, J. Zhang, et al. 686
E18 A Novel Design Approach for Wideband Absorber Screen..................................................................Q. Song, W. Tang, L. H. Yuan 690
E19 An Improved Design of Ortho-mode Transducer.................................................................W. P. Cao, K. Xie, S. Li, L. Y. Gao 693
E20 Wideband RCS Reduction Based on Polarization Conversion Metasurface.........................................................C. Y. Kong, Q. X. Guo, Z. R. Li, Z. Wu 696
E23 Power Frequency Electromagnetic Interference Test and Analysis of The Rail Weighbridge Pressure sensor.................................X. Li, F. Zhu, R. Q. Qiu, et al. 706
E24 Exploration and Practice on the course of “Analysis of Electronic Information Business Case” .................................................C. Y. Ha, Y. G. Zhang 710
E26 Coupling Reduction of Closely Packed Antennas by Stringing EBG Structure.................................................................L. Peng, K. Sun, J. Y. Xie, et al. 716
E30 Study on the transmission characteristics of a double layered Complementary frequency selective surface.............................................H. ZHAO, M. S. CHEN, L. ZHANG, et al. 731
E31 Research on RCS Time Series of Ballistic Missile Warhead in Reentry Phase........................................................................J. C. YUAN, X. K. ZHANG 735
E32 Modified Doherty Power Amplifier Based onAsymmetrical Load Matching Networks..................................................Y. F. Cai, C. P. Yu, S. L. Li, Y. N. Liu 739
E33 Study on the Scattering Property of Gradient Index Metasurfaces with H-shaped Patches................................................................H. J. Hou, J. H. Wang 743
E34 Rainfall Observation based on the VHF Radar.................................................................................H. Y. Qing 746
E35 Design of a 5-States Reconfigurable Filter Based on the Structure of
F. Others

F1 Seasonal Occurrence of Polar mesosphere summer echo variations with different layers .........................................................S. Ge, H. Li, T. Xu, et al. 756
F2 Non-data-aided timing recovery scheme for MSK signals.........................................................Y. Dong, Q. Wang, Z. G. Xu 759
F4 A Compact Quad-Band Bandstop Filter Using Square Spiral Resonators Based On Folded Stepped Impedance Resonator........................................P. Wang, X. Huang, Z. Yu, et al. 766
F5 Analysis of Computerized Ionospheric Tomography Using PALSAR Polarimetric Data..................................................C. Wang, L. Chen, L. Liu, et al. 769
F6 Impact of Excitation Coefficients Orthogonalization on Beam Forming........................X. J. Chen, J. X. Wan 772
F7 The Optimal Order of Processing Sensors in Sequential IPDA Filter .......................H. J. Zhang, Z. H. Zhang, B. M. Li, L. Chang 776
F8 The Design Method of the Radiation Source Parameter-Database Based on C/S Structure.................................................................Q. F. Liu, T. Hu 783
F9 A robust timing recovery algorithm with frequency offset for MIL-STD SOQPSK..................................................Y. Y. Dong, Q. F. Wang, Z. G. Xu 786
F10 An optimized Interference Alignment Algorithm based on dynamic power allocation for MIMO System.........................................................Y. Liu, H. W. Yuan, N. Li, L. J. Zhai 790
F12 Optical and Electrical Properties of Short-Pitch Plasmonic Solar Cells with Oblique Incidence..................................................L. L. Cheng, Z. X. Huang, X. L. Wu 800
F13 FO-13 ID:102-The Range Alignment Algorithm for High-Resolution Range Profile of Multiple Target.........................................................S. Jing, H. M. Reng 804
F15 MIMO Channel Sounder and Millimeter Wave Measurements in a Conference Room..................................................Y. S. Liu, R. Zhang, L. K. Lin 812
F16 Two Methods for BCI Probe to Improve the HighFrequency Performance .........................................................W. J. Zhao, Z. W. Yan, W. Liu 815
F17 Investigation on Down-conductor System Layout for Electronic Equipment Protection..................................................Z. S. Quan, Y. H. Yan, W. D. Dong, et al. 820
F18 Compact Power Divider Based on Composite Right/Left-handed Transmission
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>824</td>
<td>An Improved Type of TE11 Mode Circular Polarizer</td>
<td>X. H. Yu, S. T. Ye, W. P. Cao, et al.</td>
<td>F19</td>
</tr>
<tr>
<td>828</td>
<td>A TE01 Generator Excited by TEM</td>
<td>X. H. Yu, W. B. Wang, W. P. Cao, et al.</td>
<td>F20</td>
</tr>
<tr>
<td>830</td>
<td>Ka Band Band-stop Filter Based on Complementary Split Ring and SIW Resonators</td>
<td>W. P. Cao, Z. Zhang, S. M. Li, et al.</td>
<td>F21</td>
</tr>
<tr>
<td>832</td>
<td>Density and temperature characteristics of hypersonic aircraft outflow field near the wall</td>
<td>D. Y. Zhang, L. Bai, Z. S. Wu, et al.</td>
<td>F22</td>
</tr>
<tr>
<td>834</td>
<td>Design of Multistage Gradient Coaxial Based on Axial Dislocation Compensation Method</td>
<td>J. Zhang, Y. N. Jiang, W. P. Cao, et al.</td>
<td>F23</td>
</tr>
<tr>
<td>842</td>
<td>Analysis on Ship’s Underwater Static Electric Field with Physical Scale Model</td>
<td>Y. D. Feng, G. Pan, X. Z. Xi, et al.</td>
<td>F25</td>
</tr>
<tr>
<td>846</td>
<td>Motion Compensation for High Range Resolution Profile Based on Stepped-Frequency Waveforms</td>
<td>B. Hu, L. X. Zhang, Z. X. Song, et al.</td>
<td>F26</td>
</tr>
<tr>
<td>854</td>
<td>Impact of probe ring location on test area performance in 3D MIMO OTA setup</td>
<td>Y. Yuan, W. M. Wang, Y. A. Liu, et al.</td>
<td>F28</td>
</tr>
<tr>
<td>862</td>
<td>Low angle estimation with colored noise in bi-static MIMO radar</td>
<td>S. Hong, M. S. Yan, Y. H. Wang, et al.</td>
<td>F30</td>
</tr>
<tr>
<td>869</td>
<td>The Recognition Method Based on the Height of the reentry target</td>
<td>T. Y. Guang, H. C. Ying, R. H. Mei</td>
<td>F32</td>
</tr>
<tr>
<td>873</td>
<td>The Difference in Variation Characteristics of the F2-peak Height HmF2 at the Low and Middle Latitudes</td>
<td>W. Ning, G. L. Xin, D. Z. Hua, et al.</td>
<td>F33</td>
</tr>
<tr>
<td>877</td>
<td>Mitigation of RF Blackout in Plasma Sheaths Communication via Nonlinear Effects</td>
<td>Z. J. Wang, L. X. Guo, J. T. Li</td>
<td>F34</td>
</tr>
<tr>
<td>882</td>
<td>A New Hybrid Data Compression Algorithm for Weather Radar</td>
<td>K. Ma, C. Y. Li, H. Z. Li</td>
<td>F35</td>
</tr>
<tr>
<td>886</td>
<td>Designing and Simulation of A ZigBee-Communication Printed Circuit Board</td>
<td>C. Huang, Y. Liu, B. Xiong, et al.</td>
<td>F36</td>
</tr>
<tr>
<td>890</td>
<td>Arbitrarily non-conformal ellipsoidal invisible cloak</td>
<td>W. M. Liu, X. H. Xu</td>
<td>F37</td>
</tr>
</tbody>
</table>
F42 The Statistic and Analysis of atmospheric ducts worldwide using radiosonde data..............................................................X. J. Hao, L. X. Guo, L. K. Lin, et al 911
F43 The Study of the Rough Medium Surface by Improved IPO.................................................Y. Y. Wei, Z. S. Wu, X. X. Zhang 915
F44 Microwave Technology for Brain Activities Detection of Rats..........................................................X. Jiang, B. Kang, X. P. Li, L. Peng 918
F45 A Multi-Order Radiative Transfer Model for Microwave Radiometry of Vegetation Canopies..........................................................L. Chen, C. Wang, Q. Cui 921
F46 Multiband plasmonic filter based on double layer spoof surface plasmon polaritons..........................................................D. Tian, R. Xu, Z. Xu, et al 925
F47 A Handover Scheme for Seamless Multicasting in PMIPv6 Wireless Networks.........................................................Y. Zhang, J. C. Gao, H. F. Hu 928