Maokun Li

List of Publications by Year in Descending Order

127 papers	2,086 citations	24 h-index	41 g-index
193 ext. papers	2,960 ext. citations	3.6 avg, IF	5.52 L-index

#	Paper	IF	Citations
127	Ultra-Wide-Scanning Conformal Heterogeneous Phased Array Antenna Based on Deep Deterministic Policy Gradient Algorithm. *IEEE Transactions on Antennas and Propagation*, **2022**, 1-1	4.9	3
126	Modeling of Multiscale Wave Interactions Based on an Iterative Scheme of MoM-PO-EPA Algorithm. *Electronics (Switzerland)*, **2022**, 11, 990	2.6	
125	A Microwave Thorax Imaging System Based on Symmetrical Dipole Antenna and One-Step Supervised Descent Method. *IEEE Transactions on Microwave Theory and Techniques*, **2022**, 1-1	4.1	0
124	Characteristic Model and Efficient FDTD-SPM Algorithm for Fishnet Metasurfaces Analysis. *IEEE Transactions on Antennas and Propagation*, **2022**, 1-1	4.9	1
123	Artificial Intelligence: New Frontiers in Real‐Time Inverse Scattering and Electromagnetic Imaging. *IEEE Transactions on Antennas and Propagation*, **2022**, 1-1	4.9	10
122	Electromagnetic Modeling Using an FDTD-Equivalent Recurrent Convolution Neural Network: Accurate Computing on a Deep Learning Framework.. *IEEE Antennas and Propagation Magazine*, **2021**, 2-11	1.7	1
121	Solving Combined Field Integral Equation With Deep Neural Network for 2-D Conducting Object. *IEEE Antennas and Wireless Propagation Letters*, **2021**, 20, 538-542	3.8	6
120	Supervised Descent Learning for Thoracic Electrical Impedance Tomography. *IEEE Transactions on Biomedical Engineering*, **2021**, 68, 1360-1369	5	13
119	. *IEEE Antennas and Propagation Magazine*, **2021**, 63, 39-51	1.7	17
118	A 10 240-Element Reconfigurable Reflectarray With Fast Steerable Monopulse Patterns. *IEEE Transactions on Antennas and Propagation*, **2021**, 69, 173-181	4.9	19
117	A Fast Modeling Algorithm for Quasi-Periodic Array. *IEEE Transactions on Antennas and Propagation*, **2021**, 69, 584-587	4.9	4
116	Physics Embedded Deep Neural Network for Solving Volume Integral Equation: 2D Case. *IEEE Transactions on Antennas and Propagation*, **2021**, 1-1	4.9	6
115	Design, Analysis, and Experiment on High-Performance Orbital Angular Momentum Beam Based on 1-Bit Programmable Metasurface. *IEEE Access*, **2021**, 9, 18585-18596	3.5	4
114	Low-Frequency Data Prediction With Iterative Learning for Highly Nonlinear Inverse Scattering Problems. *IEEE Transactions on Microwave Theory and Techniques*, **2021**, 1-1	4.1	10
113	3-D Model-Based Inversion Using Supervised Descent Method for Aspect-Limited Microwave Data of Metallic Targets. *IEEE Transactions on Geoscience and Remote Sensing*, **2021**, 1-10	8.1	1
112	Physics Embedded Deep Neural Network for Solving Full-wave Inverse Scattering Problems. *IEEE Transactions on Antennas and Propagation*, **2021**, 1-1	4.9	8
111	Design and Measurement of a Reconfigurable Transmitarray Antenna With Compact Varactor-Based Phase Shifters. *IEEE Antennas and Wireless Propagation Letters*, **2021**, 1-1	3.8	12

110	A Low-Profile Transmissive Metasurface for Transformation of Plane Wave to Contour Beam Pattern Using 4-Arm Spiral Element. *IEEE Access*, **2021**, 9, 39792-39797	3.5	
109	Application of Multitask Learning for 2-D Modeling of Magnetotelluric Surveys: TE Case. *IEEE Transactions on Geoscience and Remote Sensing*, **2021**, 1-9	8.1	4
108	A Feasibility Study of 2-D Microwave Thorax Imaging Based on the Supervised Descent Method. *Electronics (Switzerland)*, **2021**, 10, 352	2.6	2
107	Design and Implementation of a Wideband 1-Bit Transmitarray Based on a Yagi–Vivaldi Unit Cell. *IEEE Transactions on Antennas and Propagation*, **2021**, 69, 4229-4234	4.9	13
106	A Dual-Band Orthogonally Polarized Contour Beam Transmitarray Design. *IEEE Transactions on Antennas and Propagation*, **2021**, 69, 4538-4545	4.9	5
105	Joint Inversion of Audio-Magnetotelluric and Seismic Travel Time Data With Deep Learning Constraint. *IEEE Transactions on Geoscience and Remote Sensing*, **2021**, 59, 7982-7995	8.1	8
104	Hybrid Polarization-Phase Tuning Methodology for Reflectarray Antennas. *IEEE Transactions on Antennas and Propagation*, **2021**, 69, 5534-5545	4.9	7
103	A Low-Profile Compact Dual-Band L-Shape Monopole Antenna for Microwave Thorax Monitoring. *IEEE Antennas and Wireless Propagation Letters*, **2020**, 19, 448-452	3.8	8
102	Neural network-based supervised descent method for 2D electrical impedance tomography. *Physiological Measurement*, **2020**, 41, 074003	2.9	8
101	A Low-Profile Quad-Beam Transmitarray. *IEEE Antennas and Wireless Propagation Letters*, **2020**, 19, 1340-1344	3.8	8
100	Pixel- and Model-Based Microwave Inversion With Supervised Descent Method for Dielectric Targets. *IEEE Transactions on Antennas and Propagation*, **2020**, 68, 8114-8126	4.9	13
99	Study on a Fast Solver for Poisson's Equation Based on Deep Learning Technique. *IEEE Transactions on Antennas and Propagation*, **2020**, 68, 6725-6733	4.9	16
98	A Supervised Descent Learning Technique for Solving Directional Electromagnetic Logging-While-Drilling Inverse Problems. *IEEE Transactions on Geoscience and Remote Sensing*, **2020**, 58, 8013-8025	8.1	19
97	Application of supervised descent method for 2D magnetotelluric data inversion. *Geophysics*, **2020**, 85, WA53-WA65	3.1	14
96	Three-Dimensional Joint Inversion of EM and Acoustic Data Based on Contrast Source Inversion. *IEEE Journal on Multiscale and Multiphysics Computational Techniques*, **2020**, 5, 28-36	1.5	5
95	Teaching Electromagnetics to Next-Generation Engineers—The ELEDIA Recipe: The ELEDIA teaching style. *IEEE Antennas and Propagation Magazine*, **2020**, 62, 50-61	1.7	0
94	Coding Programmable Metasurfaces Based on Deep Learning Techniques. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2020**, 10, 114-125	5.2	33
93	A Novel 1 Bit Wide-Angle Beam Scanning Reconfigurable Transmitarray Antenna Using an Equivalent Magnetic Dipole Element. *IEEE Transactions on Antennas and Propagation*, **2020**, 68, 5691-5695	4.9	24

92	Single-Layer Reflectarray Antenna With Independent Dual-CP Beam Control. *IEEE Antennas and Wireless Propagation Letters*, **2020**, 19, 532-536	3.8	8
91	Dual-Layer Transmitarray Antenna With High Transmission Efficiency. *IEEE Transactions on Antennas and Propagation*, **2020**, 68, 6003-6012	4.9	20
90	Study on 3-D Acoustic Imaging for Human Thorax Based on Contrast Source Inversion. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2020**, 67, 1533-1543	3.2	
89	Analysis of Nonlinear Metallic Metasurface Elements Using Maxwell-Hydrodynamic Model With Time-Domain Perturbation Method. *IEEE Transactions on Antennas and Propagation*, **2020**, 68, 2213-2223	4.9	0
88	Fast Nonuniform Metasurface Analysis in FDTD Using Surface Susceptibility Model. *IEEE Transactions on Antennas and Propagation*, **2020**, 68, 7121-7130	4.9	5
87	Design and Experiment of a Dual-Band 1 Bit Reconfigurable Reflectarray Antenna With Independent Large-Angle Beam Scanning Capability. *IEEE Antennas and Wireless Propagation Letters*, **2020**, 19, 1896-1900	3.8	11
86	A REVIEW OF DEEP LEARNING APPROACHES FOR INVERSE SCATTERING PROBLEMS (INVITED REVIEW). *Progress in Electromagnetics Research*, **2020**, 167, 67-81	3.8	75
85	Real-Time Mode Switching and Beam Scanning of High-Gain OAM Waves Using a 1-Bit Reconfigurable Reflectarray Antenna. *Electronics (Switzerland)*, **2020**, 9, 2181	2.6	4
84	First arrival traveltime tomography using supervised descent learning technique. *Inverse Problems*, **2019**, 35, 105008	2.3	7
83	Design Method for Modulated Metasurface Antennas Composed of Anisotropic Elements Based on Generalized Boundary Conditions. *IEEE Antennas and Wireless Propagation Letters*, **2019**, 18, 1848-1852	3.8	2
82	Application of Supervised Descent Method to Parametric Level-set Approach **2019**,		1
81	Design and Optimization of a Mechanically Reconfigurable Reflectarray Antenna with Pixel Patch Elements Using Genetic Algorithm **2019**,		1
80	Generalized Boundary Conditions in Surface Electromagnetics: Fundamental Theorems and Surface Characterizations. *Applied Sciences (Switzerland)*, **2019**, 9, 1891	2.6	12
79	DNNs as Applied to Electromagnetics, Antennas, and Propagation□A Review. *IEEE Antennas and Wireless Propagation Letters*, **2019**, 18, 2225-2229	3.8	79
78	A High-Gain Dual-Band and Dual-Polarized Transmitarray Using Novel Loop Elements. *IEEE Antennas and Wireless Propagation Letters*, **2019**, 18, 1213-1217	3.8	15
77	Application of supervised descent method to transient electromagnetic data inversion. *Geophysics*, **2019**, 84, E225-E237	3.1	21
76	Supervised Descent Learning Technique for 2-D Microwave Imaging. *IEEE Transactions on Antennas and Propagation*, **2019**, 67, 3550-3554	4.9	59
75	Design and Measurement of a 1-bit Reconfigurable Transmitarray With Subwavelength H-Shaped Coupling Slot Elements. *IEEE Transactions on Antennas and Propagation*, **2019**, 67, 3500-3504	4.9	41

74	A Compact Dual-Band Folded-Cavity Antenna for Microwave Biomedical Imaging Applications **2019**,		5
73	A 1-Bit Bidirectional Reconfigurable Transmit-Reflect-Array Using a Single-Layer Slot Element With PIN Diodes. *IEEE Transactions on Antennas and Propagation*, **2019**, 67, 6205-6210	4.9	26
72	A 1-bit Reconfigurable Reflectarray Element with Independent Dual-band Phase Controlling Capability **2019**,		1
71	Innovative Machine Learning Techniques for Biomedical Imaging **2019**,		3
70	Supervised Descent Method for Electrical Impedance Tomography **2019**,		3
69	Study on a Recurrent Convolutional Neural Network Based FDTD Method **2019**,		4
68	Supervised Descent Method for Full-wave Microwave Imaging **2019**,		2
67	Supervised Descent Method for 2D Magnetotelluric Inversion using Adam Optimization **2019**,		2
66	Three-Dimensional Electrical Impedance Tomography With Multiplicative Regularization. *IEEE Transactions on Biomedical Engineering*, **2019**, 66, 2470-2480	5	19
65	Study on Joint Inversion Algorithm of Acoustic and Electromagnetic Data in Biomedical Imaging. *IEEE Journal on Multiscale and Multiphysics Computational Techniques*, **2019**, 4, 2-11	1.5	17
64	A Mechanically Reconfigurable Reflectarray With Slotted Patches of Tunable Height. *IEEE Antennas and Wireless Propagation Letters*, **2018**, 17, 555-558	3.8	20
63	An Efficient Dual-Band Orthogonally Polarized Transmitarray Design Using Three-Dipole Elements. *IEEE Antennas and Wireless Propagation Letters*, **2018**, 17, 319-322	3.8	29
62	A high gain broadband transmitarray antenna using dual-resonant E-shaped element. *Microwave and Optical Technology Letters*, **2018**, 60, 1531-1536	1.2	2
61	Design and Experiment of a Near-Zero-Thickness High-Gain Transmit-Reflect-Array Antenna Using Anisotropic Metasurface. *IEEE Transactions on Antennas and Propagation*, **2018**, 66, 2853-2861	4.9	58
60	Metasurface-Based Ultrathin Beam Splitter with Variable Split Angle and Power Distribution. *ACS Photonics*, **2018**, 5, 2997-3002	6.3	33
59	Dual-band dual-polarized transmitarray for satellite communications **2018**,		3
58	Characterization of Multiple-Layer Anisotropic Metasurfaces Based on Generalized Boundary Conditions **2018**,		1
57	Feasibility study of acoustic imaging for human thorax using an acoustic contrast source inversion algorithm. *Journal of the Acoustical Society of America*, **2018**, 144, 2782	2.2	5

56	A Multi-bit Reconfigurable Transmitarray Design Approach Using Cascaded Spatial Phase Shifters **2018**,		1
55	Design of a 1-bit Reconfigurable Transmitarray Element Using an Equivalent Magnetic Dipole **2018**,		3
54	Study on a 3D Possion's Equation Slover Based on Deep Learning Technique **2018**,		1
53	Analysis of Reflectarray Antenna Elements Under Arbitrary Incident Angles and Polarizations Using Generalized Boundary Conditions. *IEEE Antennas and Wireless Propagation Letters*, **2018**, 17, 2208-2212	3.8	6
52	Synthesis of Refiectarray Based on Deep Learning Technique **2018**,		5
51	An FSS-Backed Ku/Ka Quad-Band Reflectarray Antenna for Satellite Communications. *IEEE Transactions on Antennas and Propagation*, **2018**, 66, 4353-4358	4.9	37
50	Reconfigurable sensing antenna for mechanical rotation monitoring **2018**,		1
49	Study of a low-profile transmitarray element using 3 non-identical layers **2018**,		2
48	Design of Artificial Matching Layers With Arbitrary Permittivity Using a Metasurface. *IEEE Antennas and Wireless Propagation Letters*, **2018**, 17, 1445-1448	3.8	6
47	A Study of Phase Quantization Effects for Reconfigurable Reflectarray Antennas. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 302-305	3.8	66
46	A 1600-Element Dual-Frequency Electronically Reconfigurable Reflectarray at X/Ku-Band. *IEEE Transactions on Antennas and Propagation*, **2017**, 65, 3024-3032	4.9	84
45	Design of a Low-Cost Single-Layer X/Ku Dual-Band Metal-Only Reflectarray Antenna. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 2106-2109	3.8	8
44	A Broadband High-Efficiency Reconfigurable Reflectarray Antenna Using Mechanically Rotational Elements. *IEEE Transactions on Antennas and Propagation*, **2017**, 65, 3959-3966	4.9	58
43	Reflectarray element analysis based on generalized sheet transition conditions **2017**,		5
42	Efficient Reciprocity-Based Hybrid Approach for Analyzing Radiated Susceptibility Responses of Multilayer PCBs. *IEEE Transactions on Electromagnetic Compatibility*, **2017**, 59, 952-961	2	6
41	Single-Layer Dual-Band Reflectarray Antennas With Wide Frequency Ratios and High Aperture Efficiencies Using Phoenix Elements. *IEEE Transactions on Antennas and Propagation*, **2017**, 65, 612-622	4.9	31
40	An FSS-Backed 20/30-GHz Dual-Band Circularly Polarized Reflectarray With Suppressed Mutual Coupling and Enhanced Performance. *IEEE Transactions on Antennas and Propagation*, **2017**, 65, 926-931	4.9	34
39	Design of a Ku-band 1-bit reconfigurable transmitarray with 16□16 slot coupled elements **2017**,		1

38	Mode analysis of 1-Bit reflectarray element using p-i-n diode at W-band **2017**,		3
37	Characterization of metascreens based on babinet's principle and generalized sheet transition conditions for metafilms **2017**,		2
36	Design of Resistor-Loaded Reflectarray Elements for Both Amplitude and Phase Control. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 1159-1162	3.8	38
35	Acceleration of 2-D Multiplicative Regularized Contrast Source Inversion Algorithm Using Paralleled Computing Architecture. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 441-444	3.8	7
34	Quasi-Periodic Array Modeling Using Reduced Basis Method. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 825-828	3.8	11
33	A Single-Layer High-Efficiency Wideband Reflectarray Using Hybrid Design Approach. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 884-887	3.8	31
32	A 1-Bit Multipolarization Reflectarray Element for Reconfigurable Large-Aperture Antennas. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 581-584	3.8	28
31	A Distributed Power-Amplifying Reflectarray Antenna for EIRP Boost Applications. *IEEE Antennas and Wireless Propagation Letters*, **2017**, 16, 2742-2745	3.8	3
30	A novel 2-bit reconfigurable reflectarray element for both linear and circular polarizations **2017**,		11
29	Study on a Poisson's equation solver based on deep learning technique **2017**,		16
28	Quasi-Periodic Array Modeling Using Reduced Basis From Elemental Array. *IEEE Journal on Multiscale and Multiphysics Computational Techniques*, **2017**, 2, 202-208	1.5	4
27	Application of multiplicative regularization for electrical impedance tomography **2017**,		3
26	A wideband reflectarray design using novel phasing rings **2017**,		2
25	Electromagnetic Inverse Problems [Guest Editorial]. *IEEE Antennas and Propagation Magazine*, **2017**, 59, 9-115	1.7	6
24	A feasibility study of microwave respiration monitoring **2017**,		4
23	Design of a dual-band orthogonally polarized transmitarray using 3-dipole elements **2017**,		1
22	A Passive Temperature-Sensing Antenna Based on a Bimetal Strip Coil. *Sensors*, **2017**, 17,	3.8	6
21	Phase error analysis for reflectarray antennas based on study of quasi-periodic effect **2017**,		3

20	Design of a multi-polarization double-layer transmitarray element using cross dipoles with vias **2016**,		2
19	A programmable metasurface with dynamic polarization, scattering and focusing control. *Scientific Reports*, **2016**, 6, 35692	4.9	231
18	Design of an amplifying reflectarray antenna with improved isolation performance **2016**,		3
17	Design of a Ku-band triple-layer perforated dielectric transmitarray antenna **2016**,		5
16	Dual-frequency reconfigurable patch antenna with thermal switches for temperature monitoring **2016**,		2
15	A 100-GHz Metal-Only Reflectarray for High-Gain Antenna Applications. *IEEE Antennas and Wireless Propagation Letters*, **2016**, 15, 178-181	3.8	23
14	Application of the Variable Projection Scheme for Calibration in Electromagnetic Data Inversion. *IEEE Transactions on Antennas and Propagation*, **2016**, 64, 332-335	4.9	2
13	A Low-Cost Metal-Only Reflectarray Using Modified Slot-Type Phoenix Element With 360□Phase Coverage. *IEEE Transactions on Antennas and Propagation*, **2016**, 64, 1556-1560	4.9	33
12	A Double-Layer Transmitarray Antenna Using Malta Crosses With Vias. *IEEE Transactions on Antennas and Propagation*, **2016**, 64, 1120-1125	4.9	79
11	Electromagnetic Inverse Problems for Sensing and Imaging. *IEEE Antennas and Propagation Magazine*, **2016**, 58, 17-17	1.7	
10	Radiation performances of conformal dielectric reflectarray antennas at sub-millimeter waves **2016** ,		3
9	. *IEEE Transactions on Antennas and Propagation*, **2016**, 64, 2246-2254	4.9	125
8	Design of a single-layer dual-band reflectarray using Phoenix elements **2015**,		1
7	Design of a circularly polarized reconfigurable reflectarray using micromotors **2015**,		4
6	Design of a dual-frequency broadband reflectarray using triple-resonance elements **2015**,		4
5	Design of a 2-bit reconfigurable reflectarray element using two MEMS switches **2015**,		6
4	A contrast source inversion method in the wavelet domain. *Inverse Problems*, **2013**, 29, 025015	2.3	57
3	. *IEEE Transactions on Antennas and Propagation*, **2012**, 60, 3361-3372	4.9	25

2	Inversion of controlled-source electromagnetic data using a model-based approach. *Geophysical Prospecting*, **2010**, 58, 455-467	1.9	18
1	Application of a two-and-a-half dimensional model-based algorithm to crosswell electromagnetic data inversion. *Inverse Problems*, **2010**, 26, 074013	2.3	12