

# Ali Abdolali

## List of Publications by Year in descending order

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124  
papers

1,891  
citations

304743

22  
h-index

361022

35  
g-index

130  
all docs

130  
docs citations

130  
times ranked

1325  
citing authors

#	ARTICLE	IF	CITATIONS
1	Multilayer graphene-based metasurfaces: robust design method for extremely broadband, wide-angle, and polarization-insensitive terahertz absorbers. <i>Applied Optics</i> , 2018, 57, 959.	1.8	112
2	Multi-bit graphene-based bias-encoded metasurfaces for real-time terahertz wavefront shaping: From controllable orbital angular momentum generation toward arbitrary beam tailoring. <i>Carbon</i> , 2019, 149, 125-138.	10.3	76
3	An Information Theory-Inspired Strategy for Design of Re-programmable Encrypted Graphene-based Coding Metasurfaces at Terahertz Frequencies. <i>Scientific Reports</i> , 2018, 8, 6200.	3.3	72
4	Generalized Optical Signal Processing Based on Multioperator Metasurfaces Synthesized by Susceptibility Tensors. <i>Physical Review Applied</i> , 2019, 11, .	3.8	61
5	Real-time and Broadband Terahertz Wave Scattering Manipulation via Polarization-insensitive Conformal Graphene-based Coding Metasurfaces. <i>Annalen Der Physik</i> , 2018, 530, 1700310.	2.4	60
6	Asymmetric Spatial Power Dividers Using Phase-Amplitude Metasurfaces Driven by Huygens Principle. <i>ACS Omega</i> , 2019, 4, 14340-14352.	3.5	52
7	Analytical Investigation of Ultrabroadband Plasma-Graphene Radar Absorbing Structures. <i>IEEE Transactions on Plasma Science</i> , 2017, 45, 945-954.	1.3	46
8	ULTRA WIDE BAND RCS OPTIMIZATION OF MULTILAYERD CYLINDRICAL STRUCTURES FOR ARBITRARILY POLARIZED INCIDENT PLANE WAVES. <i>Progress in Electromagnetics Research</i> , 2008, 78, 129-157.	4.4	42
9	Frequency-multiplexed pure-phase microwave meta-holograms using bi-spectral 2-bit coding metasurfaces. <i>Nanophotonics</i> , 2020, 9, 703-714.	6.0	42
10	Large-scale hurricane modeling using domain decomposition parallelization and implicit scheme implemented in WAVEWATCH III wave model. <i>Coastal Engineering</i> , 2020, 157, 103656.	4.0	41
11	Ultrabroadband Monostatic/Bistatic RCS Reduction via High-Entropy Phase-Encoded Polarization Conversion Metasurfaces. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2019, 18, 1233-1237.	4.0	39
12	Design of Wideband Leaky-Wave Antenna Using Sinusoidally Modulated Impedance Surface Based on the Holography Theory. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2018, 17, 1807-1811.	4.0	36
13	Real-time terahertz meta-cryptography using polarization-multiplexed graphene-based computer-generated holograms. <i>Nanophotonics</i> , 2020, 9, 2861-2877.	6.0	36
14	Reprogrammable multifocal THz metalens based on metal-insulator transition of VO <sub>2</sub> -assisted digital metasurface. <i>Optics Communications</i> , 2020, 462, 125331.	2.1	33
15	A honeycomb-like three-dimensional metamaterial absorber via super-wideband and wide-angle performances at millimeter wave and low THz frequencies. <i>Applied Physics A: Materials Science and Processing</i> , 2018, 124, 1.	2.3	32
16	Parallel integro-differential equation solving via multi-channel reciprocal bianisotropic metasurface augmented by normal susceptibilities. <i>New Journal of Physics</i> , 2019, 21, 113048.	2.9	32
17	Observation of Radar Cross-Section Reduction Using Low-Pressure Plasma-Arrayed Coating Structure. <i>IEEE Transactions on Antennas and Propagation</i> , 2017, 65, 3058-3064.	5.1	31
18	Polarization-insensitive, ultra-broadband, and compact metamaterial-inspired optical absorber via wide-angle and highly efficient performances. <i>Applied Optics</i> , 2018, 57, 3693.	1.8	31

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19	Analog signal processing through space-time digital metasurfaces. <i>Nanophotonics</i> , 2021, 10, 1753-1764.	6.0	30
20	Adopting image theorem for rigorous analysis of a perfect electric conductor-backed array of graphene ribbons. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2018, 35, 1836.	2.1	29
21	Depth-integrated equation for hydro-acoustic waves with bottom damping. <i>Journal of Fluid Mechanics</i> , 2015, 766, .	3.4	28
22	Reprogrammable Spatiotemporally Modulated Graphene-Based Functional Metasurfaces. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2020, 10, 75-87.	3.6	24
23	Optimized chemical potential graphene-based coding metasurface approach for dynamic manipulation of terahertz wavefront. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 085102.	2.8	23
24	Evaluating the accuracy and uncertainty of atmospheric and wave model hindcasts during severe events using model ensembles. <i>Ocean Dynamics</i> , 2021, 71, 217-235.	2.2	23
25	DESIGN AND OPTIMIZATION OF PLANAR MULTILAYER ANTIREFLECTION METAMATERIAL COATINGS AT KU BAND UNDER CIRCULARLY POLARIZED OBLIQUE PLANE WAVE INCIDENCE. <i>Progress in Electromagnetics Research C</i> , 2008, 3, 1-18.	0.9	22
26	Hydroacoustic and tsunami waves generated by the 2012 Haida Gwaii earthquake: Modeling and in situ measurements. <i>Journal of Geophysical Research: Oceans</i> , 2015, 120, 958-971.	2.6	22
27	Development of an ESMF Based Flexible Coupling Application of ADCIRC and WAVEWATCH III for High Fidelity Coastal Inundation Studies. <i>Journal of Marine Science and Engineering</i> , 2020, 8, 308.	2.6	22
28	Self-biased tri-state power-multiplexed digital metasurface operating at microwave frequencies. <i>Optics Express</i> , 2020, 28, 5410.	3.4	22
29	Equivalent Circuit Model for Frequency-Selective Surfaces Embedded Within a Thick Plasma Layer. <i>IEEE Transactions on Plasma Science</i> , 2015, 43, 3590-3598.	1.3	21
30	Design of Coating Materials for Cloaking and Directivity Enhancement of Cylindrical Antennas Using Transformation Optics. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2017, 16, 3122-3125.	4.0	21
31	Arbitrary Shaped Acoustic Concentrators Enabled by Null Media. <i>Physical Review Applied</i> , 2020, 13, .	3.8	21
32	Role of Compressibility on Tsunami Propagation. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 9780-9794.	2.6	20
33	Effect of Water Compressibility, Sea-floor Elasticity, and Field Gravitational Potential on Tsunami Phase Speed. <i>Scientific Reports</i> , 2019, 9, 16874.	3.3	19
34	Parallel Analog Computing Based on a $2 \times 2$ Multiple-Input Multiple-Output Metasurface Processor With Asymmetric Response. <i>Physical Review Applied</i> , 2021, 15, .	3.8	19
35	Real-time terahertz wave channeling via multifunctional metagratings: a sparse array of all-graphene scatterers. <i>Optics Letters</i> , 2020, 45, 795.	3.3	19
36	Use of Collisional Plasma as an Optimum Lossy Dielectric for Wave Absorption in Planar Layers, Analysis, and Application. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 1999-2006.	1.3	18

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37	Advanced synthesis of meta-antenna radiation pattern enabled by transformation optics. Journal of Optics (United Kingdom), 2019, 21, 045108.	2.2	18
38	Parameter retrieval of chiral metamaterials based on the state-space approach. Physical Review E, 2013, 88, 023204.	2.1	17
39	Removing the wall effects using electromagnetic complex coating layer for ultra-wideband through wall imaging. IET Microwaves, Antennas and Propagation, 2017, 11, 477-482.	1.4	17
40	On the propagation of acoustic "gravity waves under elastic ice sheets. Journal of Fluid Mechanics, 2018, 837, 640-656.	3.4	17
41	A fast, straightforward, and accurate computer-aided design for highly efficient metasurface-assisted Fabry-Perot cavity antennas based on the equivalent circuit approach. AEU - International Journal of Electronics and Communications, 2018, 97, 252-262.	2.9	17
42	Circular configuration of perforated dielectrics for ultra-broadband, wide-angle, and polarisation-insensitive monostatic/bistatic RCS reduction. IET Microwaves, Antennas and Propagation, 2018, 12, 1821-1827.	1.4	16
43	Patterned Magnetic Fields for Remote Steering and Wireless Powering to a Swimming Microrobot. IEEE/ASME Transactions on Mechatronics, 2020, 25, 207-216.	5.8	16
44	Power modulation of vortex beams using phase/amplitude adjustable transmissive coding metasurfaces. Journal Physics D: Applied Physics, 2021, 54, 035305.	2.8	16
45	Geometry free materials enabled by transformation optics for enhancing the intensity of electromagnetic waves in an arbitrary domain. Journal of Applied Physics, 2020, 127, .	2.5	15
46	Electromagnetic Characterization of Uniaxial Chiral Composites Using State Transition Matrix Method. IEEE Transactions on Antennas and Propagation, 2013, 61, 5658-5665.	5.1	14
47	Room shielding with frequency-selective surfaces for electromagnetic health application. International Journal of Microwave and Wireless Technologies, 2017, 9, 291-298.	1.9	14
48	Adaptable setups for magnetic drug targeting in human muscular arteries: Design and implementation. Journal of Magnetism and Magnetic Materials, 2017, 438, 173-180.	2.3	14
49	Illusion mechanisms with cylindrical metasurfaces: A general synthesis approach. Physical Review B, 2019, 100, .	3.2	14
50	Wideband RCS reduction of patch array antenna with miniaturized FSS. Microwave and Optical Technology Letters, 2016, 58, 969-973.	1.4	13
51	Magnetic field pattern synthesis and its application in targeted drug delivery: Design and implementation. Bioelectromagnetics, 2018, 39, 325-338.	1.6	13
52	Exploiting transformation optics for arbitrary manipulation of antenna radiation pattern. IET Microwaves, Antennas and Propagation, 2019, 13, 1271-1279.	1.4	13
53	Flexible Manipulation of Emitting Beams Using Single-Aperture Circularly Polarized Digital Metasurface Antennas: Multi-Beam Radiation toward Vortex-Beam Generation. Advanced Theory and Simulations, 2020, 3, 1900225.	2.8	13
54	Reciprocal Metasurfaces for On-Axis Reflective Optical Computing. IEEE Transactions on Antennas and Propagation, 2021, 69, 7709-7719.	5.1	13

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55	EM Scattering From Cylindrical Structures Coated by Materials With Inhomogeneity in Both Radial and Azimuthal Directions. <i>IEEE Transactions on Antennas and Propagation</i> , 2015, 63, 1118-1128.	5.1	12
56	Feasible Thermodynamics Devices Enabled by Thermal-Null Medium. <i>Physical Review Applied</i> , 2020, 14, .	3.8	12
57	Parallel wave-based analog computing using metagratings. <i>Nanophotonics</i> , 2022, 11, 1561-1571.	6.0	12
58	Ultrawideband Time-Reversal Imaging With Frequency Domain Sampling. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2014, 11, 597-601.	3.1	11
59	Carpet Cloak Design for Rough Surfaces. <i>Chinese Physics Letters</i> , 2017, 34, 084101.	3.3	11
60	Determination of artificial recharge location using analytic hierarchy process and Dempsterâ€™Shafer theory. <i>Environmental Earth Sciences</i> , 2020, 79, 1.	2.7	11
61	Spatiotemporal Binary Acoustic Metasurfaces. <i>Physical Review Applied</i> , 2021, 16, .	3.8	11
62	Electromagnetic Characterization of Biaxial Bianisotropic Media Using the State Space Approach. <i>IEEE Transactions on Antennas and Propagation</i> , 2014, 62, 1538-1542.	5.1	10
63	New approach to design dual-band frequency selective surface based on frequency response tuning of each individual layer. <i>Microwave and Optical Technology Letters</i> , 2016, 58, 1423-1429.	1.4	10
64	Experimental and analytical investigations on a wide-angle, polarization-insensitive, and broadband water-based metamaterial absorber. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 225302.	2.8	10
65	Plane wave scattering by a circular PEMC cylinder coated with anisotropic media. <i>International Journal of RF and Microwave Computer-Aided Engineering</i> , 2013, 23, 225-231.	1.2	9
66	Technique for inversion of an inhomogeneous bianisotropic slab through an optimisation approach. <i>IET Microwaves, Antennas and Propagation</i> , 2013, 7, 436-443.	1.4	9
67	Patterning of Subwavelength Magnetic Fields Along a Line by Means of Spatial Spectrum: Design and Implementation. <i>IEEE Magnetics Letters</i> , 2017, 8, 1-4.	1.1	9
68	Acousticâ€™gravity waves from multi-fault rupture. <i>Journal of Fluid Mechanics</i> , 2021, 915, .	3.4	9
69	Numerical analysis of scattering from cylindrical structures coated by layers having inhomogeneity in both radial and azimuthal directions. <i>IET Microwaves, Antennas and Propagation</i> , 2015, 9, 472-485.	1.4	8
70	Three-dimensional ultra-wideband carpet cloak using multi-layer dielectrics. <i>Microwave and Optical Technology Letters</i> , 2017, 59, 1284-1288.	1.4	8
71	Investigating the Impact of High-Resolution Landâ€™Sea Masks on Hurricane Forecasts in HWRF. <i>Atmosphere</i> , 2020, 11, 888.	2.3	8
72	Non-closed acoustic cloaking devices enabled by sequential-step linear coordinate transformations. <i>Scientific Reports</i> , 2021, 11, 1845.	3.3	8

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73	State transition matrix of inhomogeneous planar layers. IET Microwaves, Antennas and Propagation, 2015, 9, 301-306.	1.4	7
74	Asymmetric Metal-Dielectric Metacylinders and Their Potential Applications From Engineering Scattering Patterns to Spatial Optical Signal Processing. Physical Review Applied, 2021, 15, .	3.8	7
75	Three-dimensional analysis, modeling, and simulation of the effect of static magnetic fields on neurons. Bioelectromagnetics, 2017, 38, 128-136.	1.6	6
76	Manipulation of the electromagnetic near-fields by 3D printed coils: from design to fabrication. IET Microwaves, Antennas and Propagation, 2018, 12, 1461-1465.	1.4	6
77	Experimental Verification of Shape-Independent Surface Cloak Enabled by Nihility Transformation Optics. Advanced Optical Materials, 2021, 9, 2100816.	7.3	6
78	Magnetic Particle Separation by an Optimized Coil : A Graphical User Interface. Journal of Magnetics, 2017, 22, 214-219.	0.4	6
79	Zero reflection from layered anisotropic metamaterial structures. Waves in Random and Complex Media, 2013, 23, 152-168.	2.7	5
80	Parameter reconstruction of materials with off-diagonal anisotropy using the state transition matrix method. AEU - International Journal of Electronics and Communications, 2014, 68, 877-882.	2.9	5
81	Cylinder scattering pattern manipulation for dual-polarized radar cross-section reduction using inhomogeneous metasurface. , 2017, , .		5
82	Adopting reciprocity theorem in deep transcranial magnetic stimulation problem to design an efficient single source coil array based on nerve cell direction. Medical and Biological Engineering and Computing, 2018, 56, 13-23.	2.8	5
83	A Fast Diffraction Tomography Algorithm for 3-D Through-the-Wall Radar Imaging Using Nonuniform Fast Fourier Transform. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	3.1	5
84	A reflection-only method for characterizing PEC-backed anisotropic materials using waveguide higher order modes. International Journal of RF and Microwave Computer-Aided Engineering, 2020, 30, e22340.	1.2	5
85	Time-Modulated Metasurface-Assisted Measurements. Advanced Optical Materials, 2021, 9, 2001594.	7.3	5
86	Sensitivity of tidal hydrodynamics to varying bathymetric configurations in a multi-inlet rapidly eroding salt marsh system: A numerical study. Earth Surface Processes and Landforms, 2022, 47, 1157-1182.	2.5	5
87	Hydrodynamic modeling of a complex salt marsh system: Importance of channel shoreline and bathymetric resolution. Coastal Engineering, 2022, 173, 104094.	4.0	5
88	State-transition-matrix method for inverse scattering in one-dimensional inhomogeneous media. Physical Review E, 2014, 90, 053203.	2.1	4
89	Highly sensitive miniaturized bio-sensor using 2-layer double split ring resonators. , 2015, , .		4
90	Dental Implants and Mobile-Phone Use: How implant presence and position affect antenna parameters, specific absorption rate, and current density. IEEE Antennas and Propagation Magazine, 2016, 58, 43-51.	1.4	4

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91	Inhomogeneous media characterization: a hybrid method of state space and frequency diversity. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	4
92	Experimental demonstration of an arbitrary shape dc electric concentrator. Scientific Reports, 2020, 10, 16722.	3.3	4
93	Highly efficient meta-radiators with circular polarization. Journal of Applied Physics, 2020, 128, .	2.5	4
94	A theoretical investigation on reciprocity-inspired wide-angle spectrally-selective THz absorbers augmented by anisotropic metamaterials. Scientific Reports, 2020, 10, 10396.	3.3	4
95	Robust technique based on transition matrix method to electromagnetic characterisation of anisotropic material. IET Microwaves, Antennas and Propagation, 2014, 8, 632-641.	1.4	3
96	A new efficient approach for fast and accurate design of frequency selective surfaces based on geometry estimation networks. Neural Computing and Applications, 2017, 28, 2727-2734.	5.6	3
97	Thermal mapping on male genital and skin tissues of laptop thermal sources and electromagnetic interaction. Bioelectromagnetics, 2017, 38, 550-558.	1.6	3
98	ULTRA-THIN TUNABLE PLASMA-METASURFACE COMPOSITES FOR EXTREMELY BROADBAND ELECTROMAGNETIC SHIELDING APPLICATIONS. Progress in Electromagnetics Research C, 2018, 85, 91-104.	0.9	3
99	A Novel Waveguide Approach for Electromagnetic Characterization of Inhomogeneous Materials. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 4658-4665.	4.6	3
100	Flexible Control of Magnetic Fields by Shaped-Optimized Three-Dimensional Coil Arrays. IEEE Magnetics Letters, 2019, 10, 1-5.	1.1	3
101	General Analysis of Coupled Nonuniform Transmission Lines Based on State Transition Matrix. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 2321-2324.	2.2	3
102	Breaking the acoustic diffraction limit with an arbitrary shape acoustic magnifying lens. Scientific Reports, 2021, 11, 12958.	3.3	3
103	Analytical design for full-space spatial power dividers using metagratings. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 2915.	2.1	3
104	Designing approach of terahertz broadband backscattering reduction based on combination of diffusion and absorption. Optik, 2021, 246, 167771.	2.9	3
105	Space wave channeling enabled by conformal transformation optics. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 2499.	2.1	3
106	Angularly Dispersionless Scattering Patterns for Impenetrable Surfaces: A straightforward design based on transformation optics. IEEE Antennas and Propagation Magazine, 2021, 63, 62-74.	1.4	3
107	Discrete Green's Function Approach for The Analysis of A Dual Band Notched Uwb Antenna. Microwave and Optical Technology Letters, 2013, 55, 2168-2174.	1.4	2
108	Multilayered Discrete Green's Functions Based on Mixed-Potential Finite-Difference Formulation. IEEE Transactions on Antennas and Propagation, 2014, 62, 5765-5774.	5.1	2



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109	Application of transformation optics in radar cross section reduction of targets with arbitrary two-dimensional geometries. Journal of Applied Physics, 2019, 125, .	2.5	2
110	BI-FUNCTIONAL ANTENNA COATING FOR CLOAKING AND DIRECTIVITY ENHANCEMENT MADE OF ISOTROPIC MATERIALS. Progress in Electromagnetics Research M, 2020, 90, 9-18.	0.9	2
111	Complex Permittivity Retrieval of Dispersive Liquids Based on Varactor-Loaded Split-Ring Resonator. IEEE Sensors Journal, 2021, 21, 24019-24027.	4.7	2
112	Analytical relations for achieving zero reflection in anisotropic materials. IET Microwaves, Antennas and Propagation, 2013, 7, 552-562.	1.4	1
113	Radiation and scattering from a point source on an inhomogeneous substrate. IET Microwaves, Antennas and Propagation, 2014, 8, 1327-1332.	1.4	1
114	A new method for optimizing RCS of the nose of flying objects. Microwave and Optical Technology Letters, 2015, 57, 1361-1365.	1.4	1
115	Application of the mantle cloak in near vertical incidence skywave/ground wave high frequency communication. IET Microwaves, Antennas and Propagation, 2019, 13, 2419-2425.	1.4	1
116	Control of near electric field by topology optimised sub-wavelength 3D loop antenna. Electronics Letters, 2019, 55, 979-980.	1.0	1
117	Parallel Optical Spatial Signal Processing Based on 2 × 2 MIMO Computational Metasurface. , 2020, , .		1
118	An exact mathematical proof for the condition of zero reflection by multilayered metamaterial media. , 2008, , .		0
119	Analysis of inhomogeneous chiral slab using Taylor's series expansion. , 2012, , .		0
120	Three-dimensional FDTD modeling of neurons to solve EEG and MEG forward problem. International Journal of Imaging Systems and Technology, 2017, 27, 361-367.	4.1	0
121	A Novel Reciprocity Based Theory for Extraction of Scattered Field under Plane Wave Incidence from that of Near-field Illumination. IETE Journal of Research, 2021, 67, 913-920.	2.6	0
122	In-band radar cross-section reduction of the slot array antennas by RAM-based frequency selective surfaces. IET Microwaves, Antennas and Propagation, 2021, 15, 457-463.	1.4	0
123	Exact Formulation for Analysis of Media With Simultaneous Inhomogeneity and Anisotropy Characteristics. IEEE Antennas and Wireless Propagation Letters, 2021, 20, 1359-1363.	4.0	0
124	Broadband Tunable Terahertz Polarization Converter based on Graphene-Shaped Metasurfaces. , 2020, , .		0