

# Withawat Withayachumnankul

## List of Publications by Citations

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154  
papers

5,516  
citations

40  
h-index

71  
g-index

225  
ext. papers

6,855  
ext. citations

4.9  
avg, IF

6.03  
L-index

#	Paper	IF	Citations
154	Ultrasensitive terahertz sensing with high-Q Fano resonances in metasurfaces. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 171101	3.4	398
153	High-Sensitivity Metamaterial-Inspired Sensor for Microfluidic Dielectric Characterization. <i>IEEE Sensors Journal</i> , <b>2014</b> , 14, 1345-1351	4	395
152	Metamaterial-based microfluidic sensor for dielectric characterization. <i>Sensors and Actuators A: Physical</i> , <b>2013</b> , 189, 233-237	3.9	249
151	Metamaterials in the Terahertz Regime. <i>IEEE Photonics Journal</i> , <b>2009</b> , 1, 99-118	1.8	225
150	Flexible metasurfaces and metamaterials: A review of materials and fabrication processes at micro- and nano-scales. <i>Applied Physics Reviews</i> , <b>2015</b> , 2, 011303	17.3	204
149	Mechanically Tunable Dielectric Resonator Metasurfaces at Visible Frequencies. <i>ACS Nano</i> , <b>2016</b> , 10, 133-41	16.7	198
148	Dielectric resonator nanoantennas at visible frequencies. <i>Optics Express</i> , <b>2013</b> , 21, 1344-52	3.3	147
147	Ultrabroadband reflective polarization convertor for terahertz waves. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 181111	3.4	136
146	A Review on Thin-film Sensing with Terahertz Waves. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2012</b> , 33, 245-291	2.2	133
145	Fundamentals of Measurement in Terahertz Time-Domain Spectroscopy. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2014</b> , 35, 610-637	2.2	131
144	T-ray sensing and imaging. <i>Proceedings of the IEEE</i> , <b>2007</b> , 95, 1528-1558	14.3	121
143	Mechanically tunable terahertz metamaterials. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 121101	3.4	119
142	Uncertainty in terahertz time-domain spectroscopy measurement. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2008</b> , 25, 1059	1.7	108
141	Metamaterial-Inspired Rotation Sensor With Wide Dynamic Range. <i>IEEE Sensors Journal</i> , <b>2014</b> , 14, 2609-2614	4.1	102
140	Metal-Loaded Dielectric Resonator Metasurfaces for Radiative Cooling. <i>Advanced Optical Materials</i> , <b>2017</b> , 5, 1700460	8.1	99
139	Varactor-Tunable Second-Order Bandpass Frequency-Selective Surface With Embedded Bias Network. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2016</b> , 64, 1672-1680	4.9	92
138	Experimental demonstration of reflectarray antennas at terahertz frequencies. <i>Optics Express</i> , <b>2013</b> , 21, 2875-89	3.3	91

137	Metamaterial-Inspired Multichannel Thin-Film Sensor. <i>IEEE Sensors Journal</i> , <b>2012</b> , 12, 1455-1458	4	87
136	Terahertz reflectarray as a polarizing beam splitter. <i>Optics Express</i> , <b>2014</b> , 22, 16148-60	3.3	83
135	Sub-diffraction thin-film sensing with planar terahertz metamaterials. <i>Optics Express</i> , <b>2012</b> , 20, 3345-52	3.3	82
134	Ultrabroadband Plasmonic Absorber for Terahertz Waves. <i>Advanced Optical Materials</i> , <b>2015</b> , 3, 376-380	8.1	76
133	Dielectric Resonator Reflectarray as High-Efficiency Nonuniform Terahertz Metasurface. <i>ACS Photonics</i> , <b>2016</b> , 3, 1019-1026	6.3	67
132	Material thickness optimization for transmission-mode terahertz time-domain spectroscopy. <i>Optics Express</i> , <b>2008</b> , 16, 7382-96	3.3	64
131	Second-Order Terahertz Bandpass Frequency Selective Surface With Miniaturized Elements. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2015</b> , 5, 761-769	3.4	63
130	Tutorial: Terahertz beamforming, from concepts to realizations. <i>APL Photonics</i> , <b>2018</b> , 3, 051101	5.2	63
129	Plasmonic Resonance toward Terahertz Perfect Absorbers. <i>ACS Photonics</i> , <b>2014</b> , 1, 625-630	6.3	62
128	Microwave microfluidic sensor for determination of glucose concentration in water <b>2015</b> ,		58
127	Compact electric-LC resonators for metamaterials. <i>Optics Express</i> , <b>2010</b> , 18, 25912-21	3.3	54
126	Elastomeric silicone substrates for terahertz fishnet metamaterials. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 061101	3.4	51
125	Quarter-wavelength multilayer interference filter for terahertz waves. <i>Optics Communications</i> , <b>2008</b> , 281, 2374-2379	2	51
124	Terahertz Magnetic Mirror Realized with Dielectric Resonator Antennas. <i>Advanced Materials</i> , <b>2015</b> , 27, 7137-44	24	48
123	Flexible terahertz metamaterials for dual-axis strain sensing. <i>Optics Letters</i> , <b>2013</b> , 38, 2104-6	3	48
122	Planar Array of Electric- LC Resonators With Broadband Tunability. <i>IEEE Antennas and Wireless Propagation Letters</i> , <b>2011</b> , 10, 577-580	3.8	46
121	Limitation in thin-film sensing with transmission-mode terahertz time-domain spectroscopy. <i>Optics Express</i> , <b>2014</b> , 22, 972-86	3.3	45
120	Modeling terahertz heating effects on water. <i>Optics Express</i> , <b>2010</b> , 18, 4727-39	3.3	44

119	All-dielectric rod antenna array for terahertz communications. <i>APL Photonics</i> , <b>2018</b> , 3, 051707	5.2	43
118	Broadband Terahertz Circular-Polarization Beam Splitter. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1700852	8.1	42
117	Terahertz multi-beam antenna using photonic crystal waveguide and Luneburg lens. <i>APL Photonics</i> , <b>2018</b> , 3, 126105	5.2	41
116	Insulator-metal transition in substrate-independent VO thin film for phase-change devices. <i>Scientific Reports</i> , <b>2017</b> , 7, 17899	4.9	40
115	Dielectrics for Terahertz Metasurfaces: Material Selection and Fabrication Techniques. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 1900750	8.1	40
114	Numerical removal of water vapour effects from terahertz time-domain spectroscopy measurements. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2008</b> , 464, 2435-2456	2.4	39
113	Demonstration of a highly efficient terahertz flat lens employing tri-layer metasurfaces. <i>Optics Letters</i> , <b>2017</b> , 42, 1867-1870	3	38
112	Recent Progress in Terahertz Metasurfaces. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2017</b> , 38, 1067-1084	2.2	36
111	Metamaterial-Inspired Bandpass Filters for Terahertz Surface Waves on Goubau Lines. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2013</b> , 3, 851-858	3.4	35
110	Nanoscale TiO <sub>2</sub> dielectric resonator absorbers. <i>Optics Letters</i> , <b>2016</b> , 41, 3391-4	3	34
109	Dual-mode behavior of the complementary electric-LC resonators loaded on transmission line: Analysis and applications. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 083705	2.5	33
108	Integrated Silicon Photonic Crystals Toward Terahertz Communications. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1800401	8.1	33
107	Dual Circularly Polarized Series-Fed Microstrip Patch Array With Coplanar Proximity Coupling. <i>IEEE Antennas and Wireless Propagation Letters</i> , <b>2017</b> , 16, 1500-1503	3.8	32
106	Compact Dual-Mode Wideband Filter Based on Complementary Split-Ring Resonator. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2014</b> , 24, 152-154	2.6	29
105	Hybrid metasurface for ultra-broadband terahertz modulation. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 181108	3.4	28
104	All-dielectric integration of dielectric resonator antenna and photonic crystal waveguide. <i>Optics Express</i> , <b>2017</b> , 25, 14706-14714	3.3	27
103	Terahertz Reflectarrays and Nonuniform Metasurfaces. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2017</b> , 23, 1-18	3.8	26
102	Terahertz plasmonic Bessel beamformer. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 021101	3.4	26

101	A Systemized View of Superluminal Wave Propagation. <i>Proceedings of the IEEE</i> , <b>2010</b> , 98, 1775-1786	14.3	26
100	Effective-medium-cladded dielectric waveguides for terahertz waves. <i>Optics Express</i> , <b>2019</b> , 27, 38721-38734	3.4	26
99	Compact Second-Order Bandstop Filter Based on Dual-Mode Complementary Split-Ring Resonator. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2016</b> , 26, 571-573	2.6	24
98	Dielectric-resonator metasurfaces for broadband terahertz quarter- and half-wave mirrors. <i>Optics Express</i> , <b>2018</b> , 26, 14392-14406	3.3	23
97	Simple material parameter estimation via terahertz time-domain spectroscopy. <i>Electronics Letters</i> , <b>2005</b> , 41, 800	1.1	23
96	Material parameter extraction for terahertz time-domain spectroscopy using fixed-point iteration <b>2005</b> ,		23
95	Doped polymer for low-loss dielectric material in the terahertz range. <i>Optical Materials Express</i> , <b>2015</b> , 5, 1373	2.6	21
94	Analysis of 3D-printed metal for rapid-prototyped reflective terahertz optics. <i>Optics Express</i> , <b>2016</b> , 24, 17384-96	3.3	21
93	Attenuated Total Reflection Terahertz Time-Domain Spectroscopy: Uncertainty Analysis and Reduction Scheme. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2016</b> , 6, 32-39	3.4	20
92	Ultra-wideband tri-layer transmissive linear polarization converter for terahertz waves. <i>APL Photonics</i> , <b>2020</b> , 5, 046101	5.2	20
91	Broadband and wide-angle reflective linear polarization converter for terahertz waves. <i>APL Photonics</i> , <b>2019</b> , 4, 096104	5.2	18
90	Single-FSS-Layer Absorber With Improved Bandwidth-Thickness Tradeoff Adopting Impedance-Matching Superstrate. <i>IEEE Antennas and Wireless Propagation Letters</i> , <b>2019</b> , 18, 916-920	3.8	18
89	Low-Profile Terahertz Radar Based on Broadband Leaky-Wave Beam Steering. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2016</b> , 1-10	3.4	18
88	Polarization-dependent thin-film wire-grid reflectarray for terahertz waves. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 031111	3.4	17
87	High-Q Terahertz Absorber With Stable Angular Response. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2020</b> , 10, 204-211	3.4	17
86	Spectral and angular characteristics of dielectric resonator metasurface at optical frequencies. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 191109	3.4	17
85	Terahertz Localized Surface Plasmon Resonances in Coaxial Microcavities. <i>Advanced Optical Materials</i> , <b>2013</b> , 1, 443-448	8.1	17
84	Wideband Endfire 3-D-Printed Dielectric Antenna With Designable Permittivity. <i>IEEE Antennas and Wireless Propagation Letters</i> , <b>2018</b> , 17, 2085-2089	3.8	16

83	Interlayer tuning of X-band frequency-selective surface using liquid crystal <b>2013</b> ,		16
82	Unclad Microphotronics for Terahertz Waveguides and Systems. <i>Journal of Lightwave Technology</i> , <b>2020</b> , 1-1	4	16
81	Microfluidic-based Split-Ring-Resonator Sensor for Real-time and Label-free Biosensing. <i>Procedia Engineering</i> , <b>2015</b> , 120, 163-166		15
80	DIRECT FABRY-PHOT EFFECT REMOVAL. <i>Fluctuation and Noise Letters</i> , <b>2006</b> , 06, L227-L239	1.2	15
79	Terahertz Reflectarray with Enhanced Bandwidth. <i>Advanced Optical Materials</i> , <b>2019</b> , 7, 1900791	8.1	14
78	Dual-Mode Terahertz Time-Domain Spectroscopy System. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2013</b> , 3, 216-220	3.4	14
77	Ultra-wideband far-infrared absorber based on anisotropically etched doped silicon. <i>Optics Letters</i> , <b>2020</b> , 45, 1196-1199	3	14
76	Directional excitation of surface plasmons by dielectric resonators. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	13
75	Dielectric Resonator Nanoantennas: A Review of the Theoretical Background, Design Examples, Prospects, and Challenges. <i>IEEE Antennas and Propagation Magazine</i> , <b>2017</b> , 59, 30-42	1.7	13
74	Terahertz near-field imaging of dielectric resonators. <i>Optics Express</i> , <b>2017</b> , 25, 3756-3764	3.3	13
73	Design of dual-band frequency selective surface with miniaturized elements <b>2014</b> ,		13
72	Broadband terahertz transmissive quarter-wave metasurface. <i>APL Photonics</i> , <b>2020</b> , 5, 096108	5.2	13
71	Broadband Single-Mode Hybrid Photonic Crystal Waveguides for Terahertz Integration on a Chip. <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2000117	6.8	11
70	Horizontally Polarized 360° Beam-Steerable Frequency-Reconfigurable Antenna. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2019</b> , 67, 5231-5242	4.9	11
69	Rapid detection of hairline cracks on the surface of piezoelectric ceramics. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2013</b> , 64, 1275-1283	3.2	11
68	Tunable electric-LC resonators using liquid crystal <b>2013</b> ,		11
67	Gas recognition with terahertz time-domain spectroscopy and spectral catalog: a preliminary study <b>2007</b> ,		11
66	Characteristics of Effective-Medium-Clad Dielectric Waveguides. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2020</b> , 1-1	3.4	11

65	Triple-Band Reconfigurable Low-Profile Monopolar Antenna With Independent Tunability. <i>IEEE Open Journal of Antennas and Propagation</i> , <b>2020</b> , 1, 47-56	1.9	10
64	Efficiency and Scalability of Dielectric Resonator Antennas at Optical Frequencies. <i>IEEE Photonics Journal</i> , <b>2014</b> , 6, 1-10	1.8	9
63	Near-field interactions in electric inductive-capacitive resonators for metamaterials. <i>Journal Physics D: Applied Physics</i> , <b>2012</b> , 45, 485101	3	9
62	Fabry-Pérot interferometer for sensing polar liquids at terahertz frequencies. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 204502	2.5	8
61	Microwave microfluidic sensor based on microstrip-line-coupled complementary resonator <b>2016</b> ,		8
60	Higher-order tunable frequency selective surface with miniaturized elements <b>2015</b> ,		8
59	Analysis of measurement uncertainty in THz-TDS <b>2007</b> ,		8
58	Assessing frost damage in barley using terahertz imaging. <i>Optics Express</i> , <b>2020</b> , 28, 30644-30655	3.3	8
57	Gratingless integrated tunneling multiplexer for terahertz waves. <i>Optica</i> , <b>2021</b> , 8, 621	8.6	8
56	Impact of Infill Pattern on 3D Printed Dielectric Resonator Antennas <b>2018</b> ,		8
55	Effective-medium-clad Bragg grating filters. <i>APL Photonics</i> , <b>2021</b> , 6, 076105	5.2	7
54	Flexible bi-layer terahertz chiral metamaterials. <i>Journal of Optics (United Kingdom)</i> , <b>2015</b> , 17, 085101	1.7	6
53	Metamaterial-inspired microfluidic-based sensor for chemical discrimination <b>2012</b> ,		6
52	Measurement of linearity in THz-TDS <b>2009</b> ,		6
51	Distributed source model for the full-wave electromagnetic simulation of nonlinear terahertz generation. <i>Optics Express</i> , <b>2012</b> , 20, 18397-414	3.3	6
50	Retrofittable antireflection coatings for T-rays. <i>Microwave and Optical Technology Letters</i> , <b>2007</b> , 49, 2267-2270		6
49	Wideband Circularly Polarized 3-D Printed Dielectric Rod Antenna. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2020</b> , 68, 745-753	4.9	6
48	Terahertz and optical Dielectric Resonator Antennas: Potential and challenges for efficient designs <b>2016</b> ,		5

47	Second-order bandpass frequency selective surface for terahertz applications <b>2014</b> ,		5
46	Practical method for determining inductance and capacitance of metamaterial resonators. <i>Electronics Letters</i> , <b>2012</b> , 48, 225	1.1	5
45	Metamaterial-based strain sensors <b>2011</b> ,		5
44	Tutorial on broadband transmissive metasurfaces for wavefront and polarization control of terahertz waves. <i>Journal of Applied Physics</i> , <b>2022</b> , 131, 061101	2.5	5
43	Terahertz transmissive half-wave metasurface with enhanced bandwidth. <i>Optics Letters</i> , <b>2021</b> , 46, 4164-4167		5
42	Beam deflection lens at terahertz frequencies using a hole lattice metamaterial <b>2013</b> ,		4
41	Nondestructive Testing of Defects in Polymer Matrix Composite Materials for Marine Applications Using Terahertz Waves. <i>Journal of Nondestructive Evaluation</i> , <b>2021</b> , 40, 1	2.1	4
40	Linear Series-Fed Patch Array with Dual Circular Polarization or Arbitrary Linear Polarization <b>2019</b> ,		4
39	Terahertz bandpass frequency selective surface with improved out-of-band response <b>2015</b> ,		3
38	Real-time and label-free biosensing with microfluidic-based split-ring-resonator sensor <b>2015</b> ,		3
37	Design and implementation of terahertz reflectarray <b>2012</b> ,		3
36	Compact wideband filter element-based on complementary split-ring resonators <b>2011</b> ,		3
35	Ultrasonic refractive index and sound velocity tomography		3
34	Fast Semi-Analytical Design for Single-FSS-Layer Circuit-Analog Absorbers. <i>IEEE Open Journal of Antennas and Propagation</i> , <b>2020</b> , 1, 483-492	1.9	3
33	IEEE 802.15.3d-Compliant Waveforms for Terahertz Wireless Communications. <i>Journal of Lightwave Technology</i> , <b>2021</b> , 1-1	4	3
32	All-Silicon Terahertz Planar Horn Antenna. <i>IEEE Antennas and Wireless Propagation Letters</i> , <b>2021</b> , 1-1	3.8	3
31	Low-profile monopole antenna with via-less shorting <b>2018</b> ,		2
30	Editorial Introduction to the Special Issue: Terahertz Metamaterials and Photonic Crystals. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2017</b> , 38, 1031-1033	2.2	2



29	Terahertz reflectarray for bidirectional beam splitting <b>2014,</b>		2
28	Removal of water-vapor-induced fluctuations in T-ray signals: a preliminary study <b>2007,</b>		2
27	Frequency-Selective-Surface-Based Mechanically Reconfigurable Terahertz Bandpass Filter. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2022</b> , 1-1	3-4	2
26	Evolution from Air-Cladded to Effective-Medium-Cladded Dielectric Waveguides <b>2019,</b>		1
25	Broadband Terahertz Quarter-Wave Plate Design <b>2019,</b>		1
24	Efficient terahertz metasurface-based flat lens <b>2017,</b>		1
23	Resonance breakdown of dielectric resonator antennas on ground plane at visible frequencies <b>2015</b>		1
22	Plasmonic Absorber Based on Nano-scale Dielectric Resonator Antennas <b>2014,</b>		1
21	Analysis and design of planar dipole array for terahertz magnetic surface wave propagation <b>2013,</b>		1
20	Terahertz magnetic plasmon waveguides <b>2012,</b>		1
19	Design and analysis of a metasurface for supporting spoof surface plasmon polaritons <b>2012,</b>		1
18	Gas recognition with terahertz time-domain spectroscopy and reference-free spectrum: A preliminary study <b>2008,</b>		1
17	Survey of terahertz metamaterial devices <b>2008,</b>		1
16	Classification of osteosarcoma T-ray responses using adaptive and rational wavelets for feature extraction <b>2007,</b>		1
15	T-ray relevant frequencies for osteosarcoma classification <b>2005,</b>		1
14	Circuit-Based Design and Optimization for Broadband Terahertz Metasurfaces <b>2021,</b>		1
13	Terahertz Waveguides: Broadband Single-Mode Hybrid Photonic Crystal Waveguides for Terahertz Integration on a Chip (Adv. Mater. Technol. 7/2020). <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2070039	6.8	1
12	Demonstration of short-range terahertz radar using high-gain leaky-wave antenna <b>2016,</b>		1

11	Terahertz Absorber Design Adopting Metallic FSS in Sub-Skin-Depth Thickness <b>2019</b> ,	1
10	Polarization Responses of Terahertz Dielectric Rod Antenna Arrays <b>2019</b> ,	1
9	Study of Microstrip-Based Terahertz Phase Shifter Using Liquid Crystal <b>2019</b> ,	1
8	Plasmonics: Ultrabroadband Plasmonic Absorber for Terahertz Waves (Advanced Optical Materials 3/2015). <i>Advanced Optical Materials</i> , <b>2015</b> , 3, 274-274	8.1
7	Terahertz Reflectarray: Terahertz Reflectarray with Enhanced Bandwidth (Advanced Optical Materials 20/2019). <i>Advanced Optical Materials</i> , <b>2019</b> , 7, 1970076	8.1
6	High Frequency Properties and Applications of Elastomeric Silicones <b>2014</b> , 211-224	
5	Plasmonics: Terahertz Localized Surface Plasmon Resonances in Coaxial Microcavities (Advanced Optical Materials 6/2013). <i>Advanced Optical Materials</i> , <b>2013</b> , 1, 412-412	8.1
4	Ultrasonic diffraction tomography by pulse-plane wave: experimental result by frequency synthesis method. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2005</b> , 2005, 1822-5	
3	Timing-Jitter Tolerant Nyquist Pulse for Terahertz Communications. <i>Journal of Lightwave Technology</i> , <b>2021</b> , 1-1	4
2	Terahertz transmissive half-wave metasurface with enhanced bandwidth: publisher's note. <i>Optics Letters</i> , <b>2021</b> , 46, 4640	3
1	Frequency-Reconfigurable Circularly-Polarized Omnidirectional Antenna. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2022</b> , 1-1	4-9