

# Thomas M Weller

## List of Publications by Year in descending order

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119  
papers

1,061  
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471509

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552781

26  
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119  
docs citations

119  
times ranked

948  
citing authors

#	ARTICLE	IF	CITATIONS
1	A 2.45 GHz Phased Array Antenna Unit Cell Fabricated Using 3-D Multi-Layer Direct Digital Manufacturing. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 4382-4394.	4.6	86
2	Fabrication and Microwave Characterization of 3-D Printed Transmission Lines. IEEE Microwave and Wireless Components Letters, 2015, 25, 823-825.	3.2	58
3	Ka-Band Characterization of Binder Jetting for 3-D Printing of Metallic Rectangular Waveguide Circuits and Antennas. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 3099-3108.	4.6	50
4	Fabrication, Modeling, and Application of Ceramic-Thermoplastic Composites for Fused Deposition Modeling of Microwave Components. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 2073-2084.	4.6	40
5	Miniaturization of a Spiral Antenna Using Periodic Z-Plane Meandering. IEEE Transactions on Antennas and Propagation, 2015, 63, 1843-1848.	5.1	33
6	Characterization and Modeling of K-Band Coplanar Waveguides Digitally Manufactured Using Pulsed Picosecond Laser Machining of Thick-Film Conductive Paste. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 3180-3187.	4.6	33
7	Compact and Wideband MMIC Phase Shifters Using Tunable Active Inductor-Loaded All-Pass Networks. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 1047-1057.	4.6	32
8	Tunable Magneto-Dielectric Polymer Nanocomposites for Microwave Applications. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 302-310.	4.6	27
9	3D multi-layer additive manufacturing of a 2.45 GHz RF front end. , 2015, , .		24
10	Multimaterial and Multilayer Direct Digital Manufacturing of 3-D Structural Microwave Electronics. Proceedings of the IEEE, 2017, 105, 688-701.	21.3	24
11	UHF RFID Tags for On-/Off-Metal Applications Fabricated Using Additive Manufacturing. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 1635-1638.	4.0	23
12	Dielectric and structural properties of pulsed laser deposited and sputtered barium strontium titanate thin films. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2007, 139, 177-185.	3.5	21
13	Optimization and Implementation of Impedance-Matched True-Time-Delay Phase Shifters on Quartz Substrate. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 335-342.	4.6	20
14	A Quasi Yagi Antenna Backed by a Metal Reflector. IEEE Transactions on Antennas and Propagation, 2008, 56, 3868-3872.	5.1	20
15	High efficiency diode doubler with conjugate- matched antennas. , 2007, , .		19
16	Additive Manufacturing of Radio-Frequency Components [Scanning the Issue]. Proceedings of the IEEE, 2017, 105, 589-592.	21.3	19
17	Multilayer Dielectric End-Fire Antenna With Enhanced Gain. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 2213-2217.	4.0	19
18	A Compact Reverberation Chamber for Hyper-Rayleigh Channel Emulation. IEEE Transactions on Antennas and Propagation, 2009, 57, 3962-3968.	5.1	18

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19	A Compact 3-D Harmonic Repeater for Passive Wireless Sensing. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 3309-3316.	4.6	18
20	Series-Fed Microstrip Antenna Arrays and Their Application to Omni-Directional Antennas. IEEE Transactions on Antennas and Propagation, 2012, 60, 4954-4959.	5.1	17
21	An electrically-small, 3-D cube antenna fabricated with additive manufacturing. , 2013, , .		16
22	Meshed rectangular waveguide for high power, low loss and reduced weight applications. , 2016, , .		15
23	High-k and low-loss thermoplastic composites for Fused Deposition Modeling and their application to 3D-printed Ku-band antennas. , 2016, , .		15
24	Embedded 6-GHz 3-D Printed Half-Wave Dipole Antenna. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 145-148.	4.0	15
25	Sensitivity Tunable Inductive Fluid Conductivity Sensor Based on RF Phase Detection. IEEE Sensors Journal, 2007, 7, 1300-1301.	4.7	13
26	Metallic 3D printed Ka-band pyramidal horn using binder jetting. , 2016, , .		13
27	Propagation Characteristics and Modeling of Meshed Ground Coplanar Waveguide. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 3460-3468.	4.6	13
28	MMIC packaging and on-chip low-loss lateral interconnection using additive manufacturing and laser machining. , 2017, , .		13
29	Laser-Assisted Additive Manufacturing of mm-Wave Lumped Passive Elements. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 5462-5471.	4.6	13
30	3D printed multilayer mm-wave dielectric rod antenna with enhanced gain. , 2017, , .		12
31	Tunable harmonic re-radiator for sensing applications. , 2009, , .		11
32	A 3-D printed miniaturized log-periodic dipole antenna. , 2014, , .		11
33	Effects of Soil Characteristics on Passive Wireless Sensor Interrogation. IEEE Sensors Journal, 2018, 18, 3454-3460.	4.7	11
34	Two-dimensional finite difference time domain analysis of cylindrical transmission lines. International Journal of Electronics, 2000, 87, 1065-1081.	1.4	10
35	A system and technology perspective on future 5G mm-wave communication systems. , 2017, , .		10
36	Design and Analysis of a Multiport Circuit for Shaping Sub-Nanosecond Pulses. IEEE Transactions on Microwave Theory and Techniques, 2008, 56, 2764-2770.	4.6	9

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37	Noncontact Electrical Characterization of Printed Resistors Using Microwave Microscopy. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 509-515.	4.7	9
38	Low permittivity cladding to improve the performance of dielectric rod waveguides and dielectric end-fire antennas. , 2016, , .		9
39	Laser enhanced direct print additive manufacturing for mm-wave components and packaging. , 2017, , .		9
40	3D Printed Wideband Multilayered Dual-Polarized Stacked Patch Antenna With Integrated MMIC Switch. IEEE Open Journal of Antennas and Propagation, 2021, 2, 38-48.	3.7	9
41	Liquids characterization using a dielectric resonator-based microwave probe. , 2012, , .		8
42	Phased Array Antenna Element with Embedded Cavity and MMIC using Direct Digital Manufacturing. , 2019, , .		8
43	Finite difference time domain analysis of cylindrical coplanar waveguide circuits. International Journal of Electronics, 2000, 87, 1083-1094.	1.4	7
44	One dimensional capacitive loading in a frequency selective surface for low profile antenna applications. , 2011, , .		7
45	A High-Efficiency, Miniaturized Sensor Node With 3-D Machined-Substrate Antennas for Embedded Wireless Monitoring. IEEE Sensors Journal, 2015, 15, 5036-5044.	4.7	7
46	Simultaneous RF electrical conductivity and topography mapping of smooth and rough conductive traces using microwave microscopy to identify localized variations. , 2015, , .		7
47	The ground plane effect of a small meandered line antenna. , 2011, , .		6
48	Miniaturization of microstrip square open loop resonators using surface mount capacitors. , 2011, , .		6
49	A high-efficiency, miniaturized sensor node with machined-substrate antennas for embedded wireless monitoring. , 2013, , .		6
50	Ku-band additive manufactured multilayer dielectric rod waveguide. , 2017, , .		6
51	Additive manufactured tripolar antenna system for link improvement in high multipath environments. , 2017, , .		6
52	Thermal and Vapor Smoothing of Thermoplastic for Reduced Surface Roughness of Additive Manufactured RF Electronics. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 1151-1160.	2.5	6
53	3-D Micro Coaxial Transmission Lines With Integrated MEM Capacitors. IEEE Microwave and Wireless Components Letters, 2007, 17, 858-860.	3.2	5
54	Polyimide core 3D rectangular micro coaxial transmission lines. Microwave and Optical Technology Letters, 2010, 52, 1291-1293.	1.4	5

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55	Non-uniform bias enhancement of a varactor-tuned FSS used with a low profile 2.4 GHz dipole antenna. , 2012, , .		5
56	A high efficiency, electrically-small, 3-D machined-substrate antenna fabricated with fused deposition modeling and 3-D printing. , 2014, , .		5
57	Direct digital manufacturing of mm-wave vertical interconnects. , 2018, , .		5
58	Dielectric Rod Antenna Array With Planar Folded Slot Antenna Excitation. IEEE Open Journal of Antennas and Propagation, 2021, 2, 664-673.	3.7	5
59	MEMS Based 3-D Micro Coaxial Transmission Lines. , 2006, , .		4
60	Low-cost non-contact microwave probe design for insulating materials characterization. , 2011, , .		4
61	An electrically small meandered line antenna with truncated ground plane. , 2011, , .		4
62	Comparison of barium strontium titanate varactors on magnesium oxide and alumina substrates. , 2011, , .		4
63	Temperature and voltage impact on intermodulation distortion of planar barium strontium titanate varactors. , 2012, , .		4
64	Embedded 6 GHz 3D-printed half-wave dipole antenna array. , 2017, , .		4
65	3D printed on-package tripolar antennas for mitigating harsh channel conditions. , 2017, , .		4
66	Wideband Ku-band antennas using multi-layer direct digital manufacturing. , 2017, , .		4
67	Low-Loss Suspended Crossover Interconnects using Laser Enhanced Direct Print Additive Manufacturing. , 2019, , .		4
68	W-band Finite Ground Coplanar Waveguide (FG-CPW) using Laser Enhanced Direct-Print Additive Manufacturing (LE-DPAM). , 2019, , .		4
69	Engineered Nanocomposites for Additive Manufacturing of Microwave Electronics. International Symposium on Microelectronics, 2015, 2015, 000189-000196.	0.0	4
70	Conductivity Improvement of Microdispensed Microstrip Lines and Grounded Coplanar Waveguides Using Laser Micromachining. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 2129-2132.	2.5	4
71	Micro coaxial-fed millimeter-wave slot antenna. , 2008, , .		3
72	Improvements in cross ratio invariance techniques for coaxial probe dielectric measurements. , 2012, , .		3

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73	A Quasi-Yagi Antenna Backed by a Jerusalem Cross Frequency Selective Surface. International Journal of Microwave Science and Technology, 2013, 2013, 1-8.	0.6	3
74	Laser Assisted Additive Manufacturing of CPW mm-Wave Interdigital Capacitors. , 2018, , .		3
75	2.4 GHz Band Pass Filter Architecture for Direct Print Additive Manufacturing. , 2018, , .		3
76	An 18â€“26 GHz range calibrated linear synthetic aperture radar prototype suitable for security applications. , 2018, , .		3
77	An X-Band Dielectric Rod Antenna for Subdermal Tumor Heating to Assist Electroporation-Mediated DNA Delivery. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2021, 5, 340-346.	3.4	3
78	Analytical and Experimental Study of Multilayer Dielectric Rod Waveguides. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 2088-2097.	4.6	3
79	Structural and Electrical Properties of Nanocrystalline Diamond based Barium Strontium Titanate Varactors. Ferroelectrics, 2008, 377, 75-85.	0.6	2
80	Magnetically tunable nanocomposites for microwave applications. , 2010, , .		2
81	A miniature, broadband, non-dispersive phase shifter based on CRLH TL unit cells. , 2012, , .		2
82	Design and characterization of a passive harmonic sensor embedded in sand. , 2013, , .		2
83	An electrically-small, 3-D cube antenna fabricated with additive manufacturing. , 2013, , .		2
84	Wideband Band-Stop X-Band Filter Using Electrically Small Tightly Coupled Resonators. IEEE Microwave and Wireless Components Letters, 2013, 23, 356-358.	3.2	2
85	Ku band Metal-Strip-Loaded Dielectric Rod Antenna with Narrowband Gain Enhancement. , 2018, , .		2
86	Design of Cladded Dielectric Rod Antennas. , 2019, , .		2
87	A Generalized Radiometer System Equation That Includes Temperature-Dependent System Losses. , 2019, , .		2
88	Optical interconnects on a flexible substrate by multi-material hybrid additive and subtractive manufacturing. Additive Manufacturing, 2021, 48, 102409.	3.0	2
89	Measurement of Electrical Conductivity of Direct Digital Printed Conductive Traces Using Near-Field Microwave Microscopy. International Symposium on Microelectronics, 2014, 2014, 000898-000904.	0.0	2
90	High-Permittivity and Low-Loss Electromagnetic Composites Based on Co-fired Ba <sub>0.55</sub> Sr <sub>0.45</sub> TiO <sub>3</sub> or MgCaTiO <sub>2</sub> Microfillers for Additive Manufacturing and Their Application to 3-D Printed K-Band Antennas. Journal of Microelectronics and Electronic Packaging, 2016, 13, 102-112.	0.7	2

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91	Additively Manufactured, Low Loss 20 GHz DC Contact RF MEMS Switch Using Laterally Actuated, Fix-Free Beam. , 2021, , .		2
92	<i>W</i> -Band MMIC Chip Assembly Using Laser-Enhanced Direct Print Additive Manufacturing. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 5381-5392.	4.6	2
93	Determining the RF resistance and Q-factor of air-core inductors. Microwave and Optical Technology Letters, 2001, 29, 89-93.	1.4	1
94	Integrated Micro Coaxial Air-Lines with Perforations. , 2006, , .		1
95	The effect of alignment tolerance on multilayer air cavity microstrip patches. , 2007, , .		1
96	Broadside 6-element series-fed slot-coupled microstrip antenna array. , 2012, , .		1
97	An electrically-small, 3-D cube antenna fabricated with additive manufacturing. , 2013, , .		1
98	Low profile tunable dipole antenna using BST varactors for biomedical applications. , 2013, , .		1
99	An efficient, electrically-small, 3-D machined-substrate antenna. , 2013, , .		1
100	4 GHz 3D-printed balun-fed bowtie antenna with finite ground plane for gain and impedance matching enhancement. , 2016, , .		1
101	Multi-layer RF tissue phantoms for mimicking a human core. , 2017, , .		1
102	High- <i>k</i> and low-loss electromagnetic composites for direct digital manufacturing of mmWave devices. , 2017, , .		1
103	Additively Manufactured Vertically Interconnected On-Package Microstrip Patch Antenna. , 2018, , .		1
104	A Novel Background Calibration Technique for Microwave Radiometric Sensors in Indoor Applications. , 2020, 4, 1-4.		1
105	Versatility of Laser Enhanced Direct Print Additive Manufacturing. NIP & Digital Fabrication Conference, 2021, 2021, 32-36.	0.0	1
106	Laser-Assisted and Additively Manufactured Multilayer Metal-Insulator-Metal Capacitors. , 2022, , .		1
107	Close-In Phase Noise Measurements of Injection Locked Oscillators. , 1998, , .		0
108	Wideband Frequency-Domain Measurement of Multipath Effects in 2.4 GHz Wireless Channels. , 1998, , .		0

#	ARTICLE	IF	CITATIONS
109	Electrical and Structural Diagnostics of Barium Strontium Titanate (BST) Thin Films. Materials Research Society Symposia Proceedings, 2011, 1292, 149.	0.1	0
110	In situ characterization of pin diode waveforms using electro-optic sampling. Microwave and Optical Technology Letters, 2012, 54, 2653-2656.	1.4	0
111	An electrically-small, 3-D cube antenna fabricated with additive manufacturing. , 2013, , .		0
112	An electrically-small, 3-D cube antenna fabricated with additive manufacturing. , 2013, , .		0
113	Periodic spherical loop antenna. , 2015, , .		0
114	Comparison of coherent and non-coherent scattering models for stratified media. , 2017, , .		0
115	Ku band Metal Strip-Loaded Dielectric Rod Waveguide Filter. , 2019, , .		0
116	Laser Enhanced Direct Print Additive Manufacturing of Embedded Circular Cross-Section Optical Fiber Interconnects for Board Level Computing Devices. Additive Manufacturing, 2020, 34, 101227.	3.0	0
117	Additive Manufactured, On-Package 2.4 GHz Tripolar Antenna System for Cluttered Channels. , 2021, , .		0
118	Dielectric Lens Designs for Antenna Beam Shaping in a Subdermal Tumor Treatment Device. , 2021, , .		0
119	A Semi-Empirical Model for Predicting the Effects of Moisture on Microwave Signal Attenuation in Fouled Railroad Ballast. , 2022, , .		0