John F Federici

List of Publications by Year in descending order

130 papers	5,638 citations	147801 31 h-index	79698 73 g-index
131 all docs	131 docs citations	131 times ranked	4782 citing authors

#	Article	IF	Citations
1	Non-destructive comparative evaluation of fossil amber using terahertz time-domain spectroscopy. PLoS ONE, 2022, 17, e0262983.	2.5	4
2	Eavesdropping Risk Evaluation on Terahertz Wireless Channels in Atmospheric Turbulence. IEEE Access, 2021, 9, 101916-101923.	4.2	12
3	Effect of 3D Printing Parameters on the Refractive Index, Attenuation Coefficient, and Birefringence of Plastics in Terahertz Range. Advances in Materials Science and Engineering, 2021, 2021, 1-9.	1.8	3
4	Terahertz Van Atta Retroreflecting Arrays. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 997-1008.	2.2	2
5	Comparison of Terahertz, Microwave, and Laser Power Beaming Under Clear and Adverse Weather Conditions. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 979-996.	2.2	8
6	Terahertz Quantum Cryptography. IEEE Journal on Selected Areas in Communications, 2020, 38, 483-495.	14.0	30
7	Industrial Applications of THz Imaging: Plastics, Food Industry, Moisture Detection, and Additive Manufacturing. , 2020, , .		0
8	Stochastic Interference Modeling and Experimental Validation for Pulse-Based Terahertz Communication. IEEE Transactions on Wireless Communications, 2019, 18, 4103-4115.	9.2	27
9	Terahertz Attenuation in Snow and Sleet. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 868-877.	2.2	20
10	Propagation studies for indoor and outdoor terahertz wireless links. , 2019, , .		3
11	Fabrication of a Flexible Current Collector for Lithium Ion Batteries by Inkjet Printing. Batteries, 2018, 4, 42.	4.5	24
12	Inkjet printable constantan ink for the fabrication of flexible and conductive film. Chemical Engineering Journal, 2017, 313, 27-36.	12.7	20
13	Comparison of thermal decomposition and chemical reduction of particle-free silver ink for inkjet printing. Thin Solid Films, 2017, 636, 397-402.	1.8	13
14	Non-destructive evaluation of specialty coating degradation using terahertz time-domain spectroscopy. Proceedings of SPIE, 2017, , .	0.8	1
15	Multi-user Interference Modeling and Experimental Characterization for Pulse-based Terahertz Communication. , 2016, , .		2
16	Review of weather impact on outdoor terahertz wireless communication links. Nano Communication Networks, 2016, 10, 13-26.	2.9	68
17	Weather Impact on Outdoor Terahertz Wireless Links. , 2015, , .		8
18	Experimental Comparison of Terahertz and Infrared Signaling in Controlled Atmospheric Turbulence. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 130-143.	2.2	46

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19	Experimental Comparison of Terahertz and Infrared Signaling in Laboratory-Controlled Rain. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 856-865.	2.2	27
20	Comparison of Experimental and Theoretical Determined Terahertz Attenuation in Controlled Rain. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 1195-1202.	2.2	23
21	Fabrication of rechargeable lithium ion batteries using water-based inkjet printed cathodes. Journal of Manufacturing Processes, 2015, 20, 198-205.	5.9	60
22	Effect of alkyl chain length on chemical sensing of polydiacetylene and polydiacetylene/ZnO nanocomposites. Colloid and Polymer Science, 2014, 292, 3137-3146.	2.1	4
23	Reversible chromatic sensor fabricated by inkjet printing TCDA-ZnO on a paper substrate. Sensors and Actuators B: Chemical, 2014, 193, 10-18.	7.8	12
24	Inkjet printing colorimetric controllable and reversible poly-PCDA/ZnO composites. Sensors and Actuators B: Chemical, 2014, 203, 320-326.	7.8	14
25	Elimination of Fresnel Reflection Boundary Effects and Beam Steering in Pulsed Terahertz Computed Tomography. Journal of Infrared, Millimeter, and Terahertz Waves, 2013, 34, 539-555.	2.2	26
26	Thermochromism in Polydiacetyleneâ€“ZnO Nanocomposites. Journal of Physical Chemistry C, 2013, , 130913150834008.	3.1	10
27	Experimental comparison of performance degradation from terahertz and infrared wireless links in fog. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 179.	1.5	73
28	Experimental comparison of terahertz and infrared data signal attenuation in dust clouds. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 2360.	1.5	81
29	Charge generation, charge transport, and residual charge in the electrospinning of polymers: A review of issues and complications. Journal of Applied Physics, 2012, 111, .	2.5	141
30	Review of Moisture and Liquid Detection and Mapping using Terahertz Imaging. Journal of Infrared, Millimeter, and Terahertz Waves, 2012, 33, 97-126.	2.2	113
31	Non-Destructive Measurement of Water Diffusion in Natural Cork Enclosures Using Terahertz Spectroscopy and Imaging. Journal of Infrared, Millimeter, and Terahertz Waves, 2011, 32, 513-527.	2.2	18
32	THz wireless communications: 2.5 Gb/s error-free transmission at 625 GHz using a narrow-bandwidth 1 mW THz source. , 2011, , .		42
33	Study of structural defects inside natural cork by pulsed terahertz tomography. , 2011, , .		4
34	2.5â€…Gbit/s duobinary signalling with narrow bandwidth 0.625 terahertz source. Electronics Letters, 2011, 47, 856.	1.0	59
35	RDX Detection with THz Spectroscopy. Journal of Infrared, Millimeter, and Terahertz Waves, 2010, 31, 1171-1181.	2.2	16
36	Review of terahertz and subterahertz wireless communications. Journal of Applied Physics, 2010, 107, .	2.5	917

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37	Terahertz response of microfluidic-jetted three-dimensional flexible metamaterials. Applied Optics, 2010, 49, 1179.	2.1	9
38	Two-dimensional interferometric and synthetic aperture imaging with a hybrid terahertz/ millimeter wave system. Applied Optics, 2010, 49, E13.	2.1	13
39	The origin and effect of space charges in electrospinning. , 2010, , .		0
40	Application of terahertz Gouy phase shift from curved surfaces for estimation of crop yield. Applied Optics, 2009, 48, 1382.	2.1	23
41	Video-rate terahertz interferometric and synthetic aperture imaging. Applied Optics, 2009, 48, 3788.	2.1	9
42	Detection of explosives by Terahertz synthetic aperture imagingâ€"focusing and spectral classification. Comptes Rendus Physique, 2008, 9, 248-261.	0.9	16
43	Terahertz study of trichloroanisole by time-domain spectroscopy. Chemical Physics, 2008, 353, 185-188.	1.9	6
44	Data encoding on terahertz signals for communication and sensing. Optics Letters, 2008, 33, 393.	3.3	58
45	Rapid-phase modulation of terahertz radiation for high-speed terahertz imaging and spectroscopy. Optics Letters, 2008, 33, 1593.	3.3	58
46	Nondestructive evaluation of cork enclosures using terahertz/millimeter wave spectroscopy and imaging. Applied Optics, 2008, 47, 72.	2.1	55
47	Microfabricated implantable pressure sensor for flow measurement. Proceedings of SPIE, 2008, , .	0.8	1
48	Terahertz response of microfluidic-jetted fabricated 3D multilayer metamaterials. , 2008, , .		0
49	Microfabricated implantable flow sensor for medical applications. , 2008, , .		1
50	TERAHERTZ INTERFEROMETRIC AND SYNTHETIC APERTURE IMAGING. International Journal of High Speed Electronics and Systems, 2007, 17, 431-443.	0.7	2
51	Cyclic thin film flexible pressure sensor testing. , 2007, , .		0
52	Terahertz interferometric imaging of RDX. , 2007, , .		4
53	TERAHERTZ INTERFEROMETRIC AND SYNTHETIC APERTURE IMAGING. Selected Topics in Electornics and Systems, 2007, , 239-251.	0.2	0
54	T-rays vs. terrorists. IEEE Spectrum, 2007, 44, 47-52.	0.7	13

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55	Characteristics of HfO2and SiO2on p-type silicon wafers using terahertz spectroscopy. Semiconductor Science and Technology, 2007, 22, 457-463.	2.0	0
56	Detection of Explosives by Terahertz Imaging. , 2007, , 323-366.		6
57	ARTIFICIAL NEURAL NETWORK ANALYSIS IN INTERFEROMETRIC THz IMAGING FOR DETECTION OF LETHAL AGENTS. Journal of Infrared, Millimeter and Terahertz Waves, 2007, 27, 1145-1158.	0.6	8
58	Effects of Scattering on THz Spectra of Granular Solids. Journal of Infrared, Millimeter and Terahertz Waves, 2007, 28, 969-978.	0.6	53
59	Terahertz Synthetic Aperture and Interferometric Imaging. , 2007, , .		1
60	A non contact characterization technique of the defect states of high k dielectrics using THz radiation. , 2006, , .		0
61	Interferometric terahertz imaging for detection of lethal agents using artificial neural network analyses. , 2006, , .		1
62	Terahertz interferometric and synthetic aperture imaging. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 1168.	1.5	40
63	Characterization of hollow polycarbonate metal waveguides using Terahertz time domain spectroscopy. , 2006, , .		2
64	Terahertz interferometric imaging of a concealed object. , 2006, , .		6
65	Grain size dependent scattering studies of common materials using THz time domain techniques. , 2006, 6120, 117.		5
66	THz reflection spectroscopy of C-4 explosive and its detection through interferometric imaging. , 2006, 6120, 58.		10
67	Terahertz interferometric and synthetic aperture imaging. , 2006, 6212, 279.		2
68	Terahertz imaging using an interferometric array. , 2005, , .		6
69	THz standoff detection and imaging of explosives and weapons. , 2005, , .		18
70	Noninvasive Study of Explosive Materials by Time Domain Spectroscopy and FTIR. AIP Conference Proceedings, 2005, , .	0.4	3
71	Biological material imaging using THz-echo analysis method. , 2005, , .		0
72	Flexible membrane pressure sensor. Sensors and Actuators A: Physical, 2005, 119, 332-335.	4.1	82

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73	THz imaging and sensing for security applicationsâ€"explosives, weapons and drugs. Semiconductor Science and Technology, 2005, 20, S266-S280.	2.0	1,517
74	<title>THz standoff detection and imaging of explosives and weapons (Invited Paper)</title>. , 2005, 5781, 75.		19
75	Application of THz Imaging in Security Screening. , 2005, , .		0
76	Physical imaging of void using ultrafast light in optical precision. , 2005, , .		0
77	Terahertz study of 1,3,5-trinitro-s-triazine by time-domain and Fourier transform infrared spectroscopy. Applied Physics Letters, 2004, 85, 5535-5537.	3.3	120
78	Optical and electronic characteristics of single walled carbon nanotubes and silicon nanoclusters by tetrahertz spectroscopy. Journal of Applied Physics, 2004, 96, 6685-6689.	2.5	29
79	Analysis of terahertz spectral images of explosives and bioagents using trained neural networks. , 2004, , .		9
80	Determining thickness independently from optical constants by use of ultrafast light. Optics Letters, 2004, 29, 2435.	3.3	9
81	Analytical solution for photonic band-gap crystals using Drude conductivity. American Journal of Physics, 2004, 72, 1051-1054.	0.7	20
82	Characteristics of nanoscale composites by THz spectroscopy. , 2004, 5268, 53.		0
83	Terahertz near-field interferometric and synthetic aperture imaging. , 2004, , .		27
84	Transfer function study of biological samples by the THz-TDS. , 2004, , .		0
85	Optical properties around resonance peaks by THz-TDS. , 2004, , .		2
86	Detection of the agent inside or behind a barrier material. , 2004, , .		0
87	An integrated photonic sensor for in situ monitoring of hazardous organics. Sensors and Actuators B: Chemical, 2003, 92, 121-126.	7.8	17
88	Neural network analysis of terahertz spectra of explosives and bio-agents. , 2003, 5070, 60.		13
89	Polarized light reflection from strained sinusoidal surfaces. Applied Optics, 2003, 42, 5198.	2.1	2
90	Terahertz imaging using an interferometric array. Applied Physics Letters, 2003, 83, 2477-2479.	3.3	59

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91	Resistance to cracking of a stretchable semiconductor: Speed of crack propagation for varying energy release rate. Materials Research Society Symposia Proceedings, 2003, 795, 463.	0.1	0
92	Measurement of skin stretch via light reflection. Journal of Biomedical Optics, 2003, 8, 80.	2.6	23
93	CHARACTERISTICS OF NANO-SCALE COMPOSITES AT THz AND IR SPECTRAL REGIONS. International Journal of High Speed Electronics and Systems, 2003, 13, 969-993.	0.7	0
94	Characteristics of nanoscale composites by terahertz spectroscopy. , 2003, , .		2
95	Terahertz near-field imaging. Physics in Medicine and Biology, 2002, 47, 3727-3734.	3.0	24
96	Terahertz pulse propagation through small apertures. Applied Physics Letters, 2001, 79, 907-909.	3.3	115
97	Collection-mode near-field imaging with 0.5-THz pulses. IEEE Journal of Selected Topics in Quantum Electronics, 2001, 7, 600-607.	2.9	108
98	Study of single-cycle pulse propagation inside a terahertz near-field probe. Applied Physics Letters, 2001, 78, 252-254.	3.3	32
99	Lighting up erbium with water: Observation of substantial crystalline matrix element enhancements. Journal of Applied Physics, 2001, 90, 2678-2682.	2.5	2
100	Cellular automata model for persistent photoconductivity in YBCO. Journal of Physics Condensed Matter, 2000, 12, L261-L267.	1.8	5
101	Near-field microscope probe for far infrared time domain measurements. Applied Physics Letters, 2000, 77, 591-593.	3.3	57
102	Terahertz near-field microscopy based on a collection mode detector. Applied Physics Letters, 2000, 77, 3496-3498.	3.3	114
103	Wavelength and photon dose dependence of infrared quenched persistent photoconductivity inYBa2Cu3O6+x. Physical Review B, 1999, 60, 6827-6833.	3.2	6
104	Characterization of laser ablated silicon thin films. Thin Solid Films, 1999, 339, 102-108.	1.8	15
105	Noninvasive light-reflection technique for measuring soft-tissue stretch. Applied Optics, 1999, 38, 6653.	2.1	17
106	Coherent terahertz radiation detection: Direct comparison between free-space electro-optic sampling and antenna detection. Applied Physics Letters, 1998, 73, 444-446.	3.3	145
107	Optical Science and Engineering Curriculum at NJIT. Journal of Engineering Education, 1998, 87, 575-582.	3.0	5
108	Design and performance of singular electric field terahertz photoconducting antennas. Applied Physics Letters, 1997, 71, 2076-2078.	3.3	123

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109	Local structural and electronic changes accompanying photodoping in YBA2Cu3O6+x. Physica C: Superconductivity and Its Applications, 1997, 292, 163-170.	1.2	9
110	Infrared quenching of photoinduced persistent conductivity in YBa2Cu3O6+x. Applied Physics Letters, 1996, 69, 3260-3262.	3.3	14
111	Defect mechanism of photoinduced superconductivity inYBa2Cu3O6+x. Physical Review B, 1995, 52, 15592-15597.	3.2	40
112	Photolithographic patterning of porous silicon using silicon nitride and silicon carbide masks. Materials Letters, 1995, 23, 209-214.	2.6	17
113	Charge-distributions in YuPr1â^'uBa2Cu3Ox. Physica C: Superconductivity and Its Applications, 1994, 235-240, 2161-2162.	1.2	4
114	Annular erbium-ion distribution for ruggedized optical fiber amplifiers. Optics Letters, 1993, 18, 1165.	3.3	0
115	Cooper pair breaking in lead measured by pulsed terahertz spectroscopy. IEEE Transactions on Applied Superconductivity, 1993, 3, 1461-1464.	1.7	4
116	Spectral dependence of noise and gain in Er-doped fiber preamplifier at 980 nm. , 1993, , .		0
117	Hybrid Er-doped fibre amplifiers at 980â€“1480 nm for long distance optical communications. Electronics Letters, 1992, 28, 1642.	1.0	8
118	Direct picosecond measurement of photoinduced Cooper-pair breaking in lead. Physical Review B, 1992, 46, 11153-11156.	3.2	35
119	Intervalley scattering in GaAs and InP probed by pulsed farâ€infrared transmission spectroscopy. Applied Physics Letters, 1992, 60, 1477-1479.	3.3	80
120	Review of four-wave mixing and phase conjugation in plasmas. IEEE Transactions on Plasma Science, 1991, 19, 549-564.	1.3	19
121	Picosecond pump and probe spectroscopy utilizing freely propagating terahertz radiation. Optics Letters, 1991, 16, 48.	3.3	81
122	Logâ€periodic antennas for pulsed terahertz radiation. Applied Physics Letters, 1991, 59, 262-264.	3.3	44
123	Four-wave mixing and phase conjugation in plasmas using ionization nonlinearities. Physical Review A, 1991, 44, 5158-5172.	2.5	2
124	Thermally activated infrared-active vibrational mode inBaBiO3. Physical Review B, 1991, 43, 8617-8619.	3.2	4
125	Interferometric characterization of 160 fs farâ€infrared light pulses. Applied Physics Letters, 1991, 59, 893-895.	3.3	115
126	Optical characterization of excited states inBaBiO3. Physical Review B, 1990, 42, 923-926.	3.2	25

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127	Î“ to X transport of photoexcited electrons in type II GaAs/AlAs multiple quantum well structures. Applied Physics Letters, 1989, 54, 1681-1683.	3.3	56
128	Four-Wave Mixing And Phase Conjugation In Plasmas Using Ionization Nonlinearities. Proceedings of SPIE, 1989, 1059, 243.	0.8	1
129	The feasibility of C. W. degenerate four-wave mixing in the far-infrared to millimeter region using an artificial Kerr medium. Journal of Infrared, Millimeter and Terahertz Waves, 1988, 9, 419-442.	0.6	2
130	Degenerate Four-Wave Mixing In Collisional And Inhomogeneous Plasmas. Proceedings of SPIE, 1988, 0879, 45.	0.8	0