

# John F Federici

## List of Publications by Year in descending order

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130  
papers

5,638  
citations

147566

31  
h-index

79541

73  
g-index

131  
all docs

131  
docs citations

131  
times ranked

4782  
citing authors

#	ARTICLE	IF	CITATIONS
1	THz imaging and sensing for security applications—explosives, weapons and drugs. <i>Semiconductor Science and Technology</i> , 2005, 20, S266-S280.	1.0	1,517
2	Review of terahertz and subterahertz wireless communications. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	917
3	Coherent terahertz radiation detection: Direct comparison between free-space electro-optic sampling and antenna detection. <i>Applied Physics Letters</i> , 1998, 73, 444-446.	1.5	145
4	Charge generation, charge transport, and residual charge in the electrospinning of polymers: A review of issues and complications. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	141
5	Design and performance of singular electric field terahertz photoconducting antennas. <i>Applied Physics Letters</i> , 1997, 71, 2076-2078.	1.5	123
6	Terahertz study of 1,3,5-trinitro-s-triazine by time-domain and Fourier transform infrared spectroscopy. <i>Applied Physics Letters</i> , 2004, 85, 5535-5537.	1.5	120
7	Interferometric characterization of 160 fs far-infrared light pulses. <i>Applied Physics Letters</i> , 1991, 59, 893-895.	1.5	115
8	Terahertz pulse propagation through small apertures. <i>Applied Physics Letters</i> , 2001, 79, 907-909.	1.5	115
9	Terahertz near-field microscopy based on a collection mode detector. <i>Applied Physics Letters</i> , 2000, 77, 3496-3498.	1.5	114
10	Review of Moisture and Liquid Detection and Mapping using Terahertz Imaging. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2012, 33, 97-126.	1.2	113
11	Collection-mode near-field imaging with 0.5-THz pulses. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2001, 7, 600-607.	1.9	108
12	Flexible membrane pressure sensor. <i>Sensors and Actuators A: Physical</i> , 2005, 119, 332-335.	2.0	82
13	Picosecond pump and probe spectroscopy utilizing freely propagating terahertz radiation. <i>Optics Letters</i> , 1991, 16, 48.	1.7	81
14	Experimental comparison of terahertz and infrared data signal attenuation in dust clouds. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2012, 29, 2360.	0.8	81
15	Intervalley scattering in GaAs and InP probed by pulsed far-infrared transmission spectroscopy. <i>Applied Physics Letters</i> , 1992, 60, 1477-1479.	1.5	80
16	Experimental comparison of performance degradation from terahertz and infrared wireless links in fog. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2012, 29, 179.	0.8	73
17	Review of weather impact on outdoor terahertz wireless communication links. <i>Nano Communication Networks</i> , 2016, 10, 13-26.	1.6	68
18	Fabrication of rechargeable lithium ion batteries using water-based inkjet printed cathodes. <i>Journal of Manufacturing Processes</i> , 2015, 20, 198-205.	2.8	60

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19	Terahertz imaging using an interferometric array. Applied Physics Letters, 2003, 83, 2477-2479.	1.5	59
20	2.5 Gbit/s duobinary signalling with narrow bandwidth 0.625 terahertz source. Electronics Letters, 2011, 47, 856.	0.5	59
21	Data encoding on terahertz signals for communication and sensing. Optics Letters, 2008, 33, 393.	1.7	58
22	Rapid-phase modulation of terahertz radiation for high-speed terahertz imaging and spectroscopy. Optics Letters, 2008, 33, 1593.	1.7	58
23	Near-field microscope probe for far infrared time domain measurements. Applied Physics Letters, 2000, 77, 591-593.	1.5	57
24	$\Gamma$ to X transport of photoexcited electrons in type II GaAs/AlAs multiple quantum well structures. Applied Physics Letters, 1989, 54, 1681-1683.	1.5	56
25	Nondestructive evaluation of cork enclosures using terahertz/millimeter wave spectroscopy and imaging. Applied Optics, 2008, 47, 72.	2.1	55
26	Effects of Scattering on THz Spectra of Granular Solids. Journal of Infrared, Millimeter and Terahertz Waves, 2007, 28, 969-978.	0.6	53
27	Experimental Comparison of Terahertz and Infrared Signaling in Controlled Atmospheric Turbulence. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 130-143.	1.2	46
28	Log-periodic antennas for pulsed terahertz radiation. Applied Physics Letters, 1991, 59, 262-264.	1.5	44
29	THz wireless communications: 2.5 Gb/s error-free transmission at 625 GHz using a narrow-bandwidth 1 mW THz source. , 2011, , .		42
30	Defect mechanism of photoinduced superconductivity in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>6+x</sub> . Physical Review B, 1995, 52, 15592-15597.	1.1	40
31	Terahertz interferometric and synthetic aperture imaging. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 1168.	0.8	40
32	Direct picosecond measurement of photoinduced Cooper-pair breaking in lead. Physical Review B, 1992, 46, 11153-11156.	1.1	35
33	Study of single-cycle pulse propagation inside a terahertz near-field probe. Applied Physics Letters, 2001, 78, 252-254.	1.5	32
34	Terahertz Quantum Cryptography. IEEE Journal on Selected Areas in Communications, 2020, 38, 483-495.	9.7	30
35	Optical and electronic characteristics of single walled carbon nanotubes and silicon nanoclusters by terahertz spectroscopy. Journal of Applied Physics, 2004, 96, 6685-6689.	1.1	29
36	Terahertz near-field interferometric and synthetic aperture imaging. , 2004, , .		27

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37	Experimental Comparison of Terahertz and Infrared Signaling in Laboratory-Controlled Rain. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 856-865.	1.2	27
38	Stochastic Interference Modeling and Experimental Validation for Pulse-Based Terahertz Communication. IEEE Transactions on Wireless Communications, 2019, 18, 4103-4115.	6.1	27
39	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.	1.2	26
40	Optical characterization of excited states in BaBiO <sub>3</sub> . Physical Review B, 1990, 42, 923-926.	1.1	25
41	Terahertz near-field imaging. Physics in Medicine and Biology, 2002, 47, 3727-3734.	1.6	24
42	Fabrication of a Flexible Current Collector for Lithium Ion Batteries by Inkjet Printing. Batteries, 2018, 4, 42.	2.1	24
43	Measurement of skin stretch via light reflection. Journal of Biomedical Optics, 2003, 8, 80.	1.4	23
44	Application of terahertz Gouy phase shift from curved surfaces for estimation of crop yield. Applied Optics, 2009, 48, 1382.	2.1	23
45	Comparison of Experimental and Theoretical Determined Terahertz Attenuation in Controlled Rain. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 1195-1202.	1.2	23
46	Analytical solution for photonic band-gap crystals using Drude conductivity. American Journal of Physics, 2004, 72, 1051-1054.	0.3	20
47	Inkjet printable constantan ink for the fabrication of flexible and conductive film. Chemical Engineering Journal, 2017, 313, 27-36.	6.6	20
48	Terahertz Attenuation in Snow and Sleet. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 868-877.	1.2	20
49	Review of four-wave mixing and phase conjugation in plasmas. IEEE Transactions on Plasma Science, 1991, 19, 549-564.	0.6	19
50	<title>THz standoff detection and imaging of explosives and weapons (Invited Paper)</title>. , 2005, 5781, 75.		19
51	THz standoff detection and imaging of explosives and weapons. , 2005, , .		18
52	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.	1.2	18
53	Photolithographic patterning of porous silicon using silicon nitride and silicon carbide masks. Materials Letters, 1995, 23, 209-214.	1.3	17
54	Noninvasive light-reflection technique for measuring soft-tissue stretch. Applied Optics, 1999, 38, 6653.	2.1	17

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55	An integrated photonic sensor for in situ monitoring of hazardous organics. Sensors and Actuators B: Chemical, 2003, 92, 121-126.	4.0	17
56	Detection of explosives by Terahertz synthetic aperture imagingâ€”focusing and spectral classification. Comptes Rendus Physique, 2008, 9, 248-261.	0.3	16
57	RDX Detection with THz Spectroscopy. Journal of Infrared, Millimeter, and Terahertz Waves, 2010, 31, 1171-1181.	1.2	16
58	Characterization of laser ablated silicon thin films. Thin Solid Films, 1999, 339, 102-108.	0.8	15
59	Infrared quenching of photoinduced persistent conductivity in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>6+x</sub> . Applied Physics Letters, 1996, 69, 3260-3262.	1.5	14
60	Inkjet printing colorimetric controllable and reversible poly-PCDA/ZnO composites. Sensors and Actuators B: Chemical, 2014, 203, 320-326.	4.0	14
61	Neural network analysis of terahertz spectra of explosives and bio-agents. , 2003, 5070, 60.		13
62	T-rays vs. terrorists. IEEE Spectrum, 2007, 44, 47-52.	0.5	13
63	Two-dimensional interferometric and synthetic aperture imaging with a hybrid terahertz/ millimeter wave system. Applied Optics, 2010, 49, E13.	2.1	13
64	Comparison of thermal decomposition and chemical reduction of particle-free silver ink for inkjet printing. Thin Solid Films, 2017, 636, 397-402.	0.8	13
65	Reversible chromatic sensor fabricated by inkjet printing TCDA-ZnO on a paper substrate. Sensors and Actuators B: Chemical, 2014, 193, 10-18.	4.0	12
66	Eavesdropping Risk Evaluation on Terahertz Wireless Channels in Atmospheric Turbulence. IEEE Access, 2021, 9, 101916-101923.	2.6	12
67	THz reflection spectroscopy of C-4 explosive and its detection through interferometric imaging. , 2006, 6120, 58.		10
68	Thermochromism in Polydiacetyleneâ€”ZnO Nanocomposites. Journal of Physical Chemistry C, 2013, , 130913150834008.	1.5	10
69	Local structural and electronic changes accompanying photodoping in YBA <sub>2</sub> Cu <sub>3</sub> O <sub>6+x</sub> . Physica C: Superconductivity and Its Applications, 1997, 292, 163-170.	0.6	9
70	Analysis of terahertz spectral images of explosives and bioagents using trained neural networks. , 2004, , .		9
71	Determining thickness independently from optical constants by use of ultrafast light. Optics Letters, 2004, 29, 2435.	1.7	9
72	Video-rate terahertz interferometric and synthetic aperture imaging. Applied Optics, 2009, 48, 3788.	2.1	9

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73	Terahertz response of microfluidic-jetted three-dimensional flexible metamaterials. Applied Optics, 2010, 49, 1179.	2.1	9
74	Hybrid Er-doped fibre amplifiers at 980â€“1480 nm for long distance optical communications. Electronics Letters, 1992, 28, 1642.	0.5	8
75	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
76	Weather Impact on Outdoor Terahertz Wireless Links. , 2015, , .		8
77	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.	1.2	8
78	Wavelength and photon dose dependence of infrared quenched persistent photoconductivity inYBa2Cu3O6+x. Physical Review B, 1999, 60, 6827-6833.	1.1	6
79	Terahertz imaging using an interferometric array. , 2005, , .		6
80	Terahertz interferometric imaging of a concealed object. , 2006, , .		6
81	Detection of Explosives by Terahertz Imaging. , 2007, , 323-366.		6
82	Terahertz study of trichloroanisole by time-domain spectroscopy. Chemical Physics, 2008, 353, 185-188.	0.9	6
83	Optical Science and Engineering Curriculum at NJIT. Journal of Engineering Education, 1998, 87, 575-582.	1.9	5
84	Cellular automata model for persistent photoconductivity in YBCO. Journal of Physics Condensed Matter, 2000, 12, L261-L267.	0.7	5
85	Grain size dependent scattering studies of common materials using THz time domain techniques. , 2006, 6120, 117.		5
86	Thermally activated infrared-active vibrational mode inBaBiO3. Physical Review B, 1991, 43, 8617-8619.	1.1	4
87	Cooper pair breaking in lead measured by pulsed terahertz spectroscopy. IEEE Transactions on Applied Superconductivity, 1993, 3, 1461-1464.	1.1	4
88	Charge-distributions in YuPr1âˆ“uBa2Cu3Ox. Physica C: Superconductivity and Its Applications, 1994, 235-240, 2161-2162.	0.6	4
89	Terahertz interferometric imaging of RDX. , 2007, , .		4
90	Study of structural defects inside natural cork by pulsed terahertz tomography. , 2011, , .		4

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91	Effect of alkyl chain length on chemical sensing of polydiacetylene and polydiacetylene/ZnO nanocomposites. Colloid and Polymer Science, 2014, 292, 3137-3146.	1.0	4
92	Non-destructive comparative evaluation of fossil amber using terahertz time-domain spectroscopy. PLoS ONE, 2022, 17, e0262983.	1.1	4
93	Noninvasive Study of Explosive Materials by Time Domain Spectroscopy and FTIR. AIP Conference Proceedings, 2005, , .	0.3	3
94	Propagation studies for indoor and outdoor terahertz wireless links. , 2019, , .		3
95	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.	1.0	3
96	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
97	Four-wave mixing and phase conjugation in plasmas using ionization nonlinearities. Physical Review A, 1991, 44, 5158-5172.	1.0	2
98	Lighting up erbium with water: Observation of substantial crystalline matrix element enhancements. Journal of Applied Physics, 2001, 90, 2678-2682.	1.1	2
99	Polarized light reflection from strained sinusoidal surfaces. Applied Optics, 2003, 42, 5198.	2.1	2
100	Characteristics of nanoscale composites by terahertz spectroscopy. , 2003, , .		2
101	Optical properties around resonance peaks by THz-TDS. , 2004, , .		2
102	Characterization of hollow polycarbonate metal waveguides using Terahertz time domain spectroscopy. , 2006, , .		2
103	Terahertz interferometric and synthetic aperture imaging. , 2006, 6212, 279.		2
104	TERAHERTZ INTERFEROMETRIC AND SYNTHETIC APERTURE IMAGING. International Journal of High Speed Electronics and Systems, 2007, 17, 431-443.	0.3	2
105	Multi-user Interference Modeling and Experimental Characterization for Pulse-based Terahertz Communication. , 2016, , .		2
106	Terahertz Van Atta Retroreflecting Arrays. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 997-1008.	1.2	2
107	Four-Wave Mixing And Phase Conjugation In Plasmas Using Ionization Nonlinearities. Proceedings of SPIE, 1989, 1059, 243.	0.8	1
108	Interferometric terahertz imaging for detection of lethal agents using artificial neural network analyses. , 2006, , .		1

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109	Microfabricated implantable pressure sensor for flow measurement. Proceedings of SPIE, 2008, , .	0.8	1
110	Microfabricated implantable flow sensor for medical applications. , 2008, , .		1
111	Terahertz Synthetic Aperture and Interferometric Imaging. , 2007, , .		1
112	Non-destructive evaluation of specialty coating degradation using terahertz time-domain spectroscopy. Proceedings of SPIE, 2017, , .	0.8	1
113	Degenerate Four-Wave Mixing In Collisional And Inhomogeneous Plasmas. Proceedings of SPIE, 1988, 0879, 45.	0.8	0
114	Annular erbium-ion distribution for ruggedized optical fiber amplifiers. Optics Letters, 1993, 18, 1165.	1.7	0
115	Spectral dependence of noise and gain in Er-doped fiber preamplifier at 980 nm. , 1993, , .		0
116	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
117	CHARACTERISTICS OF NANO-SCALE COMPOSITES AT THz AND IR SPECTRAL REGIONS. International Journal of High Speed Electronics and Systems, 2003, 13, 969-993.	0.3	0
118	Characteristics of nanoscale composites by THz spectroscopy. , 2004, 5268, 53.		0
119	Transfer function study of biological samples by the THz-TDS. , 2004, , .		0
120	Detection of the agent inside or behind a barrier material. , 2004, , .		0
121	Biological material imaging using THz-echo analysis method. , 2005, , .		0
122	A non contact characterization technique of the defect states of high k dielectrics using THz radiation. , 2006, , .		0
123	Cyclic thin film flexible pressure sensor testing. , 2007, , .		0
124	TERAHERTZ INTERFEROMETRIC AND SYNTHETIC APERTURE IMAGING. Selected Topics in Electornics and Systems, 2007, , 239-251.	0.2	0
125	Characteristics of HfO <sub>2</sub> and SiO <sub>2</sub> on p-type silicon wafers using terahertz spectroscopy. Semiconductor Science and Technology, 2007, 22, 457-463.	1.0	0
126	Terahertz response of microfluidic-jettted fabricated 3D multilayer metamaterials. , 2008, , .		0



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127	The origin and effect of space charges in electrospinning. , 2010, , .		0
128	Application of THz Imaging in Security Screening. , 2005, , .		0
129	Physical imaging of void using ultrafast light in optical precision. , 2005, , .		0
130	Industrial Applications of THz Imaging: Plastics, Food Industry, Moisture Detection, and Additive Manufacturing. , 2020, , .		0