Patrick Mounaix

List of Publications by Year in Descending Order

153 papers	2,425 citations	25 h-index	42 g-index
242 ext. papers	3,044 ext. citations	2.8 avg, IF	4.72 L-index

#	Paper	IF	Citations
153	Tunable ultrafast infrared generation in a gas-filled hollow-core capillary by a four-wave mixing process. *Journal of the Optical Society of America B: Optical Physics*, **2022**, 39, 662	1.7	0
152	Scanning point terahertz source microscopy of unstained comedo ductal carcinoma in situ **2022**, 1, 527		
151	Single-scan multiplane phase retrieval with a radiation of terahertz quantum cascade laser. *Applied Physics B: Lasers and Optics*, **2022**, 128, 1	1.9	2
150	Multiscale Compact Modelling of UTC-Photodiodes Enabling Monolithic Terahertz Communication Systems Design. *Applied Sciences (Switzerland)*, **2021**, 11, 11088	2.6	
149	Terahertz refractive index-based morphological dilation for breast carcinoma delineation. *Scientific Reports*, **2021**, 11, 6457	4.9	9
148	Towards Monolithic Indium Phosphide (InP)-Based Electronic Photonic Technologies for beyond 5G Communication Systems. *Applied Sciences (Switzerland)*, **2021**, 11, 2393	2.6	3
147	Mid-Infrared Ultra-Short Pulse Generation in a Gas-Filled Hollow-Core Photonic Crystal Fiber Pumped by Two-Color Pulses. *Fibers*, **2021**, 9, 21	3.7	2
146	Label-Free Observation of Micrometric Inhomogeneity of Human Breast Cancer Cell Density Using Terahertz Near-Field Microscopy. *Photonics*, **2021**, 8, 151	2.2	4
145	Terahertz waves for contactless control and imaging in aeronautics industry. *NDT and E International*, **2021**, 122, 102473	4.1	2
144	Guided Reflectometry Imaging Unit Using Millimeter Wave FMCW Radars. *IEEE Transactions on Terahertz Science and Technology*, **2020**, 10, 647-655	3.4	1
143	Guided terahertz pulse reflectometry with double photoconductive antenna. *Applied Optics*, **2020**, 59, 1641-1647	1.7	2
142	Terahertz phase retrieval imaging in reflection. *Optics Letters*, **2020**, 45, 4168-4171	3	10
141	Efficient compact modelling of UTC-photodiode towards terahertz communication system design. *Solid-State Electronics*, **2020**, 170, 107836	1.7	4
140	Terahertz near-field microscopy of ductal carcinoma in situ (DCIS) of the breast. *JPhys Photonics*, **2020**, 2, 044008	2.5	9
139	Fast Terahertz Spectroscopic Holographic Assessment of Optical Properties of Diabetic Blood Plasma. *Journal of Infrared, Millimeter, and Terahertz Waves*, **2020**, 41, 1041-1056	2.2	6
138	A Versatile Illumination System for Real-Time Terahertz Imaging. *Sensors*, **2020**, 20,	3.8	3
137	Characterization of Varnish Ageing and its Consequences on Terahertz Imagery: Demonstration on a Painting Presumed of the French Renaissance. *Journal of Infrared, Millimeter, and Terahertz Waves* , **2020**, 41, 1556-1566	2.2	2

136	Iterative Tree Algorithm to Evaluate Terahertz Signal Contribution of Specific Optical Paths Within Multilayered Materials. *IEEE Transactions on Terahertz Science and Technology*, **2019**, 9, 684-694	3.4	8
135	Terahertz Spectroscopy and Quantum Mechanical Simulations of Crystalline Copper-Containing Historical Pigments. *Journal of Physical Chemistry A*, **2019**, 123, 1225-1232	2.8	9
134	Ex Vivo Breast Tumor Identification: Advances Toward a Silicon-Based Terahertz Near-Field Imaging Sensor. *IEEE Microwave Magazine*, **2019**, 20, 32-46	1.2	9
133	Scanning laser terahertz near-field reflection imaging system. *Applied Physics Express*, **2019**, 12, 122005	2.4	8
132	Terahertz spectra of drug-laden magnetic nanoparticles **2019**,		1
131	Terahertz pulse time-domain holography method for phase imaging of breast tissue **2019**,		2
130	Shape-from-focus for real-time terahertz 3D imaging. *Optics Letters*, **2019**, 44, 483-486	3	17
129	First Uni-Traveling Carrier Photodiode Compact Model Enabling Future Terahertz Communication System Design **2019**,		1
128	NearSense □Advances Towards a Silicon-Based Terahertz Near-Field Imaging Sensor for Ex Vivo Breast Tumour Identification. *Frequenz*, **2018**, 72, 93-99	0.6	4
127	Pilot study of freshly excised breast tissue response in the 300-600 GHz range. *Biomedical Optics Express*, **2018**, 9, 2930-2942	3.5	32
126	Terahertz frequency modulated continuous wave imaging advanced data processing for art painting analysis. *Optics Express*, **2018**, 26, 5358-5367	3.3	27
125	A 128-pixel 0.56THz sensing array for real-time near-field imaging in 0.13□m SiGe BiCMOS **2018**,		9
124	Towards industrial applications of terahertz real-time imaging **2018**,		1
123	A Solid-State 0.56 THz Near-Field Array for □M-Scale Surface Imaging **2018**,		2
122	Terahertz biophotonics as a tool for studies of dielectric and spectral properties of biological tissues and liquids. *Progress in Quantum Electronics*, **2018**, 62, 1-77	9.1	113
121	A 128-Pixel System-on-a-Chip for Real-Time Super-Resolution Terahertz Near-Field Imaging. *IEEE Journal of Solid-State Circuits*, **2018**, 53, 3599-3612	5.5	21
120	Interaction of terahertz radiation with tissue phantoms: numerical and experimental studies. *EPJ Web of Conferences*, **2018**, 195, 10012	0.3	
119	2D and 3D Terahertz Imaging and X-Rays CT for Sigillography Study. *Journal of Infrared, Millimeter, and Terahertz Waves*, **2017**, 38, 483-494	2.2	2

118	Art Painting Diagnostic Before Restoration with Terahertz and Millimeter Waves. *Journal of Infrared, Millimeter, and Terahertz Waves*, **2017**, 38, 369-379	2.2	23
117	THz spectroscopy and imaging for breast cancer detection in the 300500 GHz range **2017**,		3
116	Advanced Processing Sequence for 3-D THz Imaging. *IEEE Transactions on Terahertz Science and Technology*, **2016**, 6, 191-198	3.4	26
115	Liquid index matching for 2D and 3D terahertz imaging. *Applied Optics*, **2016**, 55, 9185-9192	0.2	2
114	Splitting of magnetic dipole modes in anisotropic TiO2 micro-spheres. *Laser and Photonics Reviews*, **2016**, 10, 681-687	8.3	7
113	Extending terahertz paint thickness measurements to advanced industry-standard automotive paint structures **2016**,		2
112	Automated data and image processing for biomedical sample analysis **2016**,		1
111	Frequency modulated continuous wave terahertz imaging for art restoration **2016**,		2
110	Photoconductive microprobe based near-field scanning of Terahertz resonances of a single high-index TiO2 microsphere **2016**,		1
109	Terahertz imaging and tomography as efficient instruments for testing polymer additive manufacturing objects. *Applied Optics*, **2016**, 55, 3462-7	0.2	32
108	Bulk magnetic terahertz metamaterials based on dielectric microspheres. *Optics Express*, **2016**, 24, 18340-5	3.3	3
107	Low-frequency noise effect on terahertz tomography using thermal detectors. *Applied Optics*, **2015**, 54, 6758-62	0.2	12
106	Quantitative Analysis of Hexahydro-1,3,5-trinitro-1,3,5, Triazine/Pentaerythritol Tetranitrate (RDX-PETN) Mixtures by Terahertz Time Domain Spectroscopy. *Applied Spectroscopy*, **2015**, 69, 1464-71	3.1	18
105	Discrimination and identification of RDX/PETN explosives by chemometrics applied to terahertz time-domain spectral imaging **2015**,		3
104	Review of Terahertz Tomography Techniques. *Journal of Infrared, Millimeter, and Terahertz Waves*, **2014**, 35, 382-411	2.2	142
103	Broadband effective magnetic response of inorganic dielectric resonator-based metamaterial for microwave applications. *Applied Physics A: Materials Science and Processing*, **2014**, 114, 997-1002	2.6	9
102	Terahertz metamolecules deposited on thin flexible polymer: design, fabrication and experimental characterization. *Journal of Optics (United Kingdom)*, **2014**, 16, 094014	1.7	20
101	Three-Dimensional Silver Nanoparticle Formation Using Femtosecond Laser Irradiation in Phosphate Glasses: Analogy with Photography. *Advanced Functional Materials*, **2014**, 24, 5824-5832	15.6	62

100	Chemometrics applied to quantitative analysis of ternary mixtures by terahertz spectroscopy. *Analytical Chemistry*, **2014**, 86, 4927-33	7.8	55
99	Expectation maximisation algorithms for terahertz transmission tomography **2014**,		1
98	Near-field probing of Mie resonances in single TiO2 microspheres at terahertz frequencies. *Optics Express*, **2014**, 22, 23034-42	3.3	20
97	Ordered subsets convex algorithm for 3D terahertz transmission tomography. *Optics Express*, **2014**, 22, 23299-309	3.3	14
96	Qualitative and quantitative analysis of explosives by terahertz time-domain spectroscopy: Application to imaging **2014**,		2
95	Processing sequence for non-destructive inspection based on 3D terahertz images **2014**,		1
94	Terahertz imaging of sub-wavelength particles with Zenneck surface waves. *Applied Physics Letters*, **2013**, 103, 221103	3.4	9
93	Review in terahertz spectral analysis. *TrAC - Trends in Analytical Chemistry*, **2013**, 44, 98-105	14.6	109
92	Structural health monitoring using a scanning THz system **2013**,		1
91	Examination of femtosecond laser matter interaction in multipulse regime for surface nanopatterning of vitreous substrates. *Optics Express*, **2013**, 21, 29090-100	3.3	3
90	Ultra-flexible multiband terahertz metamaterial absorber for conformal geometry applications. *Optics Letters*, **2013**, 38, 4988-90	3	105
89	Aeronautics composite material inspection with a terahertz time-domain spectroscopy system. *Optical Engineering*, **2013**, 53, 031208	1.1	71
88	Chemometrics applied to analysis of terahertz spectra **2013**,		1
87	X-ray versus 3D terahertz imaging for sigillography science **2013**,		2
86	TiO2 microsphere-based metamaterials exhibiting effective magnetic response in the terahertz regime. *Applied Physics A: Materials Science and Processing*, **2012**, 109, 891-894	2.6	8
85	Ionic Polarization Occurrence in BaSrTiO3 Thin Film by THz-Time Domain Spectroscopy. *Ferroelectrics*, **2012**, 430, 36-41	0.6	4
84	Towards left-handed metamaterials using single-size dielectric resonators: The case of TiO2-disks at millimeter wavelengths. *Applied Physics Letters*, **2012**, 101, 042909	3.4	19
83	Investigation of spatial filters at microwave frequencies: Application for antenna directivity enhancement. *Microwave and Optical Technology Letters*, **2012**, 54, 1327-1332	1.2	7

82	Resonant magnetic response of TiO2 microspheres at terahertz frequencies. *Applied Physics Letters*, **2012**, 100, 061117	3.4	37
81	Terahertz radiation for tomographic inspection. *Optical Engineering*, **2012**, 51, 091609	1.1	6
80	Propagation beam consideration for 3D THz computed tomography. *Optics Express*, **2012**, 20, 5817-29	3.3	41
79	Ultrafast carrier response of Br+-irradiated In0.53Ga0.47As excited at telecommunication wavelengths. *Journal of Applied Physics*, **2012**, 111, 093721	2.5	4
78	Potential of the Eu:LYB crystal as a laser material for DPSS lasers emitting at 613 nm **2012**,		4
77	Investigation on reconstruction methods applied to 3D terahertz computed tomography. *Optics Express*, **2011**, 19, 5105-17	3.3	67
76	Spectroscopy and terahertz imaging for sigillography applications. *Journal of the European Optical Society-Rapid Publications*, **2011**, 6,	2.5	5
75	Theoretical and experimental investigations of easy made fishnet metamaterials at microwave frequencies. *Applied Physics A: Materials Science and Processing*, **2011**, 103, 685-688	2.6	4
74	Tunable THz metamaterials based on an array of paraelectric SrTiO3 rods. *Applied Physics A: Materials Science and Processing*, **2011**, 103, 689-692	2.6	14
73	Dielectric dispersion of BaSrTiO3 thin film from centimeter to submillimeter wavelengths. *Journal of Applied Physics*, **2011**, 109, 014116	2.5	11
72	Optical phase detection in a 4-N,N-dimethylamino-4?-N?-methyl-stilbazolium tosylate crystal for terahertz time domain spectroscopy system at 1.55 Îm wavelength. *Applied Physics Letters*, **2010**, 97, 111112	3.4	16
71	Terahertz and far-infrared response of Ba x Sr1□x TiO3 films. *Phase Transitions*, **2010**, 83, 966-973	1.3	3
70	3D millimeter wave tomographic scanner for large size opaque object inspection with different refractive index contrasts **2010**,		2
69	Non-destructive inspection of opaque objects with a 3D millimeter-wave tomographic scanner **2010**,		1
68	Terahertz-pulse imaging for non-destructive analysis of layered art paintings **2010**,		2
67	Non-invasive investigation of art paintings by terahertz imaging. *Applied Physics A: Materials Science and Processing*, **2010**, 100, 585-590	2.6	66
66	Refraction losses in terahertz computed tomography. *Optics Communications*, **2010**, 283, 2050-2055	2	31
65	High photocarrier mobility in ultrafast ion-irradiated In0.53Ga0.47As for terahertz applications. *Journal Physics D: Applied Physics*, **2009**, 42, 195103	3	16

64	Terahertz dielectric characterisation of photopolymer resin used for fabrication of 3D THz imaging phantoms. *Electronics Letters*, **2009**, 45, 702	1.1	4
63	Broadband terahertz imaging of documents written with lead pencils. *Optics Communications*, **2009** , 282, 3104-3107	2	45
62	Plasma wave field effect transistor as a resonant detector for 1 terahertz imaging applications. *Optics Communications*, **2009**, 282, 3055-3058	2	24
61	Tunable terahertz metamaterials with negative permeability. *Physical Review B*, **2009**, 79,	3.3	81
60	Segregation and Twinning in the Rare-Earth Doped KPb2Cl5 Laser Crystals. *Crystal Growth and Design*, **2009**, 9, 1949-1955	3.5	5
59	Broadband dielectric terahertz metamaterials with negative permeability. *Optics Letters*, **2009**, 34, 3541-3	3	34
58	Materials with on-demand refractive indices in the terahertz range. *Optics Letters*, **2008**, 33, 2275-7	3	21
57	Far infrared absorption and terahertz time domain spectroscopy of liquid CS2: Experiments and molecular dynamics simulation. *Applied Physics Letters*, **2008**, 92, 214102	3.4	5
56	Ultrafast carrier dynamics in Br+-bombarded InP studied by time-resolved terahertz spectroscopy. *Physical Review B*, **2008**, 78,	3.3	14
55	Dielectric properties of conducting polyaniline films by THz time-domain spectroscopy. *European Polymer Journal*, **2008**, 44, 124-129	5.2	36
54	Electrical Characterizations of Paraelectric BST Thin Films up to 1 THz: Realization of Microwave Phaseshifters. *Ferroelectrics*, **2007**, 353, 29-37	0.6	7
53	Shielding effectiveness in terahertz domain of monolayer-doped polyaniline films. *Electronics Letters*, **2007**, 43, 1271	1.1	6
52	Emission characteristics of ion-irradiated In(0.53)Ga(0.47)As based photoconductive antennas excited at 1.55 microm. *Optics Express*, **2007**, 15, 8943-50	3.3	22
51	High emission and detection efficiency of terahertz beam with heavy-ion-irradiated InP material excited at 0.8 [micro sign]m. *Electronics Letters*, **2006**, 42, 879	1.1	3
50	Terahertz radiation generated and detected by Br+-irradiated In0.53Ga0.47As photoconductive antenna excited at 800nm wavelength. *Applied Physics Letters*, **2006**, 89, 083519	3.4	16
49	One-dimensional tunable photonic crystals with spin crossover material for the terahertz range. *Applied Physics Letters*, **2006**, 89, 174105	3.4	13
48	Active optical control of the terahertz reflectivity of high-resistivity semiconductors. *Optics Letters*, **2005**, 30, 1992-4	3	20
47	High-Frequency Response in Ferroelectric BaSrTiO3Thin Films Studied by Terahertz Time-Domain Spectroscopy. *Japanese Journal of Applied Physics*, **2005**, 44, 5058-5061	1.4	12

46	Dielectric characterization of [Fe(NH2Htrz)3]Br2H2O thermal spin crossover compound by terahertz time domain spectroscopy. *Applied Physics Letters*, **2005**, 87, 244103	3.4	18
45	Characterization of non-linear Potassium crystals in the Terahertz frequency domain. *Optics Communications*, **2004**, 242, 631-639	2	17
44	Terahertz dielectric characterisation of polymethacrylimide rigid foam: The perfect sheer plate?. *Electronics Letters*, **2004**, 40, 1167	1.1	25
43	Far-infrared optical constants of CO2 near the critical point measured by terahertz spectroscopy. *Applied Physics Letters*, **2003**, 83, 5095-5097	3.4	9
42	Photonic band gap material for integrated photonic application: technological challenges. *Microelectronic Engineering*, **2002**, 61-62, 537-544	2.5	17
41	High performance HBV multipliers monolithically integrated onto a host quartz substrate **2002**,		1
40	Monolithic integrated circuits incorporating InP-based heterostructure barrier varactors. *IEEE Microwave and Wireless Components Letters*, **2002**, 12, 281-283	2.6	28
39	Deformable magnetic mirror for adaptive optics: technological aspects. *Sensors and Actuators A: Physical*, **2001**, 89, 1-9	3.9	43
38	On the validity of the independent hot-spot model. *Physical Review Letters*, **2001**, 87, 085006	7.4	5
37	High Performance Heterostructure Barrier Varactors **2001**, 53-67		
36	Giant magnetostriction thin films for multi-cantilever micro-structures driving. *Sensors and Actuators A: Physical*, **2000**, 81, 162-165	3.9	9
35	Fabrication and performance of InP-based heterostructure barrier varactors in a 250-GHz waveguide tripler. *IEEE Transactions on Microwave Theory and Techniques*, **2000**, 48, 1000-1006	4.1	38
34	Transferred-substrate InP-based heterostructure barrier varactor diodes on quartz **2000**, 10, 472-474		4
33	Substrate transfer process for InP-based heterostructure barrier varactor devices. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2000**, 18, 150		15
32	Transferred InP-based HBVs on glass substrate. *Electronics Letters*, **1999**, 35, 1493	1.1	5
31	Determination of the mechanical properties of thin polyimide films deposited on a GaAs substrate by bulging and nanoindentation tests. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1999**, 262, 101-106	5.3	20
30	Micromachined coplanar transmission lines in a GaAs technology. *Microwave and Optical Technology Letters*, **1999**, 20, 106-110	1.2	2
29	Terahertz time-domain spectroscopy of films fabricated from SU-8. *Electronics Letters*, **1999**, 35, 243	1.1	53

28	Gas filter correlation instrument for air monitoring at submillimeter wavelengths. *Optics Letters*, **1999**, 24, 351-3	3	20
27	Record performance of a 250 GHz InP-based heterostructure barrier varactor tripler. *Electronics Letters*, **1999**, 35, 938	1.1	16
26	12% efficiency and 9.5 dBm output power from InP-based heterostructure barrier varactor triplers at 250 GHz **1999**,		8
25	Non Linear Transmission Line Quintupler Loaded by Heterostructure Barrier Varactors **1999**,		5
24	Step-like heterostructure barrier varactor. *IEEE Transactions on Electron Devices*, **1998**, 45, 2291-2297	2.9	9
23	High-power terahertz radiation from a high-repetition-rate large-aperture photoconducting antenna. *Microwave and Optical Technology Letters*, **1998**, 17, 23-27	1.2	6
22	Micromachining and mechanical properties of GaInAs/InP microcantilevers. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **1998**, 51, 258-262	3.1	15
21	5-mW and 5% efficiency 216-GHz InP-based heterostructure barrier varactor tripler **1998**, 8, 384-386		17
20	Reverse Engineering Through Electromagnetic and Harmonic Balance Simulations **1998**,		2
19	InGaAs/InAlAs/AlAs heterostructure barrier varactors for harmonic multiplication **1998**, 8, 254-256		13
18	Capacitance engineering for InP-based heterostructure barrier varactor. *IEEE Electron Device Letters*, **1998**, 19, 338-340	4.4	15
17	High capacitance ratio with GaAs/InGaAs/AlAs heterostructure quantum well-barrier varactors. *Electronics Letters*, **1998**, 34, 1860	1.1	14
16	Miniaturized deformable magnetic mirror for adaptive optics **1998**,		4
15	Coplanar waveguides on dielectric membranes micromachined on a GaAs substrate. *Electronics Letters*, **1996**, 32, 821	1.1	15
14	High performance InP-based heterostructure barrier varactors in single and stack configuration. *Electronics Letters*, **1996**, 32, 1417	1.1	17
13	Electron transfer between two coupled quantum wells in a resonant tunneling diode structure. *Solid-State Electronics*, **1995**, 38, 1899-1904	1.7	5
12	Frequency capability of strained AlAs/InGaAs resonant tunnelling diodes. *Electronics Letters*, **1995**, 31, 1508-1510	1.1	5
11	Resonant tunneling diodes as sources for millimeter and submillimeter wavelengths. *IEEE Transactions on Microwave Theory and Techniques*, **1993**, 41, 2025-2027	4.1	2

10	Charge Distribution and Capacitance of Double Barrier Resonant Tunneling Diodes **1993**, 329-332		
9	Resonant tunneling of holes in Ga0.51In0.49P/GaAs double-barrier heterostructures. *Journal of Applied Physics*, **1992**, 71, 2057-2059	2.5	8
8	FABRICATION OF HIGH-PERFORMANCE ALXGA1-XAS/INYGA1-YAS/GAAS RESONANT TUNNELING DIODES USING A MICROWAVE-COMPATIBLE TECHNOLOGY. *IEEE Electron Device Letters*, **1991**, 12, 114-116	4.4	10
7	Temperature Dependence of Peak to Valley Current Ratio in Resonant Tunneling Double Barriers. *NATO ASI Series Series B: Physics*, **1991**, 107-116		7
6	Measurement of negative differential conductance to 40 GHz for vertically integrated resonant tunnelling diodes. *Electronics Letters*, **1991**, 27, 1358	1.1	7
5	Effect of cathode spacer layer on the current-voltage characteristics of resonant tunneling diodes. *Applied Physics Letters*, **1990**, 57, 1517-1519	3.4	29
4	Tunnel r□onnant et effets d□ectrons chauds dans les structures □double barri□e : synth□e. *Revue De Physique Appliqu□*, **1989**, 24, 17-30		5
3	Small-signal impedance of GaAs-AlxGa1□ as resonant tunnelling heterostructures at microwave frequency. *Electronics Letters*, **1988**, 24, 1180	1.1	23
2	Deformable magnetic mirror for adaptive optics: first results		5
1	A 5 mW-290 GHz heterostructure barrier tripler in a waveguide configuration		3