

Kirill I Zaytsev

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

137
papers

1,767
citations

24
h-index

36
g-index

169
ext. papers

2,283
ext. citations

2
avg, IF

4.96
L-index

#	Paper	IF	Citations
137	THz generation by two-color laser air plasma coupled to antiresonance hollow-core sapphire waveguides: THz-wave delivery and angular distribution management.. <i>Optics Express</i> , 2022 , 30, 4215-4230	3.3	2
136	Continuously tunable middle-IR bandpass filters based on gradient metal-hole arrays for multispectral sensing and thermography. <i>Journal of Applied Physics</i> , 2022 , 131, 123103	2.5	
135	Boosting photoconductive large-area THz emitter via optical light confinement behind a highly refractive sapphire-fiber lens.. <i>Optics Letters</i> , 2022 , 47, 1899-1902	3	1
134	Terahertz solid immersion microscopy: Recent achievements and challenges. <i>Applied Physics Letters</i> , 2022 , 120, 110501	3.4	3
133	Quantification of solid-phase chemical reactions using the temperature-dependent terahertz pulsed spectroscopy, sum rule, and Arrhenius theory: thermal decomposition of Dactose monohydrate.. <i>Optics Express</i> , 2022 , 30, 9208-9221	3.3	2
132	Terahertz dielectric spectroscopy of human brain gliomas and intact tissues : double-Debye and double-overdamped-oscillator models of dielectric response. <i>Biomedical Optics Express</i> , 2021 , 12, 69-83	3.5	18
131	Opal-based terahertz optical elements fabricated by self-assembly of porous SiO nanoparticles. <i>Optics Express</i> , 2021 , 29, 13764-13777	3.3	5
130	Terahertz dielectric spectroscopy and solid immersion microscopy of glioma model 101.8: brain tissue heterogeneity. <i>Biomedical Optics Express</i> , 2021 , 12, 5272-5289	3.5	8
129	. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2021 , 1-1	3.4	3
128	Object-dependent spatial resolution of the reflection-mode terahertz solid immersion microscopy. <i>Optics Express</i> , 2021 , 29, 3553-3566	3.3	10
127	Terahertz transmission-mode scanning-probe near-field optical microscopy based on a flexible step-index sapphire fiber. <i>Optical Engineering</i> , 2021 , 60,	1.1	5
126	Moisture adsorption by decellularized bovine pericardium collagen matrices studied by terahertz pulsed spectroscopy and solid immersion microscopy. <i>Biomedical Optics Express</i> , 2021 , 12, 5368-5386	3.5	6
125	Sapphire waveguides and fibers for terahertz applications. <i>Progress in Crystal Growth and Characterization of Materials</i> , 2021 , 67, 100523	3.5	7
124	Cellular effects of terahertz waves. <i>Journal of Biomedical Optics</i> , 2021 , 26,	3.5	18
123	Photoconductive THz Detector Based on New Functional Layers in Multi-Layer Heterostructures. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2021 , 129, 851-856	0.7	
122	Overcoming the Abbe Diffraction Limit Using a Bundle of Metal-Coated High-Refractive-Index Sapphire Optical Fibers. <i>Advanced Optical Materials</i> , 2020 , 8, 2000307	8.1	11
121	Electromagnetic field localization behind a mesoscale dielectric particle with a broken symmetry: a photonic hook phenomenon 2020 ,		6

120	Novel promising terahertz optical material based on nanoporous SiO ₂ 2020 ,		2
119	Improved biomedical imaging over a wide spectral range from UV to THz towards multimodality 2020 ,		3
118	Capability of physically reasonable OCT-based differentiation between intact brain tissues, human brain gliomas of different WHO grades, and glioma model 101.8 from rats. <i>Biomedical Optics Express</i> , 2020 , 11, 6780-6798	3.5	6
117	Proof of concept for continuously-tunable terahertz bandpass filter based on a gradient metal-hole array. <i>Optics Express</i> , 2020 , 28, 26228-26238	3.3	13
116	Nanoporous SiO ₂ based on annealed artificial opals as a favorable material platform of terahertz optics. <i>Optical Materials Express</i> , 2020 , 10, 2100	2.6	8
115	Prospects of terahertz technology in diagnosis of human brain tumors [A review]. <i>Journal of Biomedical Photonics and Engineering</i> , 2020 , 6,	2.4	13
114	Terahertz Spectroscopy and Imaging of Brain Tumors 2020 , 551-574		1
113	Special Section Guest Editorial: Terahertz and Infrared Optics: Towards Biophotonics. <i>Optical Engineering</i> , 2020 , 59, 1	1.1	
112	The progress and perspectives of terahertz technology for diagnosis of neoplasms: a review. <i>Journal of Optics (United Kingdom)</i> , 2020 , 22, 013001	1.7	79
111	Temperature Evolution of the Dielectric Response of D-lactose Monohydrate in the THz Frequency Range. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2020 , 128, 752-758	0.7	1
110	Sapphire Single-Crystal Waveguides and Fibers for Thz Frequency Range. <i>Journal of Surface Investigation</i> , 2020 , 14, 437-439	0.5	1
109	Effects of Terahertz Radiation on Living Cells: a Review. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2020 , 128, 855-866	0.7	28
108	Microfocusing sapphire capillary needle for laser surgery and therapy: Fabrication and characterization. <i>Journal of Biophotonics</i> , 2020 , 13, e202000164	3.1	1
107	Optical Properties of Hyperosmotic Agents for Immersion Clearing of Tissues in Terahertz Spectroscopy. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2020 , 128, 1026-1035	0.7	4
106	Emission Efficiency of Terahertz Antennas with Conventional Topology and Metal Metasurface: A Comparative Analysis. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2020 , 128, 1018-1025	0.7	3
105	Optimal hyperosmotic agents for tissue immersion optical clearing in terahertz biophotonics. <i>Journal of Biophotonics</i> , 2020 , 13, e202000297	3.1	14
104	Broadband spectroscopy of astrophysical ice analogues. <i>Astronomy and Astrophysics</i> , 2019 , 629, A112	5.1	21
103	Experimental observation of a photonic hook. <i>Applied Physics Letters</i> , 2019 , 114, 031105	3.4	59

102	Terahertz Microscope Based on Solid Immersion Effect for Imaging of Biological Tissues. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2019 , 126, 560-567	0.7	7
101	Plasmonic Photoconductive Antennas for Terahertz Pulsed Spectroscopy and Imaging Systems. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2019 , 126, 580-586	0.7	7
100	Investigation of Heating of Optical Elements During Formation of High-Power CW Fiber Laser Radiation. <i>Russian Physics Journal</i> , 2019 , 61, 2305-2312	0.7	1
99	Multimodal Optical Diagnostics of Glycated Biological Tissues. <i>Biochemistry (Moscow)</i> , 2019 , 84, S124-S143	1.3	9
98	Enhanced terahertz emission from strain-induced InGaAs/InAlAs superlattices. <i>Journal of Applied Physics</i> , 2019 , 125, 151605	2.5	19
97	An Experimentally Trained Noise Filtration Method of Optical Coherence Tomography Signals. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2019 , 126, 587-594	0.7	1
96	Differentiation of Pigmented Skin Lesions Based on Digital Processing of Optical Images. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2019 , 126, 503-513	0.7	1
95	Optimization of sapphire capillary needles for interstitial and percutaneous laser medicine. <i>Journal of Biomedical Optics</i> , 2019 , 24, 1-7	3.5	5
94	Terahertz spectroscopy of gelatin-embedded human brain gliomas of different grades: a road toward intraoperative THz diagnosis. <i>Journal of Biomedical Optics</i> , 2019 , 24, 1-5	3.5	53
93	Numerical analysis and experimental study of terahertz solid immersion microscopy. <i>Optical Engineering</i> , 2019 , 59, 1	1.1	17
92	Differentiation of healthy and malignant brain tissues using terahertz pulsed spectroscopy and optical coherence tomography 2019 ,		2
91	A comparison of terahertz optical constants and diffusion coefficients of tissue immersion optical clearing agents 2019 ,		3
90	High-temperature terahertz intrawaveguide spectroscopy using hollow-core sapphire photonic crystal waveguide 2019 ,		1
89	A method for reconstruction of terahertz dielectric response of thin liquid samples 2019 ,		1
88	Terahertz transmission-mode near-field scanning-probe microscope based on a flexible sapphire fiber 2019 ,		3
87	Step-index sapphire fiber and its application in a terahertz near-field microscopy 2019 ,		7
86	Differentiation of basal cell carcinoma and healthy skin using multispectral modulation autofluorescence imaging: A pilot study. <i>Journal of Biomedical Photonics and Engineering</i> , 2019 , 5, 0103024	2.4	2
85	Optical coherence tomography of human brain glioma as a promising tool for intraoperative diagnostics in neurosurgery 2019 ,		2

84	Study of malignant brain gliomas using optical coherence tomography and terahertz pulsed spectroscopy aimed on advanced intraoperative neurodiagnosis 2019 ,		1
83	APPLICATION OF TERAHERTZ TECHNOLOGIES IN BIOPHOTONICS. Part 2: Spectroscopy and imaging of malignant neoplasms 2019 2: Photonics Russia, 2019 , 13, 736-742	0.5	
82	Shaping the spectrum of terahertz photoconductive antenna by frequency-dependent impedance modulation. <i>Semiconductor Science and Technology</i> , 2019 , 34, 034005	1.8	24
81	Terahertz photoconductive emitter with dielectric-embedded high-aspect-ratio plasmonic grating for operation with low-power optical pumps. <i>AIP Advances</i> , 2019 , 9, 015112	1.5	27
80	Bizarre behavior of heat capacity in crystals due to interplay between two types of anharmonicities. <i>Journal of Chemical Physics</i> , 2018 , 148, 134508	3.9	10
79	Wide-Aperture Aspheric Optics for Formation of Subwavelength Caustics of a Terahertz Electromagnetic-Radiation Beam. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2018 , 124, 428-436	0.7	6
78	The Role of Scattering in Quasi-Ordered Structures for Terahertz Imaging: Local Order Can Increase an Image Quality. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2018 , 8, 403-409	3.4	12
77	Nanoparticle-enabled experimentally trained wavelet-domain denoising method for optical coherence tomography. <i>Journal of Biomedical Optics</i> , 2018 , 23, 1-9	3.5	9
76	A potential of terahertz solid immersion microscopy for visualizing sub-wavelength-scale tissue spheroids 2018 ,		13
75	Sapphire shaped crystals for laser-assisted cryodestruction of biological tissues 2018 ,		1
74	Numerical simulations and experimental study of terahertz photoconductive antennas based on GaAs and its ternary compounds 2018 ,		1
73	A concept of cryoapplicator based on sapphire shaped crystal enabling control of the ice ball formation using spatially resolved elastic backscattering of light 2018 ,		1
72	Terahertz solid immersion microscopy for sub-wavelength-resolution imaging of biological objects and tissues 2018 ,		4
71	Wavelet-domain de-noising of OCT images of human brain malignant glioma 2018 ,		5
70	Colloidal suspensions in external rotating electric field: experimental studies and prospective applications in physics, material science, and biomedicine 2018 ,		2
69	In vitro terahertz spectroscopy of gelatin-embedded human brain tumors: a pilot study 2018 ,		6
68	Sapphire capillary interstitial irradiators for laser medicine 2018 ,		2
67	Terahertz spectroscopy of immersion optical clearing agents: DMSO, PG, EG, PEG 2018 ,		4

66	Impact of Scattering in Quasi-Ordered Structures on THz Imaging. <i>EPJ Web of Conferences</i> , 2018 , 195, 08001	0.3	
65	Intraoperative diagnosis of malignant brain gliomas using terahertz pulsed spectroscopy and optical coherence tomography. <i>EPJ Web of Conferences</i> , 2018 , 195, 10018	0.3	
64	Terahertz biophotonics as a tool for studies of dielectric and spectral properties of biological tissues and liquids. <i>Progress in Quantum Electronics</i> , 2018 , 62, 1-77	9.1	113
63	Biomedical applications of terahertz solid immersion microscopy. <i>EPJ Web of Conferences</i> , 2018 , 195, 10017	0.3	1
62	Interaction of terahertz radiation with tissue phantoms: numerical and experimental studies. <i>EPJ Web of Conferences</i> , 2018 , 195, 10012	0.3	
61	Sapphire shaped crystals for waveguiding, sensing and exposure applications. <i>Progress in Crystal Growth and Characterization of Materials</i> , 2018 , 64, 133-151	3.5	39
60	Sapphire Photonic Crystal Waveguides for Terahertz Sensing in Aggressive Environments. <i>Advanced Optical Materials</i> , 2018 , 6, 1800573	8.1	29
59	Reflection-mode continuous-wave 0.15 μ m resolution terahertz solid immersion microscopy of soft biological tissues. <i>Applied Physics Letters</i> , 2018 , 113, 111102	3.4	56
58	Wide-aperture aspherical lens for high-resolution terahertz imaging. <i>Review of Scientific Instruments</i> , 2017 , 88, 014703	1.7	47
57	Solid immersion terahertz imaging with sub-wavelength resolution. <i>Applied Physics Letters</i> , 2017 , 110, 221109	3.4	49
56	Enhanced third-harmonic generation in photonic crystals at band-gap pumping. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 055105	3	23
55	Tunable two-dimensional assembly of colloidal particles in rotating electric fields. <i>Scientific Reports</i> , 2017 , 7, 13727	4.9	34
54	Flame propagation in two-dimensional solids: Particle-resolved studies with complex plasmas. <i>Physical Review E</i> , 2017 , 96, 043201	2.4	27
53	Particle-Resolved Phase Identification in Two-Dimensional Condensable Systems. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 26860-26868	3.8	27
52	Technological aspects of manufacturing terahertz photonic crystal waveguides based on sapphire shaped crystals 2017 ,		6
51	Neurosurgical sapphire handheld probe for intraoperative optical diagnostics, laser coagulation and aspiration of malignant brain tissue 2017 ,		8
50	Second Harmonic Generation in Microstructured Barium Titanate. <i>Journal of Russian Laser Research</i> , 2016 , 37, 254-258	0.7	2
49	Terahertz waveguides based on multichannel sapphire shaped crystals 2016 ,		1

48	Radiation scattering on growing ordered structures. <i>Journal of Physics: Conference Series</i> , 2016 , 673, 012011	0.3	
47	Numerical simulation of terahertz-wave propagation in photonic crystal waveguide based on sapphire shaped crystal. <i>Journal of Physics: Conference Series</i> , 2016 , 673, 012001	0.3	3
46	The active-passive continuous-wave terahertz imaging system. <i>Journal of Physics: Conference Series</i> , 2016 , 735, 012075	0.3	4
45	Monte Carlo simulation of optical coherence tomography signal of the skin nevus. <i>Journal of Physics: Conference Series</i> , 2016 , 673, 012014	0.3	3
44	Sapphire shaped crystals allow combining tissue cryodestruction, laser coagulation and diagnosis 2016 ,		1
43	In vivoterahertz pulsed spectroscopy of dysplastic and non-dysplastic skin nevi. <i>Journal of Physics: Conference Series</i> , 2016 , 735, 012076	0.3	9
42	Modeling and experimental demonstration of terahertz frequency tunable metamaterial absorber. <i>Journal of Physics: Conference Series</i> , 2016 , 735, 012087	0.3	
41	Combined terahertz imaging system for enhanced imaging quality. <i>Optical and Quantum Electronics</i> , 2016 , 48, 1	2.4	6
40	Non-destructive testing of composite materials using terahertz time-domain spectroscopy 2016 ,		3
39	Terahertz Photonic Crystal Waveguides Based on Sapphire Shaped Crystals. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2016 , 6, 576-582	3.4	40
38	Principle component analysis and linear discriminant analysis of multi-spectral autofluorescence imaging data for differentiating basal cell carcinoma and healthy skin 2016 ,		2
37	Nonlinear optical conversion in synthetic opal. <i>Inorganic Materials</i> , 2015 , 51, 419-424	0.9	3
36	Study of electromagnetic field surface states in photonic crystals using the finite-difference method. <i>Bulletin of the Lebedev Physics Institute</i> , 2015 , 42, 48-54	0.5	
35	In vivospectroscopy of healthy skin and pathology in terahertz frequency range. <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012023	0.3	9
34	Second optical harmonic near the surface of ferroelectric photonic crystals and photon traps. <i>Physics of the Solid State</i> , 2015 , 57, 453-459	0.8	6
33	In vivo terahertz spectroscopy of pigmented skin nevi: Pilot study of non-invasive early diagnosis of dysplasia. <i>Applied Physics Letters</i> , 2015 , 106, 053702	3.4	83
32	Millijoule pulse energy 100-nanosecond Er-doped fiber laser. <i>Optics Letters</i> , 2015 , 40, 1189-92	3	27
31	Highly Accurate in Vivo Terahertz Spectroscopy of Healthy Skin: Variation of Refractive Index and Absorption Coefficient Along the Human Body. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2015 , 5, 817-827	3.4	57

30	Non-Destructive Evaluation of Polymer Composite Materials at the Manufacturing Stage Using Terahertz Pulsed Spectroscopy. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2015 , 5, 810-816	3.4	78
29	Terahertz spectroscopy of pigmentary skin nevi in vivo. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2015 , 119, 404-410	0.7	21
28	A hybrid continuous-wave terahertz imaging system. <i>Review of Scientific Instruments</i> , 2015 , 86, 113704	1.7	29
27	Nonlinear conversion in optical waveguide filled with NaNO ₂ . <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012009	0.3	
26	Scattering in structured two-layered medium. <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012019	0.3	4
25	Hyper-spectral modulation fluorescent imaging using double acousto-optical tunable filter based on TeO ₂ -crystals. <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012017	0.3	
24	Pseudo-stochastic signal characterization in wavelet-domain. <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012021	0.3	
23	Problem of light scattering in complex media. <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012025	0.3	1
22	A method of studying spectral optical characteristics of a homogeneous medium by means of terahertz time-domain spectroscopy. <i>Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)</i> , 2015 , 118, 552-562	0.7	14
21	An impact of multiple wave reflections in a flat sample on material parameter reconstruction using THz pulsed spectroscopy. <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012005	0.3	2
20	Wavelet-domain de-noising of optical coherent tomography data for biomedical applications. <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012013	0.3	2
19	Structural light focusing phenomenon and enhanced second harmonic generation in NaNO ₂ -infiltrated opal photonic crystal. <i>Journal of Physics: Conference Series</i> , 2015 , 584, 012002	0.3	0
18	Accuracy of sample material parameters reconstruction using terahertz pulsed spectroscopy. <i>Journal of Applied Physics</i> , 2014 , 115, 193105	2.5	41
17	Band-gap nonlinear optical generation: The structure of internal optical field and the structural light focusing. <i>Journal of Applied Physics</i> , 2014 , 115, 213505	2.5	35
16	Novel Algorithm for Sample Material Parameter Determination using THz Time-Domain Spectrometer Signal Processing. <i>Journal of Physics: Conference Series</i> , 2014 , 486, 012018	0.3	10
15	BWO based THz imaging system. <i>Journal of Physics: Conference Series</i> , 2014 , 486, 012027	0.3	11
14	Nondestructive testing of polymer composite materials using THz radiation. <i>Journal of Physics: Conference Series</i> , 2014 , 486, 012008	0.3	16
13	Novel technique for medium permittivity profile reconstruction using THz pulsed spectroscopy. <i>Journal of Physics: Conference Series</i> , 2014 , 486, 012010	0.3	9

12	Medical diagnostics using terahertz pulsed spectroscopy. <i>Journal of Physics: Conference Series</i> , 2014 , 486, 012014	0.3	18
11	A Comparison of Terahertz Pulsed Spectroscopy and Backward-Wave Oscillator Spectroscopy. <i>Journal of Physics: Conference Series</i> , 2014 , 536, 012009	0.3	2
10	Enhanced third harmonic generation using the surface states of light in periodic photonic structures. <i>Journal of Physics: Conference Series</i> , 2014 , 541, 012072	0.3	2
9	An approach for automatic construction of the wavelet-domain de-noising procedure for THz pulsed spectroscopy signal processing. <i>Journal of Physics: Conference Series</i> , 2014 , 486, 012034	0.3	6
8	FDTD simulation of the electromagnetic field surface states in 2D photonic crystals. <i>Journal of Physics: Conference Series</i> , 2014 , 486, 012003	0.3	7
7	Spectroscopy of Nafion in terahertz frequency range. <i>Journal of Applied Physics</i> , 2014 , 116, 113508	2.5	19
6	Enhancement of second harmonic generation in NaNO ₂ -infiltrated opal photonic crystal using structural light focusing. <i>Applied Physics Letters</i> , 2014 , 105, 051902	3.4	28
5	Sensing of phase transition in medium with terahertz pulsed spectroscopy. <i>Journal of Physics: Conference Series</i> , 2014 , 486, 012024	0.3	4
4	Wavelet-domain de-noising technique for THz pulsed spectroscopy 2014 ,		5
3	Scattering of terahertz radiation in thin layers of dielectric materials 2013 ,		4
2	Invariant embedding technique for medium permittivity profile reconstruction using terahertz time-domain spectroscopy. <i>Optical Engineering</i> , 2013 , 52, 068203	1.1	37
1	Quantitative super-resolution solid immersion microscopy via refractive index profile reconstruction. <i>Optica</i> ,	8.6	6