

Vladimir Kurlov

List of Publications by Year in descending order

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110
papers

1,588
citations

361045

20
h-index

360668

35
g-index

111
all docs

111
docs citations

111
times ranked

863
citing authors

#	ARTICLE	IF	CITATIONS
1	THz generation by two-color laser air plasma coupled to antiresonance hollow-core sapphire waveguides: THz-wave delivery and angular distribution management. Optics Express, 2022, 30, 4215.	1.7	3
2	Object-dependent spatial resolution of the reflection-mode terahertz solid immersion microscopy. Optics Express, 2021, 29, 3553.	1.7	20
3	Opal-based terahertz optical elements fabricated by self-assembly of porous SiO ₂ nanoparticles. Optics Express, 2021, 29, 13764.	1.7	8
4	Terahertz axicon fabricated by direct sedimentation of SiO ₂ colloidal nanoparticles in a mold. , 2021, , .		1
5	Novel Elements of Terahertz Optics Based on Artificial Opal. Journal of Surface Investigation, 2021, 15, 1181-1184.	0.1	1
6	Proof of concept for the sapphire scalpel combining tissue dissection and optical diagnosis. Lasers in Surgery and Medicine, 2021, , .	1.1	1
7	The progress and perspectives of terahertz technology for diagnosis of neoplasms: a review. Journal of Optics (United Kingdom), 2020, 22, 013001.	1.0	135
8	Automated Growth of Si ^{1-λ} x Ge x Single Crystals with Constant Axial Gradient by Czochralski Technique. Crystal Research and Technology, 2020, 55, 1900097.	0.6	2
9	Microfocusing sapphire capillary needle for laser surgery and therapy: Fabrication and characterization. Journal of Biophotonics, 2020, 13, e202000164.	1.1	7
10	Behavior of Ultra-High Temperature Ceramic Material HfB ₂ SiC _{0.5} Y ₃ Al ₅ O ₁₂ under the Influence of Supersonic Dissociated Air Flow. Russian Journal of Inorganic Chemistry, 2020, 65, 1596-1605.	0.3	9
11	The Influence of Defects on the Absorption of Terahertz Radiation in a CdSiP ₂ Single Crystal. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 1004-1009.	0.2	2
12	Optical Properties of Hyperosmotic Agents for Immersion Clearing of Tissues in Terahertz Spectroscopy. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 1026-1035.	0.2	8
13	Optimal hyperosmotic agents for tissue immersion optical clearing in terahertz biophotonics. Journal of Biophotonics, 2020, 13, e202000297.	1.1	24
14	Terahertz and Infrared Spectroscopy of Dense and Porous Organosilicate Glass Thin Films. Doklady Physics, 2020, 65, 51-56.	0.2	2
15	Overcoming the Abbe Diffraction Limit Using a Bundle of Metal-Coated High-Refractive-Index Sapphire Optical Fibers. Advanced Optical Materials, 2020, 8, 2000307.	3.6	18
16	Layered-Fibrous Composite with a Niobium-Based Matrix Reinforced with Single-Crystal Sapphire Fibers. Journal of Surface Investigation, 2020, 14, 1126-1132.	0.1	2
17	Proof of concept for continuously-tunable terahertz bandpass filter based on a gradient metal-hole array. Optics Express, 2020, 28, 26228.	1.7	20
18	Nanoporous SiO ₂ based on annealed artificial opals as a favorable material platform of terahertz optics. Optical Materials Express, 2020, 10, 2100.	1.6	17

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19	Special Section Guest Editorial: Terahertz and Infrared Optics: Towards Biophotonics. Optical Engineering, 2020, 59, 1.	0.5	0
20	Terahertz Spectroscopy and Imaging of Brain Tumors. , 2020, , 551-574.		1
21	Development of novel medical instruments based on sapphire shaped crystals. , 2020, , .		0
22	Optically-controlled measurements of cryodestruction of biological tissues using sapphire shaped crystals. , 2020, , .		0
23	Overcoming the Abbe diffraction limit in THz spectroscopy and imaging of soft biological tissues. , 2020, , .		0
24	Sapphire Neurosurgical Probe for Aspiration of Brain Tumors with Boundary Demarcation by Use of Spectroscopy. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2019, 126, 545-553.	0.2	2
25	Experimental observation of a photonic hook. Applied Physics Letters, 2019, 114, .	1.5	80
26	Numerical Analysis of Liquid Menisci in the EFG Technique. , 2019, , .		0
27	Optimization of sapphire capillary needles for interstitial and percutaneous laser medicine. Journal of Biomedical Optics, 2019, 24, 1.	1.4	8
28	High-temperature terahertz intrawaveguide spectroscopy using hollow-core sapphire photonic crystal waveguide. , 2019, , .		1
29	Terahertz transmission-mode near-field scanning-probe microscope based on a flexible sapphire fiber. , 2019, , .		5
30	Sapphire implant based neuro-complex for deep-lying brain tumors phototheranostics. Journal of Physics: Conference Series, 2018, 945, 012009.	0.3	2
31	In vitro terahertz dielectric spectroscopy of human brain tumors. , 2018, , .		0
32	Sapphire Photonic Crystal Waveguides for Terahertz Sensing in Aggressive Environments. Advanced Optical Materials, 2018, 6, 1800573.	3.6	48
33	Reflection-mode continuous-wave 0.15 μ m-resolution terahertz solid immersion microscopy of soft biological tissues. Applied Physics Letters, 2018, 113, .	1.5	80
34	Biomedical applications of sapphire shaped crystals. , 2018, , .		2
35	Nanoparticle-enabled experimentally trained wavelet-domain denoising method for optical coherence tomography. Journal of Biomedical Optics, 2018, 23, 1.	1.4	14
36	Sapphire shaped crystals for laser-assisted cryodestruction of biological tissues. , 2018, , .		3

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37	A concept of cryoapplicator based on sapphire shaped crystal enabling control of the ice ball formation using spatially resolved elastic backscattering of light. , 2018, , .		5
38	Terahertz solid immersion microscopy for sub-wavelength-resolution imaging of biological objects and tissues. , 2018, , .		4
39	Wavelet-domain de-noising of OCT images of human brain malignant glioma. , 2018, , .		7
40	In vitro terahertz spectroscopy of gelatin-embedded human brain tumors: a pilot study. , 2018, , .		6
41	Sapphire capillary interstitial irradiators for laser medicine. , 2018, , .		3
42	Solid immersion terahertz imaging with sub-wavelength resolution. Applied Physics Letters, 2017, 110, .	1.5	69
43	Tunable two-dimensional assembly of colloidal particles in rotating electric fields. Scientific Reports, 2017, 7, 13727.	1.6	51
44	Multi-spectral endogenous fluorescence imaging for bacterial differentiation. , 2017, , .		0
45	Technological aspects of manufacturing terahertz photonic crystal waveguides based on sapphire shaped crystals. , 2017, , .		7
46	Method of calculating the phase composition of SiCâ€“Siâ€“C materials obtained by silicon infiltration of carbon matrices. Technical Physics, 2017, 62, 903-910.	0.2	5
47	Neurosurgery contact handheld probe based on sapphire shaped crystal. Journal of Crystal Growth, 2017, 457, 265-269.	0.7	20
48	SiC-Based Composite Materials Obtained by Siliconizing Carbon Matrices. Technical Physics, 2017, 62, 1869-1876.	0.2	15
49	Neurosurgical sapphire handheld probe for intraoperative optical diagnostics, laser coagulation and aspiration of malignant brain tissue. Proceedings of SPIE, 2017, , .	0.8	10
50	Sapphire shaped crystals for medicine. Journal of Physics: Conference Series, 2016, 672, 012018.	0.3	7
51	Sapphire shaped crystals allow combining tissue cryodestruction, laser coagulation and diagnosis. , 2016, , .		1
52	Terahertz Photonic Crystal Waveguides Based on Sapphire Shaped Crystals. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 576-582.	2.0	49
53	Principle component analysis and linear discriminant analysis of multi-spectral autofluorescence imaging data for differentiating basal cell carcinoma and healthy skin. , 2016, , .		2
54	Terahertz waveguides based on multichannel sapphire shaped crystals. , 2016, , .		2

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55	Numerical simulation of terahertz-wave propagation in photonic crystal waveguide based on sapphire shaped crystal. Journal of Physics: Conference Series, 2016, 673, 012001.	0.3	3
56	Growth of sapphire and oxide eutectic fibers by the EFG technique. Journal of Physics: Conference Series, 2016, 673, 012017.	0.3	10
57	Determination of the real crystal radius from a weight signal during growth by the Stepanov (EFG) technique. Technical Physics, 2015, 60, 873-876.	0.2	1
58	Determination of the melt level from a real weight signal during computer-assisted crystal growth by the Stepanov (EFG) technique and the use of crucible motion as a control action. Technical Physics, 2015, 60, 820-825.	0.2	4
59	Estimating the real crystal radius from the weight signal in a course of growth process by the Stepanov (EFG) technique. Crystal Research and Technology, 2015, 50, 641-644.	0.6	3
60	The GRANIT spectrometer. Comptes Rendus Physique, 2011, 12, 707-728.	0.3	24
61	Growth of sapphire ribbons with capillary channels for laser spectroscopy. Inorganic Materials: Applied Research, 2011, 2, 381-386.	0.1	8
62	Sapphire Smart Scalpel. , 2010, , .		2
63	Analysis of the profile curves of the menisci for the sapphire tubes growth by EFG (Stepanov) technique. Crystal Research and Technology, 2009, 44, 689-700.	0.6	11
64	Analysis of the profile curves of the menisci for the sapphire capillaries and fibers growth by EFG (Stepanov) technique. Crystal Research and Technology, 2009, 44, 701-706.	0.6	5
65	Experimental and theoretical study of the diffraction properties of various crystals for the realization of a soft gamma-ray Laue lens. Journal of Applied Crystallography, 2009, 42, 834-845.	1.9	31
66	Single crystalline mullite fibres obtained by the internal crystallisation method: Microstructure and creep resistance. Journal of the European Ceramic Society, 2009, 29, 337-345.	2.8	19
67	Laue optics for nuclear astrophysics: New detector requirements for focused gamma-ray beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 610, 283-286.	0.7	1
68	Analysis of the profile curves of the menisci for the crystal growth by the edge-defined film-fed growth (Stepanov) technique. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1320-1323.	0.1	1
69	Analysis of the features of meniscus profile curves during growth of base-faceted sapphire ribbons. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1333-1337.	0.1	2
70	Sapphire smart scalpel. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1341-1344.	0.1	16
71	Sapphire needle capillaries for laser medicine. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1345-1348.	0.1	14
72	Scintillation fibers and nanoscintillators for improving the spatial, spectrometric, and time resolution of radiation detectors. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1369-1373.	0.1	7

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73	Peculiarities of nanostructured silicon carbide films and coatings obtained by novel technique. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1374-1376.	0.1	5
74	New shaped ceramics based on silicon carbide. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1377-1379.	0.1	6
75	Nanoscintillators for Microscopic Diagnostics of Biological and Medical Objects and Medical Therapy. IEEE Transactions on Nanobioscience, 2009, 8, 20-32.	2.2	28
76	Advantages and Problems of Nanocrystalline Scintillators. IEEE Transactions on Nuclear Science, 2008, 55, 1536-1541.	1.2	23
77	Three-dimensional unsteady modeling analysis of silicon transport in melt during Cz growth of Ge _{1-x} Si _x bulk crystals. Journal of Crystal Growth, 2007, 303, 141-145.	0.7	16
78	Growth and properties of mosaic single crystals for γ -ray lens application. Journal of Crystal Growth, 2005, 275, e495-e500.	0.7	19
79	Growth of YAG:Re ³⁺ (Re=Ce, Eu)-shaped crystals by the EFG/Stepanov technique. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 537, 197-199.	0.7	11
80	Growth of YAG:Re ³⁺ (Re=Ce, Tb, Eu) fibers for imaging systems. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 537, 219-222.	0.7	6
81	Automated control of Czochralski and shaped crystal growth processes using weighing techniques. Progress in Crystal Growth and Characterization of Materials, 2003, 46, 1-57.	1.8	50
82	A review of developments in shaped crystal growth of sapphire by the Stepanov and related techniques. Progress in Crystal Growth and Characterization of Materials, 2002, 44, 63-122.	1.8	59
83	Fabrication, properties and usage of single-crystalline YAG fibres. Journal of the European Ceramic Society, 2002, 22, 1831-1837.	2.8	16
84	New advances and developments in the Stepanov method for the growth of shaped crystals. Crystallography Reports, 2002, 47, S43-S52.	0.1	23
85	Growth of oxide fibers by the internal crystallization method. Crystallography Reports, 2002, 47, S53-S62.	0.1	3
86	Temperature distribution near the interface in sapphire crystals grown by EFG and GES methods. Journal of Crystal Growth, 1999, 198-199, 210-214.	0.7	11
87	Effect of growth conditions on the strength of shaped sapphire. Journal of Crystal Growth, 1999, 198-199, 227-231.	0.7	14
88	Crack generation and avoidance during the growth of sapphire domes from an element of shape. Journal of Crystal Growth, 1999, 204, 317-324.	0.7	18
89	Sapphire fibres grown by a modified internal crystallisation method. Journal of Crystal Growth, 1999, 204, 499-504.	0.7	37
90	Growth of Sapphire Crystals of Complicated Shape. Crystal Research and Technology, 1999, 34, 293-300.	0.6	9

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91	One of the Possibilities to Improve Optical Quality of As-Grown Shaped Sapphire Crystals. Crystal Research and Technology, 1999, 34, 821-824.	0.6	3
92	EFG growth of sapphire tubes upto 85mm in diameter. Journal of Crystal Growth, 1998, 187, 107-110.	0.7	18
93	Growth of sapphire shaped crystals with continuously modulated dopants. Journal of Crystal Growth, 1998, 191, 779-782.	0.7	11
94	Growth of sapphire core-doped fibers. Journal of Crystal Growth, 1998, 191, 520-524.	0.7	13
95	In Situ Preparation of Bulk Crystals with Regularly Doped Structures. Advanced Materials, 1998, 10, 539-541.	11.1	8
96	Growth of shaped sapphire crystals using automated weight control. Journal of Crystal Growth, 1997, 173, 417-426.	0.7	44
97	Fabrication of near-net-shaped sapphire domes by noncapillary shaping method. Journal of Crystal Growth, 1997, 179, 175-180.	0.7	16
98	The noncapillary shaping (NCS) method: a new method of crystal growth. Journal of Crystal Growth, 1997, 179, 168-174.	0.7	19
99	Irreversible alterations of ferroelectric domain structure in paramagnetic rare earth molybdates induced by a magnetic field. Journal of Applied Physics, 1994, 75, 8004-8007.	1.1	6
100	Giant magnetic anisotropy in paramagnetic Tb ₂ (MoO ₄) ₃ . Ferroelectrics, 1994, 151, 103-108.	0.3	9
101	SmP1O5: Growth of rare-earth molybdate crystals. Ferroelectrics, 1992, 133, 289-294.	0.3	6
102	Magnetolectrical effect in paramagnetic rare-earth molybdates. Physica B: Condensed Matter, 1992, 177, 327-329.	1.3	27
103	Servo-controlled crystal growth by the Czochralski method estimating the state vector of the controlled object. Journal of Crystal Growth, 1992, 116, 185-190.	0.7	11
104	Synthesis of charge with the growth of rare-earth molybdate crystals. Ferroelectrics, 1992, 130, 333-340.	0.3	10
105	Growth of shaped lithium tantalate crystals. Journal of Crystal Growth, 1990, 104, 80-83.	0.7	3
106	Investigation of the growth conditions of gadolinium molybdate crystals. Journal of Crystal Growth, 1990, 104, 77-79.	0.7	26
107	The stepanov growth of LiNbO ₃ crystals. Journal of Crystal Growth, 1987, 82, 106-109.	0.7	17
108	Determination of Physical Constants of the Melt and the Parameters of the Control Object Concerning Crystal Growth from the Melt. Crystal Research and Technology, 1986, 21, 995-1002.	0.6	11

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109	Algorithm for the Transitional Portions during the CZ Crystal Growth Using a Computer Control. Crystal Research and Technology, 1986, 21, 1257-1264.	0.6	11
110	Dielectric permittivity of organosilicate glass thin films on a sapphire substrate determined using time-domain THz and Fourier IR spectroscopy. Journal Physics D: Applied Physics, 0, , .	1.3	1