Vladimir Kurlov

List of Publications by Year
in descending order

110	1,588	361045	360668
papers	citations	20 h-index	35 g-index

111	111	111	863
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The progress and perspectives of terahertz technology for diagnosis of neoplasms: a review. Journal of Optics (United Kingdom), 2020, 22, 013001.	1.0	135
2	Reflection-mode continuous-wave 0.15Î»-resolution terahertz solid immersion microscopy of soft biological tissues. Applied Physics Letters, 2018, 113, .	1.5	80
3	Experimental observation of a photonic hook. Applied Physics Letters, 2019, 114, .	1.5	80
4	Solid immersion terahertz imaging with sub-wavelength resolution. Applied Physics Letters, 2017, 110, .	1.5	69
5	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
6	Tunable two-dimensional assembly of colloidal particles in rotating electric fields. Scientific Reports, 2017, 7, 13727.	1.6	51
7	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
8	Terahertz Photonic Crystal Waveguides Based on Sapphire Shaped Crystals. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 576-582.	2.0	49
9	Sapphire Photonic Crystal Waveguides for Terahertz Sensing in Aggressive Environments. Advanced Optical Materials, 2018, 6, 1800573.	3.6	48
10	Growth of shaped sapphire crystals using automated weight control. Journal of Crystal Growth, 1997, 173, 417-426.	0.7	44
11	Sapphire fibres grown by a modified internal crystallisation method. Journal of Crystal Growth, 1999, 204, 499-504.	0.7	37
12	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
13	Nanoscintillators for Microscopic Diagnostics of Biological and Medical Objects and Medical Therapy. IEEE Transactions on Nanobioscience, 2009, 8, 20-32.	2.2	28
14	Magnetoelectrical effect in paramagnetic rare-earth molybdates. Physica B: Condensed Matter, 1992, 177, 327-329.	1.3	27
15	Investigation of the growth conditions of gadolinium molybdate crystals. Journal of Crystal Growth, 1990, 104, 77-79.	0.7	26
16	The GRANIT spectrometer. Comptes Rendus Physique, 2011, 12, 707-728.	0.3	24
17	Optimal hyperosmotic agents for tissue immersion optical clearing in terahertz biophotonics. Journal of Biophotonics, 2020, 13, e202000297.	1.1	24
18	New advances and developments in the Stepanov method for the growth of shaped crystals. Crystallography Reports, 2002, 47, S43-S52.	0.1	23

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19	Advantages and Problems of Nanocrystalline Scintillators. IEEE Transactions on Nuclear Science, 2008, 55, 1536-1541.	1.2	23
20	Neurosurgery contact handheld probe based on sapphire shaped crystal. Journal of Crystal Growth, 2017, 457, 265-269.	0.7	20
21	Object-dependent spatial resolution of the reflection-mode terahertz solid immersion microscopy. Optics Express, 2021, 29, 3553.	1.7	20
22	Proof of concept for continuously-tunable terahertz bandpass filter based on a gradient metal-hole array. Optics Express, 2020, 28, 26228.	1.7	20
23	The noncapillary shaping (NCS) method: a new method of crystal growth. Journal of Crystal Growth, 1997, 179, 168-174.	0.7	19
24	Growth and properties of mosaic single crystals for -ray lens application. Journal of Crystal Growth, 2005, 275, e495-e500.	0.7	19
25	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
26	EFG growth of sapphire tubes upto 85mm in diameter. Journal of Crystal Growth, 1998, 187, 107-110.	0.7	18
27	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
28	Overcoming the Abbe Diffraction Limit Using a Bundle of Metalâ€Coated Highâ€Refractiveâ€Index Sapphire Optical Fibers. Advanced Optical Materials, 2020, 8, 2000307.	3.6	18
29	The stepanov growth of LiNbO3 crystals. Journal of Crystal Growth, 1987, 82, 106-109.	0.7	17
30	Nanoporous SiO2 based on annealed artificial opals as a favorable material platform of terahertz optics. Optical Materials Express, 2020, 10, 2100.	1.6	17
31	Fabrication of near-net-shaped sapphire domes by noncapillary shaping method. Journal of Crystal Growth, 1997, 179, 175-180.	0.7	16
32	Fabrication, properties and usage of single-crystalline YAG fibres. Journal of the European Ceramic Society, 2002, 22, 1831-1837.	2.8	16
33	Three-dimensional unsteady modeling analysis of silicon transport in melt during Cz growth of Ge1â^'xSix bulk crystals. Journal of Crystal Growth, 2007, 303, 141-145.	0.7	16
34	Sapphire smart scalpel. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1341-1344.	0.1	16
35	SiC-Based Composite Materials Obtained by Siliconizing Carbon Matrices. Technical Physics, 2017, 62, 1869-1876.	0.2	15
36	Effect of growth conditions on the strength of shaped sapphire. Journal of Crystal Growth, 1999, 198-199, 227-231.	0.7	14

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37	Sapphire needle capillaries for laser medicine. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1345-1348.	0.1	14
38	Nanoparticle-enabled experimentally trained wavelet-domain denoising method for optical coherence tomography. Journal of Biomedical Optics, 2018, 23, 1.	1.4	14
39	Growth of sapphire core-doped fibers. Journal of Crystal Growth, 1998, 191, 520-524.	0.7	13
40	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
41	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
42	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
43	Growth of sapphire shaped crystals with continuously modulated dopants. Journal of Crystal Growth, 1998, 191, 779-782.	0.7	11
44	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
45	Growth of YAG:Re3+ (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
46	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
47	Growth of sapphire and oxide eutectic fibers by the EFG technique. Journal of Physics: Conference Series, 2016, 673, 012017.	0.3	10
48	Synthesis of charge with the growth of rare-earth molybdate crystals. Ferroelectrics, 1992, 130, 333-340.	0.3	10
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	Giant magnetic anisotropy in paramagnetic Tb2(MoO4)3. Ferroelectrics, 1994, 151, 103-108.	0.3	9
51	Growth of Sapphire Crystals of Complicated Shape. Crystal Research and Technology, 1999, 34, 293-300.	0.6	9
52	Behavior of Ultra-High Temperature Ceramic Material HfB2â€“SiCâ€“Y3Al5O12 under the Influence of Supersonic Dissociated Air Flow. Russian Journal of Inorganic Chemistry, 2020, 65, 1596-1605.	0.3	9
53	In Situ Preparation of Bulk Crystals with Regularly Doped Structures. Advanced Materials, 1998, 10, 539-541.	11.1	8
54	Growth of sapphire ribbons with capillary channels for laser spectroscopy. Inorganic Materials: Applied Research, 2011, 2, 381-386.	0.1	8

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55	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
56	Opal-based terahertz optical elements fabricated by self-assembly of porous SiO₂ nanoparticles. Optics Express, 2021, 29, 13764.	1.7	8
57	Optimization of sapphire capillary needles for interstitial and percutaneous laser medicine. Journal of Biomedical Optics, 2019, 24, 1.	1.4	8
58	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
59	Sapphire shaped crystals for medicine. Journal of Physics: Conference Series, 2016, 672, 012018.	0.3	7
60	Technological aspects of manufacturing terahertz photonic crystal waveguides based on sapphire shaped crystals. , 2017, , .		7
61	Microfocusing sapphire capillary needle for laser surgery and therapy: Fabrication and characterization. Journal of Biophotonics, 2020, 13, e202000164.	1.1	7
62	Wavelet-domain de-noising of OCT images of human brain malignant glioma. , 2018, , .		7
63	SmP1O5: Growth of rare-earth molybdate crystals. Ferroelectrics, 1992, 133, 289-294.	0.3	6
64	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
65	Growth of YAG:Re3+ (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
66	New shaped ceramics based on silicon carbide. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1377-1379.	0.1	6
67	In vitro terahertz spectroscopy of gelatin-embedded human brain tumors: a pilot study. , 2018, , .		6
68	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
69	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
70	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
71	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
72	Terahertz transmission-mode near-field scanning-probe microscope based on a flexible sapphire fiber. , 2019, , .		5

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73	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
74	Terahertz solid immersion microscopy for sub-wavelength-resolution imaging of biological objects and tissues. , 2018, , .		4
75	Growth of shaped lithium tantalate crystals. Journal of Crystal Growth, 1990, 104, 80-83.	0.7	3
76	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
77	Growth of oxide fibers by the internal crystallization method. Crystallography Reports, 2002, 47, S53-S62.	0.1	3
78	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
79	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
80	Sapphire shaped crystals for laser-assisted cryodestruction of biological tissues. , 2018, , .		3
81	Sapphire capillary interstitial irradiators for laser medicine. , 2018, , .		3
82	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
83	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
84	Sapphire Smart Scalpel. , 2010, , .		2
85	Principle component analysis and linear discriminant analysis of multi-spectral autofluorescence imaging data for differentiating basal cell carcinoma and healthy skin. , 2016, , .		2
86	Terahertz waveguides based on multichannel sapphire shaped crystals. , 2016, , .		2
87	Sapphire implant based neuro-complex for deep-lying brain tumors phototheranostics. Journal of Physics: Conference Series, 2018, 945, 012009.	0.3	2
88	Biomedical applications of sapphire shaped crystals. , 2018, , .		2
89	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
90	Automated Growth of Si 1â^' x Ge x Single Crystals with Constant Axial Gradient by Czochralski Technique. Crystal Research and Technology, 2020, 55, 1900097.	0.6	2

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91	The Influence of Defects on the Absorption of Terahertz Radiation in a CdSiP2 Single Crystal. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 1004-1009.	0.2	2
92	Terahertz and Infrared Spectroscopy of Dense and Porous Organosilicate Glass Thin Films. Doklady Physics, 2020, 65, 51-56.	0.2	2
93	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
94	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
95	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
96	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
97	Sapphire shaped crystals allow combining tissue cryodestruction, laser coagulation and diagnosis. , 2016, , .		1
98	Terahertz axicon fabricated by direct sedimentation of SiO2 colloidal nanoparticles in a mold. , 2021, , .		1
99	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
100	High-temperature terahertz intrawaveguide spectroscopy using hollow-core sapphire photonic crystal waveguide. , 2019, , .		1
101	Terahertz Spectroscopy and Imaging of Brain Tumors. , 2020, , 551-574.		1
102	Novel Elements of Terahertz Optics Based on Artificial Opal. Journal of Surface Investigation, 2021, 15, 1181-1184.	0.1	1
103	Proof of concept for the sapphire scalpel combining tissue dissection and optical diagnosis. Lasers in Surgery and Medicine, 2021, , .	1.1	1
104	Multi-spectral endogenous fluorescence imaging for bacterial differentiation. , 2017, , .		0
105	In vitro terahertz dielectric spectroscopy of human brain tumors. , 2018, , .		0
106	Numerical Analysis of Liquid Menisci in the EFG Technique. , 2019, , .		0
107	Special Section Guest Editorial: Terahertz and Infrared Optics: Towards Biophotonics. Optical Engineering, 2020, 59, 1.	0.5	0
108	Development of novel medical instruments based on sapphire shaped crystals. , 2020, , .		0

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109	Optically-controlled measurements of cryodestruction of biological tissues using sapphire shaped crystals. , 2020, , .		0
110	Overcoming the Abbe diffraction limit in THz spectroscopy and imaging of soft biological tissues. , 2020, , .		0