

# Nikolay Chkhalo

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7493391/publications.pdf>

Version: 2024-02-01

166  
papers

1,583  
citations

331259

21  
h-index

454577

30  
g-index

166  
all docs

166  
docs citations

166  
times ranked

446  
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation of microstructure and reflectivity of thermally annealed Mo/Be and W/Be multilayer mirrors. <i>Surfaces and Interfaces</i> , 2022, 28, 101656.	1.5	4
2	Microstructure and phonon behavior in W/Si periodic multilayer structures. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 175302.	1.3	4
3	Highly reflective Ru/Y multilayer mirrors for the spectral range of 9-11 $\mu$ m. <i>Optics Express</i> , 2022, 30, 19332.	1.7	3
4	Influence of ion-beam etching by Ar ions with an energy of 200-1000 eV on the roughness and sputtering yield of a single-crystal silicon surface. <i>Applied Optics</i> , 2022, 61, 2825.	0.9	10
5	High-aperture low-coherence interferometer with a diffraction reference wave. <i>Optics Letters</i> , 2022, 47, 3459.	1.7	1
6	Raman scattering studies of the ambient atmospheric thermal stability of Be in periodic Be/Mo and Be/W multilayer mirrors. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 245301.	1.3	0
7	Inhibition of chemical interaction of molybdenum and silicon in a Mo/Si multilayer structure by the formation of intermediate compounds. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 1363-1370.	1.3	5
8	Phonon, plasmon and electronic properties of surfaces and interfaces of periodic W/Si and Si/W multilayers. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 15076-15090.	1.3	10
9	Microstructural Transformation of Nanoscale Be Layers in the Mo/Be and Be/Mo Periodic Multilayer Mirrors Investigated by Raman Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2021, 125, 2729-2738.	1.5	10
10	Emission Spectra of Light Inert Gases Ne and Ar in the 3-20 nm Range under Pulsed Laser Excitation Using Various Gas Jets as Targets. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2021, 47, 377-381.	0.0	0
11	Matrix based algorithm for ion-beam figuring of optical elements. <i>Precision Engineering</i> , 2021, 69, 29-35.	1.8	22
12	Size-dependent plasmon effects in periodic W-Si based mirrors, investigated by X-ray photoelectron spectroscopy. <i>Applied Surface Science</i> , 2021, 566, 150616.	3.1	6
13	Phase analysis of tungsten and phonon behavior of beryllium layers in W/Be periodic multilayers. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 23303-23312.	1.3	5
14	Effect of annealing on the interface formation in Mo/Be multilayer structures without/with a barrier layer. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 23978-23985.	1.3	3
15	Faraday Isolator With Composite Magneto-Optical TGG-Sapphire Elements. <i>IEEE Journal of Quantum Electronics</i> , 2021, 57, 1-8.	1.0	3
16	Intrinsic roughness and interfaces of Cr/Be multilayers. <i>Journal of Applied Crystallography</i> , 2021, 54, 1747-1756.	1.9	2
17	Emission Spectra of Heavy Inert Gases Kr and Xe in the Range from 3 to 20 nm Obtained under Pulsed Laser Excitation Using Various Gas Jets as Targets. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2021, 47, 431-434.	0.7	0
18	Emission Spectra of Molecular Gases N <sub>2</sub> and CO <sub>2</sub> in the Range of 3-20 nm upon Pulsed Laser Excitation of Various Gas-Jet Targets. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2021, 129, 789-793.	0.2	0

#	ARTICLE	IF	CITATIONS
19	Y-Based Multilayer Mirrors for the Spectral Range of 8â€“12 nm. Bulletin of the Lebedev Physics Institute, 2021, 48, 406-410.	0.1	0
20	Raman scattering study of nanoscale Mo/Si and Mo/Be periodic multilayer structures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	10
21	Quantum Confinement Effect in a Nanoscale Mo/Si Multilayer Structure. Journal of Physical Chemistry C, 2020, 124, 17795-17805.	1.5	15
22	Matched characterization of super-multiperiod superlattices. Journal Physics D: Applied Physics, 2020, 53, 455103.	1.3	8
23	Optimization of an Anode Membrane with a Transmission-Type Target in a System of Soft X-Ray Sources for X-Ray Nanolithography. Technical Physics, 2020, 65, 1709-1716.	0.2	0
24	Material Surface Treatment for Design of Composite Optical Elements. Technical Physics, 2020, 65, 1828-1831.	0.2	1
25	Creation of Composite Optical Elements by the Ion-Beam Surface-Activation Method for Laser Applications. Journal of Surface Investigation, 2020, 14, 1016-1021.	0.1	0
26	Modification and Polishing of the Holographic Diffraction Grating Grooves by a Neutralized Ar Ion Beam. Technical Physics, 2020, 65, 1780-1785.	0.2	0
27	Projection Objective For an EUV-Lithographic Workbench. Journal of Surface Investigation, 2020, 14, 562-573.	0.1	0
28	High-resolution laboratory reflectometer for the study of x-ray optical elements in the soft and extreme ultraviolet wavelength ranges. Review of Scientific Instruments, 2020, 91, 063103.	0.6	6
29	Diffraction limited X-ray optics: technology, metrology, applications. Physics-Uspekhi, 2020, 63, 67-82.	0.8	12
30	Beryllium-Based Multilayer Mirrors for the Soft X-Ray and Extreme Ultraviolet Wavelength Ranges. Journal of Surface Investigation, 2020, 14, 124-134.	0.1	6
31	Broadband Mirrors for Spectroheliographs at the KORTES Sun Study Facility. Technical Physics, 2020, 65, 1792-1799.	0.2	2
32	Application of Novel Multilayer Normal-Incidence Mirrors for EUV Solar Spectroscopy. Technical Physics, 2020, 65, 1736-1739.	0.2	2
33	The Smoothing Effect of Si Layers in Multilayer Be/Al Mirrors for the 17- to 31-nm Range. Technical Physics, 2020, 65, 1786-1791.	0.2	4
34	Multilayer Cr/Sc Mirrors with Improved Reflection for the â€œWater Transparency Windowâ€•Range. Technical Physics, 2020, 65, 1809-1813.	0.2	8
35	Obtaining of Smooth High-Precision Surfaces by the Mechanical Lapping Method. Technical Physics, 2020, 65, 1873-1879.	0.2	5
36	Composite Yb:YAG/sapphire thin-disk active elements for high-energy high-average power lasers. Optics Letters, 2020, 45, 387.	1.7	19

#	ARTICLE	IF	CITATIONS
37	Optical constants of sputtered beryllium thin films determined from photoabsorption measurements in the spectral range 20.4â€“250â€“eV. Journal of Synchrotron Radiation, 2020, 27, 75-82.	1.0	4
38	Prospects for the Use of X-Ray Tubes with a Field-Emission Cathode and a Through-Type Anode in the Range of Soft X-Ray Radiation. Technical Physics, 2020, 65, 1726-1735.	0.2	3
39	The Microstructure of Transition Boundaries in Multilayer Mo/Be Systems. Technical Physics, 2020, 65, 1800-1808.	0.2	1
40	Ion-Beam Methods for High-Precision Processing of Optical Surfaces. Technical Physics, 2020, 65, 1837-1845.	0.2	1
41	Stable Multilayer Reflective Coatings for $\lambda$ (HeI) = 58.4 nm for the KORTES Solar Telescope. Technical Physics Letters, 2019, 45, 85-88.	0.2	6
42	Miniature Ion Source KLAN-10M with a Plasma Neutralizer. Journal of Surface Investigation, 2019, 13, 182-187.	0.1	4
43	Multilayer X-Ray Image-Forming Optics. Bulletin of the Russian Academy of Sciences: Physics, 2019, 83, 105-111.	0.1	0
44	X-ray scattering by the fused silica surface etched by low-energy Ar ions. Journal of X-Ray Science and Technology, 2019, 27, 857-870.	0.7	4
45	Observation of Laser-Induced Spark in the Density Jump in a Gas-Jet Target. Technical Physics Letters, 2019, 45, 970-972.	0.2	3
46	Optical, Mechanical, and Thermal Properties of Free-Standing MoSi <sub>2</sub> N <sub>x</sub> and ZrSi <sub>2</sub> N <sub>y</sub> Nanocomposite Films. Technical Physics, 2019, 64, 1590-1595.	0.2	4
47	Mo/Si Multilayer Mirrors with B <sub>4</sub> C and Be Barrier Layers. Journal of Surface Investigation, 2019, 13, 169-172.	0.1	4
48	Vacuum Ultraviolet and Soft X-ray Broadband Monochromator for a Synchrotron Radiation Metrological Station. Optoelectronics, Instrumentation and Data Processing, 2019, 55, 107-114.	0.2	5
49	Aperiodic Mirrors Based on Multilayer Beryllium Systems. Journal of Surface Investigation, 2019, 13, 267-271.	0.1	2
50	Microstructure and Density of Mo Films in Multilayer Mo/Si Mirrors. Journal of Surface Investigation, 2019, 13, 8-13.	0.1	0
51	On the Possibilities of Multilayer Mirrors for Measuring the Concentration of Boron Impurities in Diamond. Journal of Surface Investigation, 2019, 13, 173-176.	0.1	0
52	Set of Multilayer X-Ray Mirrors for a Double-Mirror Monochromator Operating in the Wavelength Range of 0.41â€“15.5 nm. Journal of Surface Investigation, 2019, 13, 1-7.	0.1	8
53	Influence of Thermal Annealing on the Properties of Multilayer Mo/Be Mirrors. Technical Physics, 2019, 64, 1692-1697.	0.2	3
54	Development of Technological Principles for Creating a System of Microfocus X-Ray Tubes Based on Silicon Field Emission Nanocathodes. Technical Physics, 2019, 64, 1742-1748.	0.2	9

#	ARTICLE	IF	CITATIONS
55	Multilayer Ag/Y Mirrors for the Spectral Range of 9–11 nm. Technical Physics, 2019, 64, 1684-1687.	0.2	2
56	Beryllium as a Material for Thermally Stable X-Ray Mirrors. Technical Physics, 2019, 64, 1596-1601.	0.2	2
57	Fabrication and Study of a Concave Crystal Mirror for the KORTES Project. Technical Physics, 2019, 64, 1680-1683.	0.2	1
58	Influence of Beryllium Barrier Layers on the Properties of Mo/Si Multilayer Mirrors. Technical Physics, 2019, 64, 1688-1691.	0.2	3
59	Matched X-Ray Reflectometry and Diffractometry of Super-Multiperiod Heterostructures Grown by Molecular Beam Epitaxy. Semiconductors, 2019, 53, 1910-1913.	0.2	7
60	Modular Device for the Formation and Study of Cluster Beams of Inert and Molecular Gases. Journal of Surface Investigation, 2019, 13, 862-869.	0.1	7
61	Simulation of Local Error Correction of the Surface Shape by a Low-Dimensional Ion Beam. Technical Physics, 2019, 64, 1560-1565.	0.2	2
62	Emission Properties of Laser Plasma Excited on Molecular-Cluster Carbon Dioxide Jets. Technical Physics, 2019, 64, 1566-1572.	0.2	0
63	Optimization of Composition, Synthesis, and Study of Broadband Multilayer Mirrors for the EUV Spectral Range. Technical Physics, 2019, 64, 1673-1679.	0.2	6
64	Angle resolved photoelectron spectroscopy as applied to X-ray mirrors: an in depth study of Mo/Si multilayer systems. Physical Chemistry Chemical Physics, 2019, 21, 25002-25010.	1.3	24
65	Ultrasoother beryllium substrates for solar astronomy in extreme ultraviolet wavelengths. Applied Optics, 2019, 58, 3652.	0.9	4
66	Measurement Error of Interferometers with Diffraction Reference Wave. Technical Physics, 2019, 64, 1698-1703.	0.2	1
67	Current State of Development of a Microscope Operating at a Wavelength of 3.37 nm at the Institute of Physics of Microstructures of the Russian Academy of Sciences. Journal of Surface Investigation, 2018, 12, 1253-1263.	0.1	10
68	Electron Energy Conversion to EUV Radiation in the K $\alpha$ Line of Be in the "Shooting Through" Geometry. Journal of Experimental and Theoretical Physics, 2018, 127, 985-993.	0.2	3
69	Conversion efficiency of a laser-plasma source based on a Xe jet in the vicinity of a wavelength of 11 nm. AIP Advances, 2018, 8, .	0.6	23
70	Observation of extreme ultraviolet light emission from an expanding plasma jet with multiply charged argon or xenon ions. Applied Physics Letters, 2018, 113, .	1.5	25
71	Maskless X-Ray Lithography Based on Microoptical Electromechanical Systems and Microfocus X-Ray Tubes. Journal of Surface Investigation, 2018, 12, 944-952.	0.1	8
72	Absolutely Calibrated Spectrally Resolved Measurements of Xe Laser Plasma Radiation Intensity in the EUV Range. Technical Physics, 2018, 63, 1507-1510.	0.2	9

#	ARTICLE	IF	CITATIONS
73	Microfocus X-Ray Tubes with a Silicon Autoemission Nanocathode as an X-Ray Source. Bulletin of the Lebedev Physics Institute, 2018, 45, 1-5.	0.1	5
74	A double-stream Xe:He jet plasma emission in the vicinity of 6.7â€‰nm. Applied Physics Letters, 2018, 112, .	1.5	13
75	Study of oxidation processes in Mo/Be multilayers. AIP Advances, 2018, 8, .	0.6	16
76	Polishing the surface of a z-cut KDP crystal by neutralized argon ions. Applied Optics, 2018, 57, 6911.	0.9	5
77	Influence of barrier interlayers on the performance of Mo/Be multilayer mirrors for next-generation EUV lithography. Optics Express, 2018, 26, 33718.	1.7	32
78	Laboratory reflectometer for the investigation of optical elements in a wavelength range of 5 â€“ 50 nm: description and testing results. Quantum Electronics, 2017, 47, 385-392.	0.3	21
79	Current status and development prospects for multilayer X-ray optics at the Institute for Physics of Microstructures, Russian Academy of Sciences. Journal of Surface Investigation, 2017, 11, 1-19.	0.1	36
80	Deposition of Mo/Si multilayers onto MEMS micromirrors and its utilization for extreme ultraviolet maskless lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	0.6	16
81	Extended model for the reconstruction of periodic multilayers from extreme ultraviolet and X-ray reflectivity data. Journal of Applied Crystallography, 2017, 50, 1428-1440.	1.9	40
82	Application of cluster beams for the physics and technologies of microstructures. Journal of Surface Investigation, 2017, 11, 496-500.	0.1	6
83	The effect of bombardment with neutralized neon ions on the roughness of a fused silica and beryllium surface. Journal of Surface Investigation, 2017, 11, 485-489.	0.1	2
84	Surface shape measurement of mirrors in the form of rotation figures by using point diffraction interferometer. Journal of Modern Optics, 2017, 64, 413-421.	0.6	5
85	Effect of ion beam etching on the surface roughness of bare and silicon covered beryllium. Proceedings of SPIE, 2017, , .	0.8	1
86	Problems and prospects of maskless (B)EUV lithography. Proceedings of SPIE, 2016, , .	0.8	4
87	The diffraction efficiency of echelle gratings increased by ion-beam polishing of groove surfaces. Technical Physics Letters, 2016, 42, 844-847.	0.2	10
88	Reflective Schmidtâ€“Cassegrain system for large-aperture telescopes. Applied Optics, 2016, 55, 4430.	2.1	14
89	Sputtering of carbon using hydrogen ion beams with energies of 60â€“800 eV. Nuclear Instruments & Methods in Physics Research B, 2016, 387, 73-76.	0.6	7
90	Thin film multilayer filters for solar EUV telescopes. Applied Optics, 2016, 55, 4683.	2.1	27

#	ARTICLE	IF	CITATIONS
91	Ion-beam polishing of fused silica substrates for imaging soft x-ray and extreme ultraviolet optics. Applied Optics, 2016, 55, 1249.	2.1	54
92	Problems in the application of a null lens for precise measurements of aspheric mirrors. Applied Optics, 2016, 55, 619.	2.1	36
93	Advanced materials for multilayer mirrors for extreme ultraviolet solar astronomy. Applied Optics, 2016, 55, 2126.	2.1	54
94	Comparative characteristics of optical methods for measuring the surface shape at the institute for physics of microstructures, Russian Academy of Sciences. Journal of Surface Investigation, 2015, 9, 741-744.	0.1	1
95	Design of a soft X-ray and extreme UV reflectometer equipped with a high-resolution monochromator and high-brightness laser-plasma radiation source. Journal of Surface Investigation, 2015, 9, 726-734.	0.1	4
96	Preparation and roughness metrology of supersmooth optical surfaces. Journal of Surface Investigation, 2015, 9, 761-764.	0.1	8
97	Principles of certification of aspherical mirrors for an EUV lithography lens at a wavelength of 13.5 nm. Journal of Surface Investigation, 2015, 9, 735-740.	0.1	3
98	Precision aspherization of the surface of optical elements by ion-beam etching. Journal of Surface Investigation, 2015, 9, 765-770.	0.1	8
99	Note: A stand on the basis of atomic force microscope to study substrates for imaging optics. Review of Scientific Instruments, 2015, 86, 016102.	0.6	33
100	Sub-micrometer resolution proximity X-ray microscope with digital image registration. Review of Scientific Instruments, 2015, 86, 063701.	0.6	5
101	Resolving capacity of the circular Zernike polynomials. Optics Express, 2015, 23, 14677.	1.7	25
102	Application of point diffraction interferometry for middle spatial frequency roughness detection. Optics Letters, 2015, 40, 159.	1.7	17
103	Application of point diffraction interferometry for measuring angular displacement to a sensitivity of 001 arcsec. Applied Optics, 2015, 54, 9315.	2.1	3
104	Effect of polymer matrix and photoacid generator on the lithographic properties of chemically amplified photoresist. Russian Microelectronics, 2014, 43, 392-400.	0.1	3
105	Roughness measurement and ion-beam polishing of super-smooth optical surfaces of fused quartz and optical ceramics. Optics Express, 2014, 22, 20094.	1.7	67
106	A Two-coordinate digital detector for microscopy in the soft X-ray region. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 64-67.	0.1	0
107	Using Ion-beam etching to smooth fused silica surfaces. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 57-60.	0.1	2
108	High performance multilayer La/B4C mirrors with carbon barrier layers. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 61-63.	0.1	4

#	ARTICLE	IF	CITATIONS
109	Nanostructure formation on an EUV lithographer stand: First results. Bulletin of the Russian Academy of Sciences: Physics, 2013, 77, 1-5.	0.1	1
110	A laser plasma source of EUV radiation for projection nanolithography. Bulletin of the Russian Academy of Sciences: Physics, 2013, 77, 6-9.	0.1	3
111	Comparative heat load testing of freestanding multilayer Mo/ZrSi <sub>2</sub> and Mo/NbSi <sub>2</sub> . Bulletin of the Russian Academy of Sciences: Physics, 2013, 77, 83-85.	0.1	0
112	Next generation nanolithography based on Ru/Be and Rh/Sr multilayer optics. AIP Advances, 2013, 3, .	0.6	58
113	Chemically amplified resists for high-resolution lithography. Russian Microelectronics, 2013, 42, 165-175.	0.1	6
114	Multilayer X-ray mirrors for the (4.4±5)-nm carbon-window spectral region. Crystallography Reports, 2013, 58, 505-508.	0.1	3
115	Polished siall substrates for X-ray optics. Journal of Surface Investigation, 2013, 7, 612-616.	0.1	6
116	Investigation of supersmooth optical surfaces and multilayer elements using soft X-ray radiation. Technical Physics, 2013, 58, 1371-1379.	0.2	8
117	On the problems of the application of atomic-force microscopes for studying the surface roughness of elements for imaging optics. Journal of Surface Investigation, 2013, 7, 797-801.	0.1	4
118	Device for the precise shape correction of optical surfaces by ion-beam and reactive plasma etching. Journal of Surface Investigation, 2013, 7, 913-915.	0.1	11
119	High performance La/B <sub>4</sub> C multilayer mirrors with barrier layers for the next generation lithography. Applied Physics Letters, 2013, 102, 011602.	1.5	54
120	Mirrors with a Subnanometer Surface Shape Accuracy. , 2013, , 595-616.		1
121	Source for extreme ultraviolet lithography based on plasma sustained by millimeter-wave gyrotron radiation. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2012, 11, 021123-1.	1.0	14
122	Free-standing spectral purity filters for extreme ultraviolet lithography. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2012, 11, 021115-1.	1.0	27
123	Multilayer structures for the water-window spectral range on the basis of scandium. Journal of Surface Investigation, 2012, 6, 598-600.	0.1	0
124	Reflective mask for projection lithography operating at a wavelength of 13.5 nm. Journal of Surface Investigation, 2012, 6, 568-573.	0.1	3
125	Atomic-hydrogen cleaning of Sn from Mo/Si and DLC/Si extreme ultraviolet multilayer mirrors. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2012, 11, 021118-1.	1.0	10
126	The evolution of roughness of supersmooth surfaces by ion-beam etching. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 163-167.	0.1	18

#	ARTICLE	IF	CITATIONS
127	Influence of the chemical structure of (co)polymer resists on their sensitivity to radiation. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 159-162.	0.1	3
128	Thermal stability of a freestanding EUV filter under long-term vacuum annealing at 700â€“1000Â°C. Journal of Surface Investigation, 2012, 6, 482-486.	0.1	3
129	Diffraction-limited short-wavelength optics: Analysis, fabrication, and application. Journal of Surface Investigation, 2012, 6, 464-472.	0.1	2
130	Problem of roughness detection for supersmooth surfaces. Proceedings of SPIE, 2011, , .	0.8	7
131	Manufacturing and characterization of diffraction quality normal incidence optics for the XEUV range. , 2011, , .		4
132	Design of the aspheric Schwarzschild lens for a nanolithographer with the operating wavelength $\hat{\lambda}$ = 13.5 nm. Journal of Surface Investigation, 2011, 5, 512-516.	0.1	0
133	System for illumination of an EUV-nanolithograph mask. Journal of Surface Investigation, 2011, 5, 517-519.	0.1	4
134	Particulars of studying the roughness of substrates for multilayer X-ray optics using small-angle X-ray reflectometry, atomic-force, and interference microscopy. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 67-72.	0.1	24
135	SIMS depth profiling of Pd/B4C, Ni/C, and Cr/Sc multilayer metal structures using registration of cluster secondary ions: The problem of depth resolution enhancement. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 100-104.	0.1	2
136	Project for manufacturing a Russian EUV nanolithographer for the fabrication of chips according to technological standards of 22 nm. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 44-48.	0.1	0
137	Evolution of the roughness of amorphous quartz surfaces and Cr/Sc multilayer structures upon exposure to ion-beam etching. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 61-63.	0.1	12
138	An extreme ultraviolet radiation source based on plasma heated by millimeter range radiation. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 64-66.	0.1	5
139	A stand for a projection EUV nanolithographer-multiplier with a design resolution of 30 nm. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 49-52.	0.1	19
140	A technological complex for manufacturing of precise imaging optics. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 53-56.	0.1	4
141	Two-mirror projection objective of a nanolithographer at $\hat{\lambda}$ = 13.5 nm. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 57-60.	0.1	6
142	Details of how to mount high-precision optics. Journal of Surface Investigation, 2010, 4, 359-365.	0.1	2
143	Use of cluster secondary ions for minimization of matrix effects in the SIMS depth profiling of La/B4C multilayer nanostructures. Journal of Surface Investigation, 2010, 4, 807-810.	0.1	8
144	New focusing multilayer structures for X-ray and VUV plasma spectroscopy. Technical Physics, 2010, 55, 1018-1023.	0.2	4

#	ARTICLE	IF	CITATIONS
145	Multilayer X-ray mirrors based on La/B4C and La/B9C. Technical Physics, 2010, 55, 1168-1174.	0.2	32
146	Multilayer thin-film filters of extreme ultraviolet and soft X-ray spectral regions. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 46-49.	0.1	10
147	Physical limitations of measurement accuracy of the diffraction reference wave interferometers. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 53-56.	0.1	11
148	Detecting quasi-periodic $\{11n\}$ ( $n = 7 \dots 11$ ) faces in samples with Ge/Si quantum dots by grazing X-ray reflectometry. Technical Physics Letters, 2010, 36, 108-111.	0.2	8
149	10.1007/s11448-008-1007-7. , 2010, 87, 27.		0
150	Activity in manufacturing and characterization of X-ray optical elements and ultrahigh-resolution systems at IPM RAS. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 62-65.	0.1	0
151	Determining angles of incidence and heights of quantum dot faces by analyzing X-ray diffuse and specular scattering. Technical Physics, 2009, 54, 561-568.	0.2	12
152	Manufacturing of diffraction-quality optical elements for high-resolution optical systems. , 2009, , .		0
153	Testing and correction of optical elements with subnanometer precision. Nanotechnologies in Russia, 2008, 3, 602-610.	0.7	14
154	Shortwave projection nanolithography. Herald of the Russian Academy of Sciences, 2008, 78, 279-285.	0.2	12
155	Effect of pinhole roughness on light diffraction. Journal of Surface Investigation, 2008, 2, 511-513.	0.1	1
156	X-ray and vacuum-ultraviolet plasma spectroscopy with the use of new focusing multilayer structures. JETP Letters, 2008, 87, 27-29.	0.4	5
157	Extreme-ultraviolet source based on the electron-cyclotron-resonance discharge. JETP Letters, 2008, 88, 95-98.	0.4	12
158	A source of a reference spherical wave based on a single mode optical fiber with a narrowed exit aperture. Review of Scientific Instruments, 2008, 79, 033107.	0.6	40
159	<title>A plane wave diffraction on a pin-hole in a film with a finite thickness and real electrodynamic properties</title>. , 2008, , .		8
160	Multilayer x-ray mirrors based on W/B 4 C with ultrashort ( $d = 0.7 \dots 1.5$ nm) periods. Journal of Surface Investigation, 2007, 1, 7-12.	0.1	1
161	Analysis of cross-correlation of interface roughness in multilayer structures with ultrashort periods. Journal of Experimental and Theoretical Physics, 2006, 103, 346-353.	0.2	10
162	Thermal loads of X-ray tubes with a fixed anode under long-duration exposure. High Temperature, 2006, 44, 766-772.	0.1	4

#	ARTICLE	IF	CITATIONS
163	<title>Laboratory methods for investigations of multilayer mirrors in extreme ultraviolet and soft x-ray region</title>. , 2004, , .		40
164	Short-period multilayer X-ray mirrors. Journal of Synchrotron Radiation, 2003, 10, 358-360.	1.0	26
165	Properties of laserâ€sputtered Ti/Be multilayers. Review of Scientific Instruments, 1992, 63, 1478-1481.	0.6	25
166	A volume plasmon blueshift in thin silicon films embedded within Be/Si periodic multilayer mirrors. Physical Chemistry Chemical Physics, 0, , .	1.3	1