Alexander N Obraztsov

List of Publications by Year in Descending Order

153 papers	2,487 citations	25 h-index	45 g-index
169 ext. papers	2,732 ext. citations	3 avg, IF	5.13 L-index

#	Paper	IF	Citations
153	Surface graphitization of diamond nanotips induced by field-emission current. *Applied Physics Letters*, **2022**, 120, 141601	3.4	1
152	Control of NV, SiV and GeV centers formation in single crystal diamond needles. *Diamond and Related Materials*, **2022**, 125, 109007	3.5	1
151	Single-Crystal Diamond Needle Fabrication Using Hot-Filament Chemical Vapor Deposition. *Materials*, **2021**, 14,	3.5	5
150	Carbon single-electron point source controlled by Coulomb blockade. *Carbon*, **2021**, 171, 154-160	10.4	7
149	Coulomb blockade and quantum confinement in field electron emission from heterostructured nanotips. *Physical Review B*, **2020**, 102,	3.3	2
148	Circular photocurrent in the carbon nanowall film. *Optics Letters*, **2020**, 45, 2022-2025	3	3
147	Macro-, Micro- and Nano-Roughness of Carbon-Based Interface with the Living Cells: Towards a Versatile Bio-Sensing Platform. *Sensors*, **2020**, 20,	3.8	3
146	Morphological Specific Features of (100)-Textured Polycrystalline Diamond Films. *Crystallography Reports*, **2020**, 65, 152-158	0.6	
145	Nanocarbon Photonics and Optoelectronics. *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1900519	1.3	
144	Photoassisted and multiphoton emission from single-crystal diamond needles. *Nanoscale*, **2019**, 11, 6852-6858	7.9	7
143	Conduction mechanisms and voltage drop during field electron emission from diamond needles. *Ultramicroscopy*, **2019**, 202, 51-56	3.1	5
142	Formation of GeV, SiV, and NV Color Centers in Single Crystal Diamond Needles Grown by Chemical Vapor Deposition. *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1800721	1.3	4
141	A Comparative Study of Field Emission From Pristine, Ion-Treated and Tungsten Nanoparticle-Decorated p-Type Silicon Tips. *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1800646	1.3	4
140	Strain sensitivity and symmetry of 2.65 eV color center in diamond nanoscale needles. *Applied Physics Letters*, **2019**, 114, 143104	3.4	1
139	Effect of laser illumination on the electrical conductivity of single-crystal diamond needles. *Journal of Applied Physics*, **2019**, 126, 045710	2.5	3
138	Nanocarbon Photonics and Optoelectronics (Phys. Status Solidi B 9/2019). *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1970036	1.3	
137	Formation of Graphene on Polycrystalline Nickel. *Technical Physics*, **2019**, 64, 1666-1672	0.5	7

136	Field emission microscopy pattern of a single-crystal diamond needle under ultrafast laser illumination. *New Journal of Physics*, **2019**, 21, 113060	2.9	1
135	Ultrafast zero-bias photocurrent and terahertz emission in hybrid perovskites. *Communications Physics*, **2018**, 1,	5.4	24
134	Thermal diffusivity of diamond nanowires studied by laser assisted atom probe tomography. *Applied Physics Letters*, **2018**, 112, 143104	3.4	7
133	Luminescent Characteristics of Needle-Like Single Crystal Diamonds. *Physica Status Solidi (B): Basic Research*, **2018**, 255, 1700189	1.3	12
132	A Comparative Study of Field Emission From Semiconducting and Metallic Single-Walled Carbon Nanotube Planar Emitters. *Physica Status Solidi (B): Basic Research*, **2018**, 255, 1700268	1.3	14
131	Field Electron Emission From CVD Nanocarbon Films Containing Scrolled Graphene Structures. *Physica Status Solidi (B): Basic Research*, **2018**, 255, 1700270	1.3	6
130	Detonation Nanodiamond-Assisted Carbon Nanotube Growth by Hot Filament Chemical Vapor Deposition. *Physica Status Solidi (B): Basic Research*, **2018**, 255, 1700286	1.3	1
129	Structural and morphological peculiarities of needle-like diamond crystallites obtained by chemical vapor deposition. *Diamond and Related Materials*, **2018**, 87, 261-266	3.5	5
128	Photoluminescent properties of single crystal diamond microneedles. *Optical Materials*, **2018**, 75, 49-55	3.3	18
127	Production and potential applications of needle-like diamonds. *Materials Today: Proceedings*, **2018**, 5, 26146-26152	1.4	2
126	The laser assisted field electron emission from carbon nanostructure. *Journal of the European Optical Society-Rapid Publications*, **2017**, 13,	2.5	5
125	Photoinduced effects in field electron emission from diamond needles. *Applied Physics Letters*, **2017**, 110, 182101	3.4	12
124	Optical Contactless Measurement of Electric Field-Induced Tensile Stress in Diamond Nanoscale Needles. *Nano Letters*, **2017**, 17, 7401-7409	11.5	14
123	Phonon-phonon interactions in photoexcited graphite studied by ultrafast electron diffraction. *Physical Review B*, **2016**, 93,	3.3	28
122	Structural peculiarities of single crystal diamond needles of nanometer thickness. *Nanotechnology*, **2016**, 27, 455707	3.4	11
121	Luminescent properties of diamond single crystals of pyramidal shape. *Physics of the Solid State*, **2016**, 58, 2307-2311	0.8	3
120	Single Crystal Diamond Needle as Point Electron Source. *Scientific Reports*, **2016**, 6, 35260	4.9	22
119	Diamond platelets produced by chemical vapor deposition. *Diamond and Related Materials*, **2016**, 65, 13-16	3.5	10

118	Field emission from single-walled carbon nanotubes modified by annealing and CuCl doping. *Applied Physics Letters*, **2016**, 109, 143112	3.4	4
117	Electrochemical characterization of mesoporous nanographite films. *Carbon*, **2016**, 105, 96-102	10.4	8
116	Quasi-two-dimensional diamond crystals: Deposition from a gaseous phase and structural morphological properties. *Physics of the Solid State*, **2016**, 58, 1458-1462	0.8	
115	Photo- and cathodo-luminescence of needle-like single crystal diamonds. *Journal of Luminescence*, **2016**, 179, 539-544	3.8	12
114	CVD nanographite films covered by ALD metal oxides: structural and field emission properties. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2015**, 12, 1022-1027		2
113	Edge field emission of large-area single layer graphene. *Applied Surface Science*, **2015**, 357, 1967-1974	6.7	33
112	Fluid modeling for plasma-enhanced direct current chemical vapor deposition. *Journal of Nanophotonics*, **2015**, 10, 103598	1.1	
111	Carbon nanoscrolls on the surface of nanocrystalline graphite and diamond films. *Crystallography Reports*, **2015**, 60, 578-582	0.6	5
110	Field emission spectroscopy evidence for dual-barrier electron tunnelling in nanographite. *Applied Physics Letters*, **2015**, 106, 233112	3.4	14
109	Fluid modeling for plasma-enhanced direct current chemical vapor deposition. *Journal of Nanophotonics*, **2015**, 10, 012503	1.1	4
108	Atomic layer deposition of TiO2and Al2O3on nanographite films: structure and field emission properties. *Journal of Nanophotonics*, **2015**, 10, 012509	1.1	2
107	Nano-graphite cold cathodes for electric solar wind sail. *Carbon*, **2015**, 81, 132-136	10.4	14
106	Thin graphite films formation by carbon precipitation in metals: diffusion approach. *Journal of Nanophotonics*, **2015**, 10, 012506	1.1	1
105	All-optical control of ultrafast photocurrents in unbiased graphene. *Scientific Reports*, **2014**, 4, 4007	4.9	38
104	Photon-drag-induced terahertz emission from graphene. *Physical Review B*, **2014**, 90,	3.3	42
103	ESTCube-1 nanosatellite for electric solar wind sail in-orbit technology demonstration. *Proceedings of the Estonian Academy of Sciences*, **2014**, 63, 2000	1.6	22
102	Single-crystal diamond microneedles shaped at growth stage. *Diamond and Related Materials*, **2014**, 42, 15-20	3.5	26
101	Nanodiamond films with dendrite structure formed by needle crystallites. *Diamond and Related Materials*, **2013**, 37, 64-67	3.5	8

100	Incredible carbon. *Materials Today*, **2013**, 16, 351-352	21.8	
99	Structural and charge transport characteristics of graphene layers obtained from CVD thin film and bulk graphite materials. *Carbon*, **2013**, 52, 49-55	10.4	9
98	Growth of a Carbon Nanotube Forest on Silicon using Remote Plasma CVD. *Chemical Vapor Deposition*, **2013**, 19, 332-337		17
97	A nano-graphite cold cathode for an energy-efficient cathodoluminescent light source. *Beilstein Journal of Nanotechnology*, **2013**, 4, 493-500	3	21
96	Scanning Anode Field Emission Microscopy of Nanocarbons. *Journal of Nanoelectronics and Optoelectronics*, **2013**, 8, 114-118	1.3	11
95	Graphene Formation on Surfaces of Single Crystal Metals. *Journal of Nanoelectronics and Optoelectronics*, **2013**, 8, 46-51	1.3	2
94	Fabrication of Carbon Nanomaterials by Hot Filament Chemical Vapor Deposition. *Journal of Nanoelectronics and Optoelectronics*, **2013**, 8, 100-105	1.3	4
93	Field Emission Properties of Single-Walled Carbon Nanotube Films. *Journal of Nanoelectronics and Optoelectronics*, **2013**, 8, 71-74	1.3	2
92	Limitation of the current from nanographite multiemitter field-emission cathodes. *Technical Physics* , **2012**, 57, 251-255	0.5	4
91	Effect of vacuum level on field emission from nanographite films. *Technical Physics*, **2012**, 57, 1003-1007	0.5	12
90	Diamonds in the air. *Materials Today*, **2012**, 15, 519	21.8	
89	The c-axis thermal conductivity of graphite film of nanometer thickness measured by time resolved X-ray diffraction. *Applied Physics Letters*, **2012**, 101, 233108	3.4	56
88	Morphology and Raman Spectra Peculiarities of Chemical Vapor Deposition Diamond Films. *Journal of Nanoelectronics and Optoelectronics*, **2012**, 7, 22-28	1.3	10
87	Field Emission Properties of Metal Oxide Nanowires. *Journal of Nanoelectronics and Optoelectronics* , **2012**, 7, 35-40	1.3	12
86	Spatially Resolved In Situ Diagnostics for Plasma-Enhanced Chemical Vapor Deposition Carbon Film Growth. *Journal of Nanoelectronics and Optoelectronics*, **2012**, 7, 90-94	1.3	9
85	Broadband light-induced absorbance change in multilayer graphene. *Nano Letters*, **2011**, 11, 1540-5	11.5	86
84	Noncatalytic synthesis of carbon nanotubes by chemical vapor deposition. *Crystallography Reports*, **2011**, 56, 310-314	0.6	8
83	Thermionic field electron emission from graphite-based nanomaterials. *Physica Status Solidi (B): Basic Research*, **2011**, 248, 2712-2715	1.3	2

82	Surface structure and field emission properties of few-layer graphene flakes. *Physica Status Solidi (B): Basic Research*, **2011**, 248, 2623-2626	1.3	14
81	Polarization-sensitive photoresponse of nanographite. *Applied Physics Letters*, **2011**, 98, 091903	3.4	33
80	Single-crystal diamond probes for atomic-force microscopy. *Instruments and Experimental Techniques*, **2010**, 53, 613-619	0.5	3
79	Thermal oxidation of CVD diamond. *Diamond and Related Materials*, **2010**, 19, 1007-1011	3.5	36
78	Invited article: Electric solar wind sail: toward test missions. *Review of Scientific Instruments*, **2010**, 81, 111301	1.7	86
77	Thermal purification of detonation diamond. *Journal of Surface Investigation*, **2010**, 4, 458-463	0.5	5
76	Formation of needlelike crystallites during growth of diamond films by chemical vapor deposition. *Crystallography Reports*, **2010**, 55, 710-715	0.6	3
75	Single crystal diamond tips for scanning probe microscopy. *Review of Scientific Instruments*, **2010**, 81, 013703	1.7	36
74	Electromechanical self-oscillations of carbon nanotube field emitter. *Carbon*, **2010**, 48, 3895-3900	10.4	14
73	A comparative study of field emission from NanoBuds, nanographite and pure or N-doped single-wall carbon nanotubes. *Physica Status Solidi (B): Basic Research*, **2010**, 247, 3051-3054	1.3	13
72	Topology peculiarities of graphite films of nanometer thickness. *Physica Status Solidi (B): Basic Research*, **2010**, 247, 3010-3013	1.3	12
71	Photon drag effect in carbon nanotube yarns. *Applied Physics Letters*, **2009**, 94, 231112	3.4	16
70	Self-oscillations of carbon nanotube twist-yarn during field emission. *Physica Status Solidi (B): Basic Research*, **2009**, 246, 2658-2661	1.3	8
69	Self-oscillations in an electromechanical system with a field emitter. *JETP Letters*, **2009**, 90, 464-468	1.2	7
68	Chiral carbon nanoscrolls with a polygonal cross-section. *Carbon*, **2009**, 47, 3099-3105	10.4	33
67	Hopping conductivity in polycrystalline diamond films. *Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika)*, **2009**, 64, 161-165	0.7	1
66	Thermal oxidation of detonation nanodiamond. *Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika)*, **2009**, 64, 433-436	0.7	6
65	Field electron emission from nanodiamond. *Technical Physics Letters*, **2009**, 35, 249-252	0.7	8

64	Efficiency of a fast-response nanographite-based optoelectric converter in air at high temperatures. *Technical Physics Letters*, **2009**, 35, 899-902	0.7	2
63	Formation of pyramidal shaped single crystal diamonds in chemical vapor deposition. *Protection of Metals and Physical Chemistry of Surfaces*, **2009**, 45, 553-557	0.9	
62	Topology of nanometric graphite films. *Protection of Metals and Physical Chemistry of Surfaces*, **2009**, 45, 558-561	0.9	1
61	Physical and chemical processes in gas-discharge plasma during the deposition of nanocarbon films. *Protection of Metals and Physical Chemistry of Surfaces*, **2009**, 45, 652-655	0.9	1
60	Structural peculiarities of carbon nanolayers prepared by deposition from a gaseous phase on Ni. *Physics of the Solid State*, **2009**, 51, 1054-1059	0.8	4
59	Production of single crystal diamond needles by a combination of CVD growth and thermal oxidation. *Diamond and Related Materials*, **2009**, 18, 1289-1293	3.5	37
58	A novel method for metal oxide nanowire synthesis. *Nanotechnology*, **2009**, 20, 165603	3.4	99
57	Cold and Laser Stimulated Electron Emission from Nanocarbons. *Journal of Nanoelectronics and Optoelectronics*, **2009**, 4, 207-219	1.3	18
56	Optical Chacterization of Plasma Enhanced Chemical Vapor Deposition of Nanocarbon Film Materials. *Journal of Nanoelectronics and Optoelectronics*, **2009**, 4, 243-246	1.3	7
55	A device for testing a fast nanographite photodetector at high temperatures. *Instruments and Experimental Techniques*, **2008**, 51, 456-461	0.5	3
54	Modeling of Field Emission from Nano Carbons. *Fullerenes Nanotubes and Carbon Nanostructures*, **2008**, 16, 384-388	1.8	11
53	Field emission from single-wall nanotubes obtained from carbon and boron nitride mixtures. *Physica Status Solidi (B): Basic Research*, **2008**, 245, 1990-1993	1.3	1
52	Raman scattering characterization of CVD graphite films. *Carbon*, **2008**, 46, 963-968	10.4	66
51	Anisotropy of the photoelectric properties of porous nanographite films. *Technical Physics Letters*, **2008**, 34, 467-471	0.7	1
50	Double resonant Raman scattering in nanographite films. *Journal of Experimental and Theoretical Physics*, **2008**, 106, 569-574	1	5
49	Chemical vapor deposition of thin graphite films of nanometer thickness. *Carbon*, **2007**, 45, 2017-2021	10.4	393
48	Formation of superhydrophobic surfaces by the deposition of coatings from supercritical carbon dioxide. *Colloid Journal*, **2007**, 69, 411-424	1.1	20
47	Effect of electric field on the vapor-phase growth of carbon nanostructures. *Technical Physics Letters*, **2007**, 33, 586-589	0.7	

46	Correlation of field emission properties with morphology and surface composition of CVD nanocarbon films. *Diamond and Related Materials*, **2006**, 15, 838-841	3.5	11
45	Optical rectification effect in nano-carbon CVD films. *Diamond and Related Materials*, **2006**, 15, 842-845	3.5	5
44	Spark light radiation coupled with the field electron emission from carbon nanotube forests. *Journal of Applied Physics*, **2006**, 100, 044327	2.5	8
43	Laser-assisted electron emission from CVD nano-graphite films. *Physica Status Solidi (B): Basic Research*, **2006**, 243, 3505-3509	1.3	2
42	Effect of substrate material on the structure of carbon films obtained by plasmachemical deposition. *Technical Physics Letters*, **2006**, 32, 735-737	0.7	
41	Quick-response film photodetector of high-power laser radiation based on the optical rectification effect. *Technical Physics*, **2006**, 51, 1190-1196	0.5	10
40	Mechanism of low-voltage field emission from nanocarbon materials. *Journal of Experimental and Theoretical Physics*, **2005**, 100, 89-94	1	12
39	Spectral dependence of the optical rectification effect in nanographite films. *Technical Physics Letters*, **2005**, 31, 94	0.7	3
38	Effect of laser radiation on the morphology and emissivity of nanodimensional carbon films. *Technical Physics*, **2005**, 50, 809-811	0.5	2
37	Effect of the nanographite film thickness on the optical rectification pulse. *Technical Physics Letters* , **2005**, 31, 560	0.7	
36	A Nanographite Film-Based Fast Response Detector for Intense Laser Radiation. *Instruments and Experimental Techniques*, **2005**, 48, 349-354	0.5	4
35	A comparative study of field emission from single- and double-wall carbon nanotubes and carbon peapods. *AIP Conference Proceedings*, **2005**,	0	2
34	Anisotropic laser-induced evaporation of graphite films. *Journal of Experimental and Theoretical Physics*, **2004**, 98, 483-488	1	5
33	Optical rectification effect in nanocarbon films. *Technical Physics Letters*, **2004**, 30, 750-752	0.7	2
32	Optical rectification effect in nanostructured carbon films. *Journal of Experimental and Theoretical Physics*, **2004**, 99, 942-946	1	3
31	Application of nanocarbon cold cathodes in lighting elements. *Surface and Interface Analysis*, **2004**, 36, 470-473	1.5	3
30	Plasma CVD characterization of nanocarbon film growth. *Surface and Interface Analysis*, **2004**, 36, 481-484	1.5	3
29	Giant optical rectification effect in nanocarbon films. *Applied Physics Letters*, **2004**, 84, 4854-4856	3.4	36

28	Fundamental Aspects and Applications of Low Field Electron Emission from Nanocarbons. *Surface Engineering*, **2003**, 19, 429-436	2.6	4
27	Chemical vapor deposition of carbon films: in-situ plasma diagnostics. *Carbon*, **2003**, 41, 836-839	10.4	36
26	Nanodimensional carbon materials formed in a gas discharge plasma. *Technical Physics Letters*, **2003**, 29, 380-382	0.7	2
25	Formation of nanostructured carbon films in gas-discharge plasmas. *Journal of Experimental and Theoretical Physics*, **2003**, 97, 1154-1158	1	9
24	Statistical analysis of low-voltage electron emission from nanocarbon cathodes. *Journal of Experimental and Theoretical Physics*, **2003**, 97, 1240-1245	1	10
23	Non-classical electron field emission from carbon materials. *Diamond and Related Materials*, **2003**, 12, 446-449	3.5	31
22	Thin Film Carbon Nanotube Cathodes for Field Emission Flat Panel Display and Light Source Application **2002**, 67-81		
21	CVD growth and field emission properties of nanostructured carbon films. *Journal Physics D: Applied Physics*, **2002**, 35, 357-362	3	52
20	Thin Film Carbon Nanotube Cathodes for Field Emission Flat Panel Display and Light Source Application **2002**, 67-81		
19	Field electron emission in graphite-like films. *Technical Physics*, **2001**, 46, 1437-1443	0.5	15
18	Rehybridization of the atomic orbitals and the field electron emission from nanostructured carbon. *Journal of Experimental and Theoretical Physics*, **2001**, 93, 846-852	1	6
17	Emission Properties of Nanostructured Carbon Field-Emission Cathodes. *Materials Research Society Symposia Proceedings*, **2001**, 685, 1		
16	Single-Wall Carbon Nanotube Electron Emitters Produced by Electrophoresis. *Materials Research Society Symposia Proceedings*, **2001**, 706, 1		1
15	Synthesis, Characterization and Application of Thin Film Carbon Nanotube Material. *Materials Research Society Symposia Proceedings*, **2000**, 633, 1311		1
14	Field emission from nanostructured carbon materials. *Diamond and Related Materials*, **2000**, 9, 1190-1195	3.5	47
13	Low-voltage electron emission from chemical vapor deposition graphite films. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1999**, 17, 674		32
12	Determination of the thermal conductivity of polycrystalline diamond films by means of the photoacoustic effect. *Technical Physics*, **1999**, 44, 438-442	0.5	1
11	Role of the curvature of atomic layers in electron field emission from graphitic nanostructured carbon. *JETP Letters*, **1999**, 69, 411-417	1.2	30

10	Influence of structural characteristics on the thermal conductivity of polycrystalline diamond films. *Physics of the Solid State*, **1998**, 40, 1112-1116	0.8	1
9	Mechanism of field emission from carbon materials. *JETP Letters*, **1998**, 68, 59-63	1.2	33
8	Photoacoustic spectroscopy of diamond powders and polycrystalline films. *Physics of the Solid State* , **1997**, 39, 1594-1598	0.8	1
7	Comparative characterization of chemical vapor deposition diamond films by scanning cathodoluminescence microscopy. *Scanning*, **1997**, 19, 455-458	1.6	3
6	Optical Absorption in Porous Silicon Studied by Photoacoustic Spectroscopy. *Physica Status Solidi (B): Basic Research*, **1997**, 203, 565-569	1.3	10
5	Nature of Charge Traps in Anode Oxide Films on GaAs. *Journal of the Electrochemical Society*, **1996**, 143, 1109-1112	3.9	
4	Observation of diamond crystallites in thin films prepared by laser ablation of hard fullerene-based carbon. *Journal Physics D: Applied Physics*, **1996**, 29, 929-933	3	13
3	Local Monitoring of Diamond Nucleation Density. *Journal of the Electrochemical Society*, **1996**, 143, 1061-1063	3.9	
2	Silicon-Diamond Interface Band Structure. *Journal of the Electrochemical Society*, **1996**, 143, 1112-1114	3.9	
1	All-Optical Thermometry with NV and SiV Color Centers in Biocompatible Diamond Microneedles. *Advanced Optical Materials*,2200631	8.1	0