Boris A Kulnitskiy

List of Publications by Year
in descending order

86	968	430874	526287
papers	citations	18 h-index	27 g-index

88	88	88	941
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Structures and physical properties of superhard and ultrahard 3D polymerized fullerites created from solid C60 by high pressure high temperature treatment. Carbon, 1998, 36, 665-670.	10.3	55
2	Synthesis of ultrahard fullerite with a catalytic 3D polymerization reaction of C60. Carbon, 2014, 76, 250-256.	10.3	50
3	High pressure transformation of single-crystal graphite to form molecular carbonâ€“onions. Nanotechnology, 2007, 18, 345601.	2.6	48
4	Raman Spectra and Bulk Modulus of Nanodiamond in a Size Interval of 2â€“5Ânm. Nanoscale Research Letters, 2017, 12, 561.	5.7	47
5	Structural studies of high pressure phases of C60. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 204, 151-154.	2.1	32
6	Combined photon-echo, luminescence and Raman spectroscopies of layered ensembles of colloidal quantum dots. Laser Physics, 2019, 29, 124009.	1.2	32
7	First-principles, UV Raman, X-ray diffraction and TEM study of the structure and lattice dynamics of the diamondâ€“lonsdaleite system. Diamond and Related Materials, 2011, 20, 951-953.	3.9	31
8	Polytypes and twins in the diamondâ€“lonsdaleite system formed by high-pressure and high-temperature treatment of graphite. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2013, 69, 474-479.	1.1	31
9	The Effect of Severe Plastic Deformations on Phase Transitions and Structure of Solids. Materials Transactions, 2019, 60, 1500-1505.	1.2	30
10	A new carbon structure formed at MeV neutron irradiation of diamond: structural and spectroscopic investigations. Diamond and Related Materials, 1999, 8, 1285-1290.	3.9	28
11	Phase diagram of carbon and the factors limiting the quantity and size of natural diamonds. Nanotechnology, 2018, 29, 115603.	2.6	26
12	Crystallogeometry of polymorphic transitions in silicon under pressure. High Pressure Research, 1996, 15, 31-42.	1.2	24
13	Boron carbide nanoparticles for high-hardness ceramics: Crystal lattice defects after treatment in a planetary ball mill. Journal of the European Ceramic Society, 2017, 37, 1349-1353.	5.7	23
14	New structure after thermobaric treatment of solid C60. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 225, 121-126.	2.1	21
15	Pressure-Induced Transformation of Graphite and Diamond to Onions. Crystals, 2018, 8, 68.	2.2	21
16	Longer Carbon Nanotubes by Controlled Catalytic Growth in the Presence of Water Vapor. Fullerenes Nanotubes and Carbon Nanostructures, 2012, 20, 411-418.	2.1	19
17	The unexpected stability of multiwall nanotubes under high pressure and shear deformation. Applied Physics Letters, 2016, 109, .	3.3	19
18	Nanocarbons formed in a hot isostatic pressure apparatus. Thin Solid Films, 1999, 346, 86-90.	1.8	18

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19	A new phase of carbon. Carbon, 1999, 37, 549-554.	10.3	18
20	The Structures of C60â€Phases, Formed by Thermobaric Treatment: HREMâ€Studies. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 13, 167-177.	2.1	18
21	TEM studies of carbon nanofibres formed on Ni catalyst by polyethylene pyrolysis. Nanotechnology, 2006, 17, 1862-1866.	2.6	18
22	Growth and characterisation of BNC nanostructures. Carbon, 2009, 47, 3167-3174.	10.3	17
23	Microstructural and optical properties of europium-doped zinc oxide nanowires. Journal of Physics and Chemistry of Solids, 2013, 74, 1733-1738.	4.0	17
24	Toward the Ultra-incompressible Carbon Materials. Computational Simulation and Experimental Observation. Journal of Physical Chemistry Letters, 2015, 6, 2147-2152.	4.6	16
25	Exfoliated graphite as a heat-conductive frame for a new pelletized Fischerâ€“Tropsch synthesis catalyst. Applied Catalysis A: General, 2020, 601, 117639.	4.3	16
26	Lonsdaleite formation in process of reverse phase transition diamondâ€“graphite. Diamond and Related Materials, 2011, 20, 1315-1318.	3.9	15
27	Transformation of diamond to fullerene-type onions at pressure 70 GPa and temperature 2400 K. Nanotechnology, 2020, 31, 315602.	2.6	15
28	Superhard Materials Based on Fullerenes and Nanotubes. , 2014, , 515-538.		13
29	Transformation of multiwall carbon nanotubes to onions with layers cross-linked by sp3 bonds under high pressure and shear deformation. AIP Advances, 2017, 7, 085218.	1.3	13
30	Transmission electron microscopy studies of nanofibers formed on Fe7C3-carbide. Diamond and Related Materials, 2002, 11, 931-934.	3.9	12
31	Transformation-deformation bands in C60after the treatment in a shear diamond anvil cell. Materials Research Express, 2016, 3, 045601.	1.6	12
32	Mutual transformation between crystalline phases in silicon after treatment in a planetary mill: HRTEM studies. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2016, 72, 733-737.	1.1	12
33	Dimerisation and polymerisation of C70 after thermobaric treatment. Carbon, 2000, 38, 2051-2054.	10.3	11
34	Magnetically active nanocomposite aerogels: preparation, characterization and application for water treatment. Journal of Porous Materials, 2022, 29, 545-557.	2.6	11
35	Electron microscopy and electron energy loss spectroscopy studies of carbon fiber formation at Fe catalysts. Journal of Applied Physics, 2002, 91, 1657-1660.	2.5	10
36	Formation of concentric shell carbon by homogeneous partial oxidation of methane. Chemical Physics Letters, 2018, 713, 242-246.	2.6	10

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37	HRTEM studies of cobalt-filled carbon nanotubes. Acta Materialia, 2010, 58, 1293-1298.	7.9	9
38	Graphite-to-diamond (¹³C) direct transition in a diamond anvil high-pressure cell. International Journal of Nanotechnology, 2016, 13, 604.	0.2	9
39	Catalytic 3D polymerization of C₆₀. Fullerenes Nanotubes and Carbon Nanostructures, 2018, 26, 465-470.	2.1	8
40	Irreversible high pressure phase transformation of onion-like carbon due to shell confinement. Diamond and Related Materials, 2020, 107, 107908.	3.9	8
41	Peculiarities of boron distribution in as-grown boron-doped diamond. Materials Research Express, 2014, 1, 035905.	1.6	7
42	Natural gas partial oxidation process as a way to synthesize onion-like carbon. Fullerenes Nanotubes and Carbon Nanostructures, 2020, 28, 250-255.	2.1	7
43	The effect of C60 fullerene polymerization processes on the mechanical properties of clusters forming ultrahard structures of 3D C60 polymers. Diamond and Related Materials, 2022, 124, 108911.	3.9	7
44	Structure and properties of solid La@C82 endofullerene polymerized under pressure 9.5 GPa and temperature 520â€“720 K. Synthetic Metals, 2001, 121, 1093-1096.	3.9	6
45	Decomposition of Fe5C2catalyst particles in carbon nanofibers during TEM observation. Science and Technology of Advanced Materials, 2009, 10, 015004.	6.1	6
46	A catalytic depolymerization of ultrahard fullerite. Journal of Materials Research, 2015, 30, 1772-1778.	2.6	6
47	Transformations in WC lattice and polytype formation in the process of sintering of W/C60 mixture. International Journal of Refractory Metals and Hard Materials, 2015, 48, 115-119.	3.8	6
48	High-hardness ceramics based on boron carbide fullerite derivatives. Physics of the Solid State, 2017, 59, 327-330.	0.6	6
49	Y-junction bamboo-like CN x nanotubes. Journal of Superhard Materials, 2007, 29, 206-212.	1.2	5
50	Impulse laser cutting of diamond accompanied by phase transitions to fullerene-type onions. Diamond and Related Materials, 2021, 113, 108281.	3.9	5
51	3D spectrum imaging of multi-wall carbon nanotube coupled Ï€-surface modes utilising electron energy-loss spectra acquired using a STEM/Enfina system. Ultramicroscopy, 2005, 104, 57-72.	1.9	4
52	Optical properties of B12P2 crystals: Ab initio calculation and EELS. Journal of Physics and Chemistry of Solids, 2018, 116, 331-337.	4.0	4
53	Phase transformations in Zr under high-pressure and shear deformation treatment. Materials Research Express, 2019, 6, 046506.	1.6	4
54	Nanostructured strain hardened aluminum-magnesium alloys modified by C₆₀ fullerene obtained by powder metallurgy. Part 1. Effect of magnesium concentration on the structure and phase composition of powders. Izvestiya Vuzov Poroshkovaya Metallurgiya I Funktsionalâ€™nye Pokrytiya, 2020, , 76-84.	0.2	4

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55	Effect of high pressures and temperatures on carbon nano-onion structures: comparison with C60. Russian Chemical Bulletin, 2011, 60, 413-418.	1.5	3
56	Structure of boron nitride nanotubes. Crystallography Reports, 2015, 60, 90-94.	0.6	3
57	Unique mechanical properties of fullerite derivatives synthesized with a catalytic polymerization reaction. MRS Communications, 2015, 5, 71-75.	1.8	3
58	C60and C70pressure-and-temperature transformations into fullerene-related forms. Fullerenes Nanotubes and Carbon Nanostructures, 2016, 24, 20-24.	2.1	3
59	Features of structures obtained by graphene nanoplatelets treatment in a diamond anvil high-pressure cell. Fullerenes Nanotubes and Carbon Nanostructures, 2017, 25, 488-492.	2.1	3
60	Phase diagram of carbon. Materials Today: Proceedings, 2018, 5, 26179-26182.	1.8	3
61	Plastic deformation of diamond by mechanical twinning at temperatures significantly lower than Debye temperature. Chemical Physics Letters, 2019, 730, 138-140.	2.6	3
62	Structure of Germanium Treated in a Planetary Mill. Physics of the Solid State, 2020, 62, 1765-1768.	0.6	3
63	Cubic and tetragonal maghemite formation inside carbon nanotubes under chemical vapor deposition process conditions. Fullerenes Nanotubes and Carbon Nanostructures, 2020, 28, 913-918.	2.1	3
64	The Effect of Shear Deformation on C-N Structure under Pressure up to 80 GPa. Nanomaterials, 2021, 11, 828.	4.1	3
65	Nanostructured Strain-Hardened Aluminumâ€“Magnesium Alloys Modified by C60 Fullerene Obtained by Powder Metallurgy: 2. The Effect of Magnesium Concentration on Physical and Mechanical Properties. Russian Journal of Non-Ferrous Metals, 2021, 62, 368-374.	0.6	3
66	C60 fullerene decoration of carbon nanotubes. Journal of Experimental and Theoretical Physics, 2016, 123, 985-990.	0.9	2
67	Peculiarities of the Twinning in Silicon during Ball Milling in the Presence of Two Different Materials. Symmetry, 2018, 10, 200.	2.2	2
68	Nanostructured Strain-Hardened Aluminumâ€“Magnesium Alloys Modified by C60 Fullerene Obtained by Powder Metallurgy: Part 1. The Effect of the Magnesium Concentration on the Structure and Phase Composition of Powders. Russian Journal of Non-Ferrous Metals, 2021, 62, 132-137.	0.6	2
69	Intermediate carbon phase. New experimental data and atomic model. Diamond and Related Materials, 2022, 123, 108825.	3.9	2
70	EEL Calculations and Measurements of Graphite and Graphitic-CNx Core-Losses. Journal of Physics: Conference Series, 2006, 26, 161-164.	0.4	1
71	New high-efficiency carbon-silica sorbent. Russian Journal of Applied Chemistry, 2015, 88, 1428-1433.	0.5	1
72	Synthesis and characterization of N-doped zinc oxide nanotetrapods. Russian Journal of Physical Chemistry A, 2016, 90, 1049-1056.	0.6	1

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73	Transformation of boron nitride under high pressure and shear deformation. Materials Today: Proceedings, 2018, 5, 26124-26127.	1.8	1
74	Oxidative nanostructuring in thin films of coal tar pitch. Materials Today: Proceedings, 2018, 5, 26068-26072.	1.8	1
75	Nanotwinning in Boron Subphosphide B12P2. Journal of Superhard Materials, 2019, 41, 139-141.	1.2	1
76	Ultra-bright and narrow-band emission from Ag atomic sized nanoclusters in a self-assembled plasmonic resonator. Nanoscale, 2022, 14, 9910-9917.	5.6	1
77	Structure and field emission of C-N nanofibers, formed in High Isostatic Pressure Apparatus. AIP Conference Proceedings, 2003, , .	0.4	0
78	Resonance-Filtered Imaging of Collective pi-States in a Carbon Nanotube using Electron Energy-Loss Spectra Acquired in an Enfina / STEM System. Microscopy and Microanalysis, 2004, 10, 844-845.	0.4	0
79	Tuning the Energy of Split Surface Electron Energy-Loss Resonances Excited on a Multi-Wall Carbon Nanotube. Microscopy and Microanalysis, 2004, 10, 868-869.	0.4	0
80	Characterization of CNTs Filled with Magnesium Oxides. Microscopy and Microanalysis, 2004, 10, 870-871.	0.4	0
81	Structural peculiarities of carbon onions, formed by different methods. , 2008, , 175-176.		0
82	Structure of twisted BNC nanotubes with polygonal cross-section. Acta Crystallographica Section B: Structural Science, 2012, 68, 543-548.	1.8	0
83	THE FEATURES OF CARBON NANOTUBES GROWN IN HIGH ISOSTATIC PRESSURE APPARATUS FROM THE NANODIAMOND POWDER. , 2013, , .		0
84	Synthesis and TEM Studies of Al2O3-Filled BNC Tubules. Fullerenes Nanotubes and Carbon Nanostructures, 2014, 22, 809-819.	2.1	0
85	Structure of boron carbide after applying shear deformations under a pressure to 55 GPa. Physics of the Solid State, 2017, 59, 929-933.	0.6	0
86	Structural features of iron-containing particles inside carbon nanotubes. Materials Research Express, 2017, 4, 075053.	1.6	0