M Yu Popov

List of Publications by Year in Descending Order

67 papers	1,753 citations	20 h-index	41 g-index
71 ext. papers	1,912 ext. citations	2.9 avg, IF	4.19 L-index

#	Paper	IF	Citations
67	Intermediate carbon phase. New experimental data and atomic model. *Diamond and Related Materials*, **2022**, 123, 108825	3.5	0
66	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	3.5	2
65	Insights into fullerene polymerization under the high pressure: The role of endohedral Sc dimer. *Carbon*, **2022**, 189, 37-45	10.4	0
64	Impulse laser cutting of diamond accompanied by phase transitions to fullerene-type onions. *Diamond and Related Materials*, **2021**, 113, 108281	3.5	0
63	High-Pressure Si Phases and the Mutual Orientation of Their Structures. HRTEM Studies. *Physics of the Solid State*, **2021**, 63, 844-849	0.8	
62	Irreversible high pressure phase transformation of onion-like carbon due to shell confinement. *Diamond and Related Materials*, **2020**, 107, 107908	3.5	3
61	Transformation of diamond to fullerene-type onions at pressure 70 GPa and temperature 2400 K. *Nanotechnology*, **2020**, 31, 315602	3.4	7
60	Structure of Germanium Treated in a Planetary Mill. *Physics of the Solid State*, **2020**, 62, 1765-1768	0.8	2
59	The Effect of Severe Plastic Deformations on Phase Transitions and Structure of Solids. *Materials Transactions*, **2019**, 60, 1500-1505	1.3	18
58	Plastic deformation of diamond by mechanical twinning at temperatures significantly lower than Debye temperature. *Chemical Physics Letters*, **2019**, 730, 138-140	2.5	3
57	Ultrasmall diamond nanoparticles with unusual incompressibility. *Diamond and Related Materials*, **2019**, 96, 52-57	3.5	11
56	Twinning formation in nanodiamonds after treatment in a planetary mill: HRTEM studies. *IOP Conference Series: Materials Science and Engineering*, **2019**, 693, 012022	0.4	
55	Phase diagram of carbon and the factors limiting the quantity and size of natural diamonds. *Nanotechnology*, **2018**, 29, 115603	3.4	18
54	Peculiarities of the Twinning in Silicon during Ball Milling in the Presence of Two Different Materials. *Symmetry*, **2018**, 10, 200	2.7	2
53	Catalytic 3D polymerization of C60. *Fullerenes Nanotubes and Carbon Nanostructures*, **2018**, 26, 465-470	1.8	7
52	Transformation of boron nitride under high pressure and shear deformation. *Materials Today: Proceedings*, **2018**, 5, 26124-26127	1.4	1
51	Phase diagram of carbon. *Materials Today: Proceedings*, **2018**, 5, 26179-26182	1.4	2

50	Pressure-Induced Transformation of Graphite and Diamond to Onions. *Crystals*, **2018**, 8, 68	2.3	19
49	High-hardness ceramics based on boron carbide fullerite derivatives. *Physics of the Solid State*, **2017** , 59, 327-330	0.8	4
48	Structure of boron carbide after applying shear deformations under a pressure to 55 GPa. *Physics of the Solid State*, **2017**, 59, 929-933	0.8	
47	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	6	15
46	Raman Spectra and Bulk Modulus of Nanodiamond in a Size Interval of 2-5 nm. *Nanoscale Research Letters*, **2017**, 12, 561	5	36
45	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	1.5	8
44	[illegible] 55 GPa. *Physics of the Solid State*, **2017**, 59, 907	0	
43	The unexpected stability of multiwall nanotubes under high pressure and shear deformation. *Applied Physics Letters*, **2016**, 109, 081904	3.4	13
42	A ceramic nanocomposite with enhanced hardness based on corundum modified with carbon. *Technical Physics Letters*, **2016**, 42, 1064-1066	0.7	3
41	C60 fullerene decoration of carbon nanotubes. *Journal of Experimental and Theoretical Physics*, **2016**, 123, 985-990	1	1
40	Transformation-deformation bands in C60after the treatment in a shear diamond anvil cell. *Materials Research Express*, **2016**, 3, 045601	1.7	8
39	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	1.8	10
38	Unique mechanical properties of fullerite derivatives synthesized with a catalytic polymerization reaction. *MRS Communications*, **2015**, 5, 71-75	2.7	3
37	Synthesis of carbon nanostructures in an RF induction plasmatron. *Technical Physics*, **2015**, 60, 730-735	0.5	3
36	Transport properties of nanocomposite thermoelectric materials based on Si and Ge. *Physics of the Solid State*, **2015**, 57, 605-612	0.8	4
35	A catalytic depolymerization of ultrahard fullerite. *Journal of Materials Research*, **2015**, 30, 1772-1778	2.5	5
34	Toward the Ultra-incompressible Carbon Materials. Computational Simulation and Experimental Observation. *Journal of Physical Chemistry Letters*, **2015**, 6, 2147-52	6.4	12
33	Synthesis of carbon onionlike nanostructures from methane in plasma flow of induction plasmatron. *Technical Physics Letters*, **2015**, 41, 1038-1040	0.7	1

32	Synthesis of ultrahard fullerite with a catalytic 3D polymerization reaction of C60. *Carbon*, **2014**, 76, 250-256	10.4	42
31	Effect of a fullerene C60 addition on the strength properties of nanocrystalline copper and aluminum under shock-wave loading. *Technical Physics*, **2014**, 59, 378-383	0.5	3
30	C60 three-dimensional polymerization by impulse heating effect. *Journal of Applied Physics*, **2014**, 115, 153506	2.5	7
29	The influence of the admixture of the fullerene C60 on the strength properties of aluminum and copper under shock-wave loading. *Journal of Physics: Conference Series*, **2014**, 500, 112008	0.3	1
28	Thermoelectric properties of Bi0.5Sb1.5Te3/C60 nanocomposites. *Physical Review B*, **2012**, 86,	3.3	56
27	Composites of Bi2□SbxTe3 nanocrystals and fullerene molecules for thermoelectricity. *Journal of Solid State Chemistry*, **2012**, 193, 64-70	3.3	29
26	Electrical conductivity of nanostructured and C60-modified aluminum. *Applied Physics A: Materials Science and Processing*, **2012**, 107, 863-869	2.6	16
25	Thermoelectric properties of nanostructured Bi-Sb-Te doped with C60 **2012**,		1
24	Thermoelectric properties of bismuth telluride nanocomposites with fullerene. *Semiconductors*, **2011**, 45, 1194-1198	0.7	16
23	Cu□C60 nanocomposite with suppressed recrystallization. *Applied Physics A: Materials Science and Processing*, **2011**, 105, 45-48	2.6	17
22	C60-doping of nanostructured Bi□Sb□Te thermoelectrics. *Physica Status Solidi (A) Applications and Materials Science*, **2011**, 208, 2783-2789	1.6	40
21	Stress-induced phase transitions in diamond. *High Pressure Research*, **2010**, 30, 670-678	1.6	18
20	Fulleride of aluminum nanoclusters. *Journal of Applied Physics*, **2010**, 108, 094317	2.5	20
19	Nanostructured superhard carbon phase obtained under high pressure with shear deformation from single-wall nanotubes HiPco. *Physica B: Condensed Matter*, **2006**, 382, 58-64	2.8	15
18	Raman and IR study of high-pressure atomic phase of nitrogen. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2005**, 334, 317-325	2.3	29
17	Polymerization of nitrogen in sodium azide. *Journal of Chemical Physics*, **2004**, 120, 10618-23	3.9	120
16	Pressure measurements from Raman spectra of stressed diamond anvils. *Journal of Applied Physics*, **2004**, 95, 5509-5514	2.5	39
15	Superhard phase of single wall carbon nanotube: comparison with fullerite C60 and diamond. *Diamond and Related Materials*, **2003**, 12, 833-839	3.5	41

14	PROPERTIES OF SUPERHARD PHASE OF SINGLE WALL CARBON NANOTUBE IN COMPARISON WITH FULLERITE C60 AND DIAMOND. *High Pressure Research*, **2003**, 23, 265-269	1.6	4
13	Superhard phase of single-wall carbon nanotube. *Physica B: Condensed Matter*, **2002**, 323, 262-264	2.8	3
12	Properties and Applications of Superhard and Ultrahard Fullerites **2002**, 223-233		
11	Superhard phase composed of single-wall carbon nanotubes. *Physical Review B*, **2002**, 65,	3.3	126
10	A new carbon structure formed at MeV neutron irradiation of diamond: structural and spectroscopic investigations. *Diamond and Related Materials*, **1999**, 8, 1285-1290	3.5	24
9	Hard disordered phases produced at high-pressure–high-temperature treatment of C60. *Carbon*, **1998**, 36, 1263-1267	10.4	36
8	High-pressure polymerized phases of C 60. *Carbon*, **1998**, 36, 319-343	10.4	245
7	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	10.4	51
6	Ultrahard and superhard phases of fullerite C60: Comparison with diamond on hardness and wear. *Diamond and Related Materials*, **1998**, 7, 427-431	3.5	112
5	Nano-sclerometry measurements of superhard materials and diamond hardness using scanning force microscope with the ultrahard fullerite C60 tip. *Journal of Materials Research*, **1997**, 12, 3109-3114	2.5	53
4	Plasticity of diamond at room temperature and determination of its hardness using an atomic force microscope with an ultrahard C60 fullerite tip. *Technical Physics Letters*, **1997**, 23, 546-547	0.7	2
3	Phase transformations in solid C60 at high-pressure-high-temperature treatment and the structure of 3D polymerized fullerites. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1996**, 220, 149-157	2.3	108
2	Ultrahard and superhard carbon phases produced from C60 by heating at high pressure: structural and Raman studies. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1995**, 205, 208-216	2.3	138
1	Is C60 fullerite harder than diamond?. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1994**, 188, 281-286	2.3	120