

Oleksandr O Kurakevych

List of Publications by Year in descending order

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50
papers

3,401
citations

172207

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53
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57
all docs

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docs citations

57
times ranked

3054
citing authors

#	ARTICLE	IF	CITATIONS
1	Ionic high-pressure form of elemental boron. <i>Nature</i> , 2009, 457, 863-867.	13.7	803
2	Ultimate Metastable Solubility of Boron in Diamond: Synthesis of Superhard Diamondlike BC_5 . <i>Physical Review Letters</i> , 2009, 102, 015506.	2.9	267
3	Synthesis of an open-framework allotrope of silicon. <i>Nature Materials</i> , 2015, 14, 169-173.	13.3	233
4	Superhard nanocomposite of dense polymorphs of boron nitride: Noncarbon material has reached diamond hardness. <i>Applied Physics Letters</i> , 2007, 90, 101912.	1.5	201
5	Creation of Nanostructures by Extreme Conditions: High-Pressure Synthesis of Ultrahard Nanocrystalline Cubic Boron Nitride. <i>Advanced Materials</i> , 2012, 24, 1540-1544.	11.1	186
6	Colossal Pressure-Induced Lattice Expansion of Graphite Oxide in the Presence of Water. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 8268-8271.	7.2	109
7	Rhombohedral boron subnitride, B_{13}N_2 , by X-ray powder diffraction. <i>Acta Crystallographica Section C: Crystal Structure Communications</i> , 2007, 63, i80-i82.	0.4	91
8	The interrelation between hardness and compressibility of substances and their structure and thermodynamic properties. <i>Journal of Superhard Materials</i> , 2008, 30, 368-378.	0.5	90
9	Superhard phases of simple substances and binary compounds of the B-C-N-O system: from diamond to the latest results (a Review). <i>Journal of Superhard Materials</i> , 2009, 31, 139-157.	0.5	77
10	Na-Si Clathrates Are High-Pressure Phases: A Melt-Based Route to Control Stoichiometry and Properties. <i>Crystal Growth and Design</i> , 2013, 13, 303-307.	1.4	75
11	Thermodynamic model of hardness: Particular case of boron-rich solids. <i>Journal of Superhard Materials</i> , 2010, 32, 167-176.	0.5	73
12	BC ₈ Silicon (Si-III) is a Narrow-Gap Semiconductor. <i>Physical Review Letters</i> , 2017, 118, 146601.	2.9	53
13	Equilibrium p-T Phase Diagram of Boron: Experimental Study and Thermodynamic Analysis. <i>Scientific Reports</i> , 2013, 3, 2351.	1.6	52
14	Chemical interaction in the B-N system at high pressures and temperatures. <i>Journal of Solid State Chemistry</i> , 2009, 182, 1359-1364.	1.4	51
15	Experimental study and critical review of structural, thermodynamic and mechanical properties of superhard refractory boron suboxide B ₆ O. <i>Journal of Superhard Materials</i> , 2011, 33, 421-428.	0.5	50
16	Thermodynamic aspects of materials' hardness: prediction of novel superhard high-pressure phases. <i>High Pressure Research</i> , 2008, 28, 531-537.	0.4	49
17	Kinetics of Diamond Crystallization from the Melt of the Fe-Ni-C System. <i>Journal of Physical Chemistry B</i> , 2002, 106, 6634-6637.	1.2	45
18	Synthesis of Mg ₂ C: A Magnesium Methanide. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 8930-8933.	7.2	45

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19	Phase Diagram of the $B\text{-}B_2O_3$ System at 5 GPa: Experimental and Theoretical Studies. <i>Journal of Physical Chemistry B</i> , 2008, 112, 6683-6687.	1.2	44
20	Nature of Hexagonal Silicon Forming via High-Pressure Synthesis: Nanostructured Hexagonal 4H Polytype. <i>Nano Letters</i> , 2018, 18, 5989-5995.	4.5	43
21	Synthesis of rock-salt $MeO\text{-}ZnO$ solid solutions ($Me=Ni^{2+}, Co^{2+}, Fe^{2+}, Mn^{2+}$) at high pressure and high temperature. <i>High Pressure Research</i> , 2008, 28, 515-519.	0.4	40
22	Synthesis of $\beta\text{-}Mg_2C_3$: A Monoclinic High-Pressure Polymorph of Magnesium Sesquicarbide. <i>Inorganic Chemistry</i> , 2014, 53, 7020-7027.	1.9	40
23	Equation of state of aluminum carbide Al_4C_3 . <i>Solid State Communications</i> , 2005, 133, 385-388.	0.9	37
24	Solid-state synthesis of β -boron subnitride, B_6N : myth or reality?. <i>Comptes Rendus Chimie</i> , 2006, 9, 1472-1475.	0.2	37
25	Equation of state of orthorhombic boron, β -B28. <i>Solid State Communications</i> , 2009, 149, 1356-1358.	0.9	37
26	Ionic high-pressure form of elemental boron. <i>Nature</i> , 2009, 460, 292-292.	13.7	34
27	Comparison of solid-state crystallization of boron polymorphs at ambient and high pressures. <i>High Pressure Research</i> , 2012, 32, 30-38.	0.4	33
28	Boron phosphide under pressure: <i>In situ</i> study by Raman scattering and X-ray diffraction. <i>Journal of Applied Physics</i> , 2014, 116, .	1.1	33
29	High-pressure synthesis of superhard and ultrahard materials. <i>Journal of Applied Physics</i> , 2019, 126, .	1.1	32
30	First and second-order Raman scattering of B_6O . <i>Journal of Raman Spectroscopy</i> , 2009, 40, 1078-1081.	1.2	29
31	300-K equation of state of rhombohedral boron subnitride,. <i>Solid State Communications</i> , 2009, 149, 2169-2171.	0.9	29
32	Kinetics of the Wurtzite-to-Rock-Salt Phase Transformation in ZnO at High Pressure. <i>Journal of Physical Chemistry A</i> , 2011, 115, 4354-4358.	1.1	29
33	Phase Diagram of the $B\text{-}BN$ System at 5 GPa. <i>Journal of Physical Chemistry B</i> , 2010, 114, 5819-5822.	1.2	27
34	A high pressure pathway toward boron-based nanostructured solids. <i>Dalton Transactions</i> , 2018, 47, 7634-7639.	1.6	27
35	High-Pressure and High-Temperature Stability of Antifluorite Mg_2C by <i>In Situ</i> X-ray Diffraction and <i>Ab Initio</i> Calculations. <i>Journal of Physical Chemistry C</i> , 2014, 118, 8128-8133.	1.5	26
36	Synthesis of Bulk BC8 Silicon Allotrope by Direct Transformation and Reduced-Pressure Chemical Pathways. <i>Inorganic Chemistry</i> , 2016, 55, 8943-8950.	1.9	25

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37	Equation of state of graphite-like BC. Solid State Communications, 2006, 137, 268-271.	0.9	24
38	High-Pressure Design of Advanced BN-Based Materials. Molecules, 2016, 21, 1399.	1.7	24
39	Thermodynamically Consistent p - T Phase Diagram of Boron Oxide B_2O_3 by in Situ Probing and Thermodynamic Analysis. Journal of Physical Chemistry C, 2015, 119, 20600-20605.	1.5	22
40	Raman scattering from turbostratic graphitelike BC4 under pressure. Journal of Applied Physics, 2007, 102, 063509.	1.1	20
41	Bulk nanostructured carbon phases prepared from C60: approaching the "ideal" hardness. Journal of Physics Condensed Matter, 2007, 19, 236209.	0.7	20
42	High-pressure route to superhard boron-rich solids. High Pressure Research, 2011, 31, 48-52.	0.4	18
43	Reversible pressure-induced structure changes in turbostratic BN-C solid solutions. Acta Crystallographica Section B: Structural Science, 2005, 61, 498-503.	1.8	17
44	Equation of state of aluminum silicon carbide $\hat{\pm}$ -Al4SiC4. Solid State Communications, 2005, 135, 87-89.	0.9	11
45	Thermoelastic equation of state and melting of Mg metal at high pressure and high temperature. Journal of Applied Physics, 2020, 127, 055903.	1.1	7
46	Restricted growth of solid phase from solution. Materials Chemistry and Physics, 2007, 105, 401-407.	2.0	6
47	Silicon Allotropy and Chemistry at Extreme Conditions. Energy Procedia, 2016, 92, 839-844.	1.8	5
48	High-Pressure Melting Curve of Zintl Sodium Silicide Na4Si4 by In Situ Electrical Measurements. Inorganic Chemistry, 2019, 58, 10822-10828.	1.9	5
49	In Situ High-Pressure Synthesis of New Outstanding Light-Element Materials under Industrial P-T Range. Materials, 2021, 14, 4245.	1.3	3
50	Heat Capacities of Nanostructured Wurtzite and Rock Salt ZnO: Challenges of ZnO Nano-Phase Diagram. Solids, 2021, 2, 121-128.	1.1	1