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Harder than diamond: superior indentation strength of wurtzite BN and lonsdaleite

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#	Paper	IF	Citations
228	Hierarchical Growth: Basic and Applied Research. 2009,		6
227	Diamond Schottky structures. 2009,		1
226	DFT Calculations of Vibrational Frequencies of CarbonNitrogen Clusters: Raman Spectra of Carbon Nitrides. 2010 , 21, 197-210		8
225	Synthesis and optical properties of purified translucent, orthorhombic boron nitride films. 2010 , 312, 3434-3437		6
224	Investigation of tetragonal ReN2 and WN2 with high shear moduli from first-principles calculations. 2010 , 374, 2569-2574		34
223	Soft bond-deformation paths in superhard Eboron. <i>Physical Review Letters</i> , 2010 , 105, 215503	7.4	49
222	Functionalization of BN honeycomb structure by adsorption and substitution of foreign atoms. 2010 , 82,		83
221	Transformations of Cold-Compressed Multiwalled Boron Nitride Nanotubes Probed by Infrared Spectroscopy. 2010 , 114, 1782-1788		31
220	Design of ultrahard materials: Go nano!. 2010 , 90, 4101-4115		22
219	1,2-BN cyclohexane: synthesis, structure, dynamics, and reactivity. 2011 , 133, 13006-9		79
218	Body-centered tetragonal B2N2: a novel sp3 bonding boron nitride polymorph. 2011 , 13, 14565-70		65
217	Evolutionary search for superhard materials: Methodology and applications to forms of carbon and TiO2. 2011 , 84,		187
216	Structure and stability under pressure of cubic and hexagonal diamond crystals of C, BN and Si from first principles. 2011 , 23, 215501		3
215	Synthesis of Nano-Polycrystalline Diamond (NPD) and Its Application to Ultrahigh-Pressure Studies. 2011 , 21, 278-284		1
214	Lonsdaleite [A material stronger and stiffer than diamond. 2011 , 65, 229-232		43
213	Mechanical properties and hardness of boron and boron-rich solids. 2011 , 33, 409-420		41
212	First-principles, UV Raman, X-ray diffraction and TEM study of the structure and lattice dynamics of the diamondlbnsdaleite system. <i>Diamond and Related Materials</i> , 2011 , 20, 951-953	3.5	24

211	Natural monocrystalline lonsdaleite. 2011 , 441, 1552-1554	17
210	Indentation strength of ultraincompressible rhenium boride, carbide, and nitride from first-principles calculations. 2012 , 86,	41
209	Unexpectedly low indentation strength of WB3 and MoB3 from first principles. 2012, 86,	42
208	Ideal strength and structural instability of aluminum at finite temperatures. 2012, 86,	21
207	Controllable oxidation of h-BN monolayer on Ir(111) studied by core-level spectroscopies. 2012 , 606, 564-570	39
206	Cubic, wurtzite, and 4H-BN band structures calculated using GW methods and maximally localized Wannier functions interpolation. 2012 , 61, 266-269	26
205	Wear resistance of nano-polycrystalline diamond with various hexagonal diamond contents. 2012 , 34, 343-349	12
204	Novel sp3 forms of carbon predicted by evolutionary metadynamics and analysis of their synthesizability using transition path sampling. 2012 , 34, 350-359	14
203	Prediction of superhard carbon allotropes from the segment combination method. 2012 , 34, 386-399	16
202	Laser/waterjet heat treatment of polycrystalline cubic/wurtzite boron nitride composite for reaching hardness of polycrystalline diamond. 2012 , 89, 123-125	9
201	Z-BN: a novel superhard boron nitride phase. 2012 , 14, 10967-71	63
200	Donor-acceptor complexation and dehydrogenation chemistry of aminoboranes. 2012 , 51, 12905-16	53
199	Temperature-dependent ideal strength and stacking fault energy of fcc Ni: a first-principles study of shear deformation. 2012 , 24, 155402	49
198	Structural transformations in the formation of superhard materials based on the wurtzitic boron nitride initial powders. 2012 , 34, 1-18	4
197	Phase transformations of carbon under extreme energy action. 2012 , 57, 198-202	8
196	The effect of structure and phase transformation on the mechanical properties of ReN and the stability of MnN. 2012, 33, 18-24	10
195	Mechanical and electronic properties of diborides of transition 3dBd metals from first principles: Toward search of novel ultra-incompressible and superhard materials. 2012 , 57, 184-228	145
194	On the mechanism of hardening wurtzitic boron nitride under an indenter. 2013 , 35, 93-96	

193	Materials from Extreme Conditions. 2013 , 17-46	4
192	Fundamental constraints on the strength of transition-metal borides: The case of CrB4. 2013 , 87,	35
191	Optical properties of impact diamonds from the Popigai astrobleme. <i>Diamond and Related Materials</i> , 2013 , 37, 8-16	20
190	Pressure-constrained deformation and superior strength: Compressed graphite versus diamond. 2013 , 88,	4
189	Diamond Hydrocarbons and Related Structures. 2013 , 1-27	3
188	Structural principles and thermoelectric properties of polytypic group 14 clathrate-II frameworks. 2013 , 14, 1807-17	13
187	Elastic constants of cubic and wurtzite boron nitrides. 2013 , 102, 241909	43
186	Tian et al. reply. 2013 , 502, E2-3	10
185	New boron nitride structures B4N4: a first-principles random searching application. 2013 , 25, 125504	18
184	Structural and mechano-chemical features of high-pressure phases forming at p, T and p-treatment of graphite. 2014 , 36, 401-409	1
183	Unexpected structural softening of interstitial boron solid solution WB3+x. 2014 , 105, 211901	7
182	Nanopolycrystalline Diamond without Binder and its Application to Various High-Pressure Apparatus. 2014 , 173-191	6
181	Superhard sp 3 carbon allotrope: Ab initio calculations. 2014 , 108, 46006	4
180	Hardness of FeB4: density functional theory investigation. 2014 , 140, 174505	67
179	Phase stability limit of c-BN under hydrostatic and non-hydrostatic pressure conditions. 2014 , 140, 164704	7
178	A possible superhard orthorhombic carbon. <i>Diamond and Related Materials</i> , 2014 , 43, 49-54 3.5	23
177	Raman identification of lonsdaleite in Popigai impactites. 2014 , 45, 305-313	29
176	Electronic structure and optical properties of Si, Ge and diamond in the lonsdaleite phase. 2014 , 26, 045801	37

175	Lonsdaleite Films with Nanometer Thickness. 2014 , 5, 541-8	42
174	Lonsdaleite is faulted and twinned cubic diamond and does not exist as a discrete material. 2014 , 5, 5447	157
173	Large indentation strain-stiffening in nanotwinned cubic boron nitride. 2014 , 5, 4965	74
172	Polycrystalline boron nitride constructed from hexagonal boron nitride. 2014 , 4, 38589-38593	6
171	First-principles calculation of the indentation strength of FeB4. 2014 , 90,	32
170	Application of 3D printing technology for designing light-weight unmanned aerial vehicle wing structures. 2014 , 1, 223-228	143
169	First-principles study of a novel superhard sp3 carbon allotrope. 2014 , 378, 3326-3330	26
168	ShengBTE: A solver of the Boltzmann transport equation for phonons. 2014 , 185, 1747-1758	1243
167	Anomalous Stress Response of Ultrahard WB_{n} Compounds. <i>Physical Review Letters</i> , 2015 , 115, 185502/4	85
166	Pathways to the polymerization of boron monoxide dimer to give low-density porous materials containing six-membered boroxine rings. 2015 , 54, 2910-5	10
165	First principles studies of electronic and optical properties of helium adsorption on Sc-doped BN monolayer. 2015 , 12, 1983-1990	15
164	Superhard BC(3) in cubic diamond structure. <i>Physical Review Letters</i> , 2015 , 114, 015502 7.4	147
163	Elastic and mechanical properties of hexagonal diamond under pressure. 2015, 119, 721-726	20
162	Pressure evolution of the potential barriers for transformations of layered BN to dense structures. 2015 , 5, 87550-87555	2
161	Improved Ductility of Boron Carbide by Microalloying with Boron Suboxide. 2015 , 119, 24649-24656	23
160	Extent of stacking disorder in diamond. <i>Diamond and Related Materials</i> , 2015 , 59, 69-72 3.5	37
159	Diamond polytypes under high pressure: A first-principles study. 2015 , 98, 129-135	9
158	Characterization of low temperature synthesized hexagonal diamond thin films. 2015 , 21, 1395-1400	1

157	Nanocrystalline hexagonal diamond formed from glassy carbon. 2016 , 6, 37232		53
156	Twinning of cubic diamond explains reported nanodiamond polymorphs. 2015 , 5, 18381		26
155	Study of composition of the ultrafine material produced from graphiteBatalyst mixture under extreme energy action. 2016 , 774, 012012		1
154	Low-density superhard materials: computational study of Li-inserted B-substituted closo-carboranes LiBC11 and Li2B2C10. 2016 , 6, 52695-52699		2
153	Superhard superstrong carbon clathrate. 2016 , 105, 151-155		23
152	Theoretical study of electronic and mechanical properties of Fe2B. 2016 , 6, 73576-73580		11
151	Nanosecond formation of diamond and lonsdaleite by shock compression of graphite. 2016 , 7, 10970		119
150	Superstrength through Nanotwinning. 2016 , 16, 7573-7579		44
149	Superhard BC 2 N: an Orthogonal Crystal Obtained by Transversely Compressing (3,0)-CNTs and (3,0)-BNNTs. 2016 , 33, 106102		5
148	Applications for Superhard and Ultra-Hard Materials. 2016 , 25-74		O
147	Les simulations sont-elles des expliences num liques?. 2016 , 55, 59-86		1
146	Heterogeneous diamond phases in compressed graphite studied by electron energy-loss spectroscopy. <i>Diamond and Related Materials</i> , 2016 , 64, 190-196	3.5	7
145	Synthesis of Diamondoid and Lonsdaleite Networks from the Same Ag(I) Ligand Combination, with Lonsdaleite the Softer Network. 2016 , 16, 1038-1046		12
144	Novel superhard B-C-O phases predicted from first principles. 2016 , 18, 1859-63		36
143	Ultrahard boron nitride material through a hybrid laser/waterjet based surface treatment. 2016 , 102, 315-322		13
142	Materials discovery at high pressures. 2017 , 2,		266
141	Elastic and mechanical softening in boron-doped diamond. 2017 , 7, 42921		8
140	Novamene: A new class of carbon allotropes. 2017 , 3, e00242		23

139	Recent Development of Boron Nitride towards Electronic Applications. 2017, 3, 1600485	53
138	Increase the hardness of polycrystalline cubic/wurtzite boron nitride composite through hybrid laser/waterjet heat (LWH) treatment. 2017 , 116, 333-340	7
137	Chiral Pentagon Only Diamond-like Structures. 2017 , 121, 13810-13815	13
136	Structural, electronic and mechanical properties of sp-hybridized BN phases. 2017 , 19, 9923-9933	5
135	Transformation of shock-compressed graphite to hexagonal diamond in nanoseconds. 2017 , 3, eaao3561	41
134	Hole polarons and p-type doping in boron nitride polymorphs. 2017 , 96,	14
133	Structural varieties of polytypes. 2017 , 59, 1926-1933	10
132	Effect of electron irradiation on optical absorption of impact diamonds from the Popigai meteorite crater. <i>Diamond and Related Materials</i> , 2017 , 79, 7-13	3
131	Extraordinary Indentation Strain Stiffening Produces Superhard Tungsten Nitrides. <i>Physical Review Letters</i> , 2017 , 119, 115503	108
130	Ab initio triangle maps for new insights into the crystal wave functions of carbon allotropes. 2017 , 123, 708-716	2
129	Thermal stability of simple tetragonal and hexagonal diamond germanium. 2017, 122, 175108	7
128	Nanoindentation measurements of a highly oriented wurtzite-type boron nitride bulk crystal. 2017 , 56, 030301	14
127	High-pressure studies with x-rays using diamond anvil cells. 2017 , 80, 016101	77
126	Simulation of the formation of polymorphic varieties of nanodiamonds. 2017 , 917, 032004	
125	Computer Simulation, Experiment, and Novelty. 2017 , 31, 379-395	1
124	Mechanical behavior, electronic and phonon properties of ZrB 12 under pressure. 2018 , 117, 173-179	9
123	Chemically stabilized epitaxial wurtzite-BN thin film. 2018 , 115, 197-203	4
122	A new orthorhombic ground-state phase and mechanical strengths of ternary B2CO compound. 2018 , 701, 86-92	6

121	Recent progress on the characterization of the high-pressure behaviour of AVO4 orthovanadates. 2018 , 97, 123-169	66
120	Mechanical strength and origin of the strengthening effect of tantalum in superhard W 0.5 Ta 0.5 B monoboride. 2018 , 44, 10463-10469	14
119	Hierarchical growth: Basic and applied research. 2018 , 90, 434-459	7
118	Graphitization resistance determines super hardness of lonsdaleite, nanotwinned and nanopolycrystalline diamond. 2018 , 133, 69-76	20
117	Production and characterization of boron nitride-doped nanofiber mats created through electrospinning. 2018 , 47, 993-1005	2
116	Theoretical investigations of group IV alloys in the Lonsdaleite phase. 2018 , 53, 2785-2801	24
115	Revealing the formation mechanism of ultrahard nanotwinned diamond from onion carbon. 2018 , 129, 159-167	24
114	Understanding the mechanical characteristics of nanotwinned diamond by atomistic simulations. 2018 , 127, 320-328	15
113	Structure of Carbon Materials Explored by Local Transmission Electron Microscopy and Global Powder Diffraction Probes. 2018 , 4, 68	33
112	Twin-size effects on the hardness and plastic deformation mechanisms of nanotwinned diamond. 2018 , 44, 22121-22128	11
111	Compression-Induced Modification of Boron Nitride Layers: A Conductive Two-Dimensional BN Compound. 2018 , 12, 5866-5872	14
110	Stability, Elastic Properties, and Deformation of LiBN: A Potential High-Energy Material. 2018 , 57, 6333-633	9
109	Lattice thermal transport in superhard hexagonal diamond and wurtzite boron nitride: A comparative study with cubic diamond and cubic boron nitride. 2018 , 139, 85-93	16
108	An inverse Ruddlesden-Popper nitride Ca7(Li1\(\tex\) Te2N2 grown from Ca \(\textstyle \textstyle x. \) 2018, 98, 118-125	2
107	Analysis of stacking disorder in ice I using pair distribution functions. 2018 , 51, 1211-1220	13
106	Effect of Boron Incorporation on Structural and Optical Properties of AlN Layers Grown by Metal-Organic Vapor Phase Epitaxy. 2018 , 215, 1800282	10
105	Toughening and maintaining strength of diamond with substitutional doping boron and nitrogen. Journal of Alloys and Compounds, 2019 , 805, 1090-1095	4
104	Hardness of Polycrystalline Wurtzite Boron Nitride (wBN) Compacts. 2019 , 9, 10215	9

103	Nonreversible Transition from the Hexagonal to Wurtzite Phase of Boron Nitride under High Pressure: Optical Properties of the Wurtzite Phase. 2019 , 123, 20167-20173	8
102	Profound softening and shear-induced melting of diamond under extreme conditions: An ab-initio molecular dynamics study. 2019 , 155, 361-368	3
101	First-principles design of strong solids: Approaches and applications. 2019 , 826, 1-49	17
100	New metastable carbon phases observed by HRTEM. 2019 , 25, 1728-1729	O
99	Smooth Flow in Diamond: Atomistic Ductility and Electronic Conductivity. <i>Physical Review Letters</i> , 2019 , 123, 195504	27
98	Predicting superhard materials via a machine learning informed evolutionary structure search. 2019 , 5,	43
97	Structure Formation of Hexagonal Diamond: Ab Initio Calculations. 2019 , 61, 1882-1890	1
96	Relative stability of diamond and graphite as seen through bonds and hybridizations. 2019 , 21, 10961-10969	8
95	Stabilizing the metastable superhard material wurtzite boron nitride by three-dimensional networks of planar defects. 2019 , 116, 11181-11186	8
94	Strengthening and toughening by partial slip in nanotwinned diamond. 2019 , 150, 1-7	14
94	Strengthening and toughening by partial slip in nanotwinned diamond. 2019, 150, 1-7 Rocketsled: a software library for optimizing high-throughput computational searches. 2019, 2, 034002	6
93	Rocketsled: a software library for optimizing high-throughput computational searches. 2019 , 2, 034002 Theoretical Investigation of Phase Transitions of Graphite and Cubic 3C Diamond Into Hexagonal	
93	Rocketsled: a software library for optimizing high-throughput computational searches. 2019 , 2, 034002 Theoretical Investigation of Phase Transitions of Graphite and Cubic 3C Diamond Into Hexagonal 2H Diamond Under High Pressures. 2019 , 256, 1800575 Stacking Disorder by Design: Factors Governing the Polytypism of Silver Iodide upon Precipitation	7
93 92 91	Rocketsled: a software library for optimizing high-throughput computational searches. 2019 , 2, 034002 Theoretical Investigation of Phase Transitions of Graphite and Cubic 3C Diamond Into Hexagonal 2H Diamond Under High Pressures. 2019 , 256, 1800575 Stacking Disorder by Design: Factors Governing the Polytypism of Silver Iodide upon Precipitation and Formation from the Superionic Phase. 2019 , 19, 2131-2138 Failure and energy absorption characteristics of four lattice structures under dynamic loading. 2019	673
93 92 91 90	Rocketsled: a software library for optimizing high-throughput computational searches. 2019, 2, 034002 Theoretical Investigation of Phase Transitions of Graphite and Cubic 3C Diamond Into Hexagonal 2H Diamond Under High Pressures. 2019, 256, 1800575 Stacking Disorder by Design: Factors Governing the Polytypism of Silver Iodide upon Precipitation and Formation from the Superionic Phase. 2019, 19, 2131-2138 Failure and energy absorption characteristics of four lattice structures under dynamic loading. 2019, 169, 107655	6 7 3 61
9392919089	Rocketsled: a software library for optimizing high-throughput computational searches. 2019, 2, 034002 Theoretical Investigation of Phase Transitions of Graphite and Cubic 3C Diamond Into Hexagonal 2H Diamond Under High Pressures. 2019, 256, 1800575 Stacking Disorder by Design: Factors Governing the Polytypism of Silver Iodide upon Precipitation and Formation from the Superionic Phase. 2019, 19, 2131-2138 Failure and energy absorption characteristics of four lattice structures under dynamic loading. 2019, 169, 107655 From 2-D to 0-D Boron Nitride Materials, The Next Challenge. 2019, 12, Low temperature, pressureless sp2 to sp3 transformation of ultrathin, crystalline carbon films.	6 7 3 61 18

85	Extreme static compression of carbon to terapascal pressures. 2019 , 144, 161-170	5
84	Prediction of a novel carbon allotrope from first-principle calculations: A potential superhard material in monoclinic symmetry. 2020 , 242, 122480	36
83	Effect of lonsdaleite on the optical properties of impact diamonds. <i>Diamond and Related Materials</i> , 2020 , 101, 107640	3
82	Toughening a superstrong carbon crystal: Sequential bond-breaking mechanisms. 2020 , 102,	2
81	Elucidating Stress-Strain Relations of ZrB from First-Principles Studies. 2020 , 11, 9165-9170	50
80	Extrinsic Doping in Group IV Hexagonal-Diamond-Type Crystals. 2020 , 124, 17290-17298	2
79	Atomistic Mechanisms for Contrasting Stress-Strain Relations of BCN and BC. 2020, 11, 10454-10462	3
78	Nanoleite: a new semiconducting carbon allotrope predicted by density functional theory 2020 , 10, 38782-38787	
77	Manipulation of giant negative Poisson's ratios in three-dimensional graphene networks. 2020, 102,	0
76	Machine Learning for Structural Materials. 2020 , 50, 27-48	18
76 75	Machine Learning for Structural Materials. 2020 , 50, 27-48 First-principles study on a new type of quaternary carbonitride VWCN with outstanding mechanical properties. 2020 , 92, 105319	3
	First-principles study on a new type of quaternary carbonitride VWCN with outstanding mechanical	
75	First-principles study on a new type of quaternary carbonitride VWCN with outstanding mechanical properties. 2020 , 92, 105319	3
75 74	First-principles study on a new type of quaternary carbonitride VWCN with outstanding mechanical properties. 2020 , 92, 105319 Hierarchically structured diamond composite with exceptional toughness. 2020 , 582, 370-374 Role of graphite crystal structure on the shock-induced formation of cubic and hexagonal diamond.	3 59
75 74 73	First-principles study on a new type of quaternary carbonitride VWCN with outstanding mechanical properties. 2020, 92, 105319 Hierarchically structured diamond composite with exceptional toughness. 2020, 582, 370-374 Role of graphite crystal structure on the shock-induced formation of cubic and hexagonal diamond. 2020, 101, Effects of boron defects on mechanical strengths of TiB at high temperature: ab initio molecular	3595
75 74 73 72	First-principles study on a new type of quaternary carbonitride VWCN with outstanding mechanical properties. 2020, 92, 105319 Hierarchically structured diamond composite with exceptional toughness. 2020, 582, 370-374 Role of graphite crystal structure on the shock-induced formation of cubic and hexagonal diamond. 2020, 101, Effects of boron defects on mechanical strengths of TiB at high temperature: ab initio molecular dynamics studies. 2020, 22, 6560-6571	35952
75 74 73 72 71	First-principles study on a new type of quaternary carbonitride VWCN with outstanding mechanical properties. 2020, 92, 105319 Hierarchically structured diamond composite with exceptional toughness. 2020, 582, 370-374 Role of graphite crystal structure on the shock-induced formation of cubic and hexagonal diamond. 2020, 101, Effects of boron defects on mechanical strengths of TiB at high temperature: ab initio molecular dynamics studies. 2020, 22, 6560-6571 Diamond-Graphene Composite Nanostructures. 2020, 20, 3611-3619 Mechanical properties of tantalum carbide from high-pressure/high-temperature synthesis and	3 59 5 2 20

67 Machinable Materials. **2021**, 53-76

66	Atomically Controlled Two-Dimensional Heterostructures: Synthesis, Characterization and Applications. 2021 , 201-235	
65	Data-Driven Discovery and Understanding of Ultrahigh-Modulus Crystals. 2021 , 33, 1276-1284	3
64	Routes to cubic ice through heterogeneous nucleation. 2021 , 118,	4
63	Indentation Strengths of Zirconium Diboride: Intrinsic versus Extrinsic Mechanisms. 2021 , 12, 2848-2853	32
62	Elastic moduli of hexagonal diamond and cubic diamond formed under shock compression. 2021 , 103,	1
61	Effects of temperature on strain engineering and transition-metal adatom magnetization in phosphorene: Ab initio molecular dynamics studies. 2021 , 103,	1
60	What is an organic substance?. 2021 , 23, 329	O
59	Superior Mechanical Properties of GaAs Driven by Lattice Nanotwinning. 2021 , 38, 046201	О
58	Carbon under pressure. 2021 , 909, 1-73	27
57	Designing highly incompressible transition metal nitrides: A new class of W0.5Al0.5N phases. 2021 , 130, 065105	1
56	Phase transition mechanism of hexagonal graphite to hexagonal and cubic diamond:simulation. 2021 , 33,	
55	Prediction on the theoretical strength of diamond, c-BN, Cu, and CeO2. 2021 , 11, 095111	1
54	Superhardness Induced by Grain Boundary Vertical Sliding in (001)-textured ZrB2 and TiB2 Nano Films. 2021 , 218, 117212	2
53	Phonon thermal transport in diamond and lonsdaleite: A comparative study of empirical potentials. Diamond and Related Materials, 2021 , 120, 108618	О
52	On the crystal chemistry of inorganic nitrides: crystal-chemical parameters, bonding behavior, and opportunities in the exploration of their compositional space. 2021 , 12, 4599-4622	3
51	Indentation-strain stiffening in tungsten nitrides: Mechanisms and implications. 2020, 4,	35
50	Structure-strength relations of distinct MoN phases from first-principles calculations. 2020 , 4,	36

49	Materials science research of boron nitride obtained at high pressure and high temperature. 2020 , 128, 620-626	4
48	Frontiers in Deep Earth Mineralogy Using New Large-Volume D-DIA and KMA Apparatus. 2010 , 20, 158-165	7
47	Design of ultra-hard multifunctional transition metal compounds. 2017 , 66, 036104	5
46	First principles study of the uniaxial compressive strength of bct-C4 carbon allotrope. 2012 , 61, 093104	3
45	First principles study on the structure and mechanical properties of hcp-C3 carbon bulk ring. 2012 , 61, 043103	2
44	X-ray Free Electron Laser (XFEL) Observation of Lonsdaleite Formation by Ultrafast Laser Shock Compression. 2019 , 47, 47	
43	Prediction of the fundamental properties of novel Be-B-Ta-based ternary compounds from first-principles calculations. 2019 , 3,	1
42	Born valence force-field model for diamond at terapascals: Validity and implications for the primary pressure scale. 2021 , 6, 068403	2
41	Synthesis of paracrystalline diamond. 2021 , 599, 605-610	9
40	Bias-Enhanced Formation of Metastable and Multiphase Boron Nitride Coating in Microwave Plasma Chemical Vapor Deposition. 2021 , 14,	1
39	Dual-Phase Nanocomposite TiB/MoSB: An Excellent Ultralow Friction and Ultralow Wear Self-Lubricating Material. 2021 ,	O
38	Superhard metallic compound TaB2 via crystal orientation resolved strain stiffening. 2022, 105,	1
37	Thermal stability, mechanical properties, and tribological performance of TiAlXN coatings: understanding the effects of alloying additions. 2022 , 17, 961-1012	3
36	Two novel carbon allotropes with tetragonal symmetry: First-principles calculations. 2022 , 122971	O
35	Macroscale Robust Superlubricity on Metallic NbB 2022 , e2103815	O
34	Ion irradiation-induced sputtering and surface modification of BN films prepared by a reactive plasma-assisted coating technique.	
33	A Review of Binderless Polycrystalline Diamonds: Focus on the High-Pressure-High-Temperature Sintering Process 2022 , 15,	2
32	The strongest and toughest predicted materials: Linear atomic chains without a Peierls instability. 2022 , 5, 1192-1203	1

31	Raman investigations and ab initio calculations of natural diamond-lonsdaleite originating from New Caledonia. 2022 , 111541		2
30	1,6;2,3-Bis-BN Cyclohexane: Synthesis, Structure, and Hydrogen Release 2022,		1
29	Simulations of plasticity in diamond nanoparticles showing ultrahigh strength. <i>Diamond and Related Materials</i> , 2022 , 126, 109109	3.5	1
28	A concise review of the Raman spectra of carbon allotropes. <i>Diamond and Related Materials</i> , 2022 , 10918	9 0 5	4
27	Boron nitride materials as emerging catalysts for oxidative dehydrogenation of light alkanes. Nanotechnology,	3-4	0
26	Multifunctional two-dimensional graphene-like boron nitride allotrope of g-B3N5: A competitor to g-BN?. <i>Journal of Alloys and Compounds</i> , 2022 , 921, 165913	5.7	Ο
25	Shock-formed carbon materials with intergrown sp 3 - and sp 2 -bonded nanostructured units. 2022 , 119,		О
24	Can Graphene Oxide Help to Prevent Peri-Implantitis in the Case of Metallic Implants?. 2022 , 12, 1202		1
23	Exceptional strain strengthening and tuning of mechanical properties of TiN. 2022, 106,		1
22	2D (< 10 nm) sp3-C-rich carbon materials, possibly hydrogenated: A review. 2022 , 9, 100219		Ο
21	Electron-Beam Synthesis and Modification and Properties of Boron Coatings on Alloy Surfaces. 2022 , 5, 706-720		1
20	Macroscale superdurable superlubricity achieved in lubricant oil via operando tribochemical formation of fullerene-like carbon. 2022 , 101130		Ο
19	Strain-induced tunable electronic properties in graphite-diamond hybrids. 2022 , 28, 100879		0
18	A facile strategy to synthesis nanocrystalline H-Diamond (H-D) phase in MoCx (H-D/a-C) composite coatings using a reactive sputtering system: The role of Mo content. 2022 , 33, 104778		O
17	Molecular dynamics method for targeting Bynuclein aggregation induced Parkinson's disease using boron nitride nanostructures. 2023 , 146, 89-95		0
16	A Comprehensive Review of High-Pressure Laser-Induced Materials Processing, Part II: Laser-Driven Dynamic Compression within Diamond Anvil Cells. 2022 , 6, 142		1
15	Electronic structure and improved optical properties of Al, P, and Al-P doped h-BN. 2023, 131, 109561		0
14	Research progress of high hardness B-C-O compounds. 2023 , 111, 106086		O

13	Raman Spectroscopy of Impact Popigai Astrobleme Diamonds Heat Treated at 5.5 GPa. 2022 , 95, 1688-1696	0
12	A new strategy for enhancement of structural ordering and H-diamond formation in (Mo: a-C) overcoats through substrate temperature: Microstructure, mechanical and tribological performances. 2023 , 180, 108230	О
11	HPHT-Treated Impact Diamonds from the Popigai Crater (Siberian Craton): XRD and Raman Spectroscopy Evidence. 2023 , 13, 154	O
10	Hardness and Mechanical Properties of Wurtzite BCN Compounds. 2023, 127, 2581-2588	0
9	Hexagonal Diamond: Theoretical Study of Methods of Fabrication and Experimental Identification. 2023 , 117, 306-312	0
8	Theoretical study on mechanical and electronic properties of ternary diborides Sc0.5V0.5B2, Sc0.5Nb0.5B2 and Sc0.5Ta0.5B2. 2023 , 35, 105760	O
7	Elastic and inelastic behavior of boron nitride nanocones at finite strains. 2023, 473, 128812	O
6	Hardness of nano- and microcrystalline lonsdaleite. 2023 , 122, 081902	0
5	Growth mechanisms of hBN crystalline nanostructures with rf sputtering deposition: challenges, opportunities, and future perspectives. 2023 , 98, 042001	0
4	Unusual mechanical strengths of Ta2O5 stable phases: A first-principles calculation study. 2023 , 133, 095103	O
3	Single Crystals Growth under High Pressure and Their Defect Control for New Functionalization. 2023 , 89, 244-248	О
2	Early melting of tantalum carbide under anisotropic stresses: An ab initio molecular dynamics study. 2023 , 107,	О
1	Superhard BC2N in cubic diamondlike structure. 2023 , 107,	0