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Superhard cubic BC₂N compared to diamond

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#	Paper	IF	Citations
197	Atomistic deformation modes in strong covalent solids. <i>Physical Review Letters</i> , 2005 , 94, 145505	7.4	104
196	Ab initio pseudopotential studies of cubic BC ₂ N under high pressure. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, 3211-3220	1.8	6
195	Polyhedral oligomeric silsesquioxane nanocomposites: the next generation material for biomedical applications. 2005 , 38, 879-84		368
194	Theoretical model of intrinsic hardness. <i>Physical Review B</i> , 2006 , 73,	3.3	229
193	Ab initio structural identification of high density cubic BC ₂ N. <i>Physical Review B</i> , 2006 , 73,	3.3	15
192	Cubic (BN) _x C ₂ (1-x) ordered alloys: a first-principles study of the structural, electronic, and effective mass properties. <i>Journal of Physics Condensed Matter</i> , 2006 , 18, 3509-3516	1.8	5
191	Insights into the fracture mechanisms and strength of amorphous and nanocomposite carbon. <i>Physical Review Letters</i> , 2006 , 96, 185503	7.4	66
190	The degradative resistance of polyhedral oligomeric silsesquioxane nanocore integrated polyurethanes: an in vitro study. 2006 , 27, 1971-9		167
189	Structural deformation, strength, and instability of cubic BN compared to diamond: A first-principles study. <i>Physical Review B</i> , 2006 , 73,	3.3	106
188	Strain dependent bonding in solid C ₃ N ₄ : High elastic moduli but low strength. <i>Physical Review B</i> , 2006 , 73,	3.3	50
187	Structural and electronic properties of OsB ₂ : A hard metallic material. <i>Physical Review B</i> , 2006 , 74,	3.3	62
186	Role of oxygen in TiN(111)/Si ₃ N ₄ /TiN(111) interfaces: Implications for superhard nanocrystalline nc-TiN/Si ₃ N ₄ nanocomposites. <i>Physical Review B</i> , 2006 , 74,	3.3	43
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184	Mechanical strengths of silicon nitrides studied by ab initio calculations. <i>Applied Physics Letters</i> , 2007 , 90, 191903	3.4	52
183	Comment on "Superhard pseudocubic BC ₂ N superlattices". <i>Physical Review Letters</i> , 2007 , 99, 159601; author reply 159602	7.4	6
182	Ideal tensile and shear strength of C ₃ N ₄ from first-principles calculations. <i>Physical Review B</i> , 2007 , 76,	3.3	27
181	Chen, Gong, and Wei Reply:. <i>Physical Review Letters</i> , 2007 , 99,	7.4	6

180	First principles studies of ideal strength and bonding nature of AlN polymorphs in comparison to TiN. <i>Applied Physics Letters</i> , 2007 , 91, 031906	3.4	62
179	Mechanical and electronic properties of hard rhenium diboride of low elastic compressibility studied by first-principles calculation. <i>Applied Physics Letters</i> , 2007 , 91, 201914	3.4	83
178	Silsesquioxane nanocomposites as tissue implants. 2007 , 119, 1653-1662		84
177	Size dependence of nanostructures: Impact of bond order deficiency. 2007 , 35, 1-159		691
176	Colossal shear-strength enhancement of low-density cubic BC ₂ N by nanoindentation. <i>Physical Review Letters</i> , 2007 , 98, 135505	7.4	64
175	Tribological study of amorphous BC ₄ N coatings. <i>Diamond and Related Materials</i> , 2007 , 16, 63-73	3.5	23
174	Origin of the hardness enhancement in superhard nc-TiN/a-Si ₃ N ₄ and ultrahard nc-TiN/a-Si ₃ N ₄ /TiSi ₂ nanocomposites. 2007 , 87, 955-966		58
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172	Theoretical hardness of the cubic BC ₂ N. <i>Diamond and Related Materials</i> , 2007 , 16, 526-530	3.5	33
171	Superhard Pseudocubic BC ₂ N superlattices. <i>Physical Review Letters</i> , 2007 , 98, 015502	7.4	68
170	Most likely phase of superhard BC ₂ N by ab initio calculations. <i>Physical Review B</i> , 2007 , 76,	3.3	54
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168	Investigations on ternary B-C-N materials. 2007 , 2, 186-190		3
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164	Is osmium diboride an ultra-hard material?. 2008 , 130, 7200-1		127
163	Synthesis and First-Principles Studies of Single-Crystalline β -BC ₂ N with Oxygen-Bearing Defects. 2008 , 8, 1972-1976		4

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157	Superhardness, stability, and metallicity of diamondlike BC ₅ : Density functional calculations. <i>Physical Review B</i> , 2009 , 80,	3.3	31
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148	First-principles prediction of the hardness of fluorite TiO ₂ . <i>Physica B: Condensed Matter</i> , 2009 , 404, 79-81.8		8
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143	Mechanical and electronic properties of 5d transition metal diborides MB ₂ (M=Re, W, Os, Ru). <i>Journal of Applied Physics</i> , 2009 , 105, 083539	2.5	31
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15	The Fundamentals of Hard and Superhard Nanocomposites and Heterostructures. 2010 , 1-34		
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