Vi Ivashchenko

List of Publications by Year
in descending order

73 papers	968 citations	394390 19 h-index	477281 29 g-index
73 all docs	73 docs citations	73 times ranked	791 citing authors

#	Article	IF	Citations
1	Structure, phase stability and elastic properties in the Ti1â€“xZrxN thin-film system: Experimental and computational studies. Acta Materialia, 2012, 60, 5601-5614.	7.9	71
2	Structural and mechanical properties of NbN and Nb-Si-N films: Experiment and molecular dynamics simulations. Ceramics International, 2016, 42, 11743-11756.	4.8	63
3	A new type of (TiZrNbTaHf)N/MoN nanocomposite coating: Microstructure and properties depending on energy of incident ions. Composites Part B: Engineering, 2018, 146, 132-144.	12.0	60
4	First-principles study of elastic and stability properties of ZrCâ€“ZrN and ZrCâ€“TiC alloys. Journal of Physics Condensed Matter, 2009, 21, 395503.	1.8	49
5	Multilayered vacuum-arc nanocomposite TiN/ZrN coatings before and after annealing: Structure, properties, first-principles calculations. Materials Characterization, 2017, 134, 55-63.	4.4	46
6	The effects of Cr and Si additions and deposition conditions on the structure and properties of the (Zr-Ti-Nb)N coatings. Ceramics International, 2017, 43, 771-782.	4.8	46
7	Characterization of SiCN thin films: Experimental and theoretical investigations. Thin Solid Films, 2014, 569, 57-63.	1.8	39
8	First-principles quantum molecular calculations of structural and mechanical properties of TiN/SiNx heterostructures, and the achievable hardness of the nc-TiN/SiNx nanocomposites. Thin Solid Films, 2015, 578, 83-92.	1.8	36
9	Nanoscale architecture of (CrN/ZrN)/(Cr/Zr) nanocomposite coatings: Microstructure, composition, mechanical properties and first-principles calculations. Journal of Alloys and Compounds, 2020, 831, 154808.	5.5	34
10	a-SiC:H films as perspective wear-resistant coatings. Surface and Coatings Technology, 2004, 180-181, 122-126.	4.8	28
11	Nanocomposite Nb-Al-N coatings: Experimental and theoretical principles of phase transformations. Journal of Alloys and Compounds, 2017, 718, 260-269.	5.5	28
12	Comparative investigation of Si-C-N Films prepared by plasma enhanced chemical vapour deposition and magnetron sputtering. Applied Surface Science, 2017, 425, 646-653.	6.1	28
13	Structural, optoelectronic and mechanical properties of PECVD Si-C-N films: An effect of substrate bias. Materials Science in Semiconductor Processing, 2018, 88, 65-72.	4.0	26
14	First-principles molecular dynamics study of the thermal stability of the BN, AlN, SiC and SiN interfacial layers in TiN-based heterostructures: Comparison with experiments. Thin Solid Films, 2013, 545, 391-400.	1.8	24
15	First-principles study of crystalline and amorphous AlMgB14-based materials. Journal of Applied Physics, 2016, 119, .	2.5	24
16	Nbâ€“Alâ€“N thin films: Structural transition from nanocrystalline solid solution nc-(Nb,Al)N into nanocomposite nc-(Nb, Al)N/aâ€“AlN. Journal of Superhard Materials, 2016, 38, 103-113.	1.2	24
17	Microstructure and mechanical properties of hard Tiâ€“Siâ€“Câ€“N films deposited by dc magnetron sputtering of multicomponent Ti/C/Si target. Surface and Coatings Technology, 2011, 205, 5068-5072.	4.8	22
18	First-principles molecular dynamics investigation of thermal and mechanical stability of the TiN(001)/AlN and ZrN(001)/AlN heterostructures. Thin Solid Films, 2014, 564, 284-293.	1.8	22

#	ARTICLE	IF	CITATIONS
19	Electronic, thermodynamics and mechanical properties of LaB6 from first-principles. Physica B: Condensed Matter, 2018, 531, 216-222.	2.7	19
20	Atomic and electronic structures of a-SiC:H from tight-binding molecular dynamics. Journal of Physics Condensed Matter, 2003, 15, 4119-4126.	1.8	17
21	A first-principles study of the stability and mechanical properties of ternary transition metal carbide alloys. Journal of Applied Physics, 2019, 125, .	2.5	16
22	Effects of short-range disorder upon electronic properties of a-SiC alloys. Applied Surface Science, 2001, 184, 137-143.	6.1	15
23	Mechanical properties of PECVD a-SiC:H thin films prepared from methyltrichlorosilane. Surface and Coatings Technology, 2006, 200, 6533-6537.	4.8	14
24	Experimental and theoretical investigation of Nb-Si-C films. Surface and Coatings Technology, 2016, 300, 35-41.	4.8	13
25	Characteristics of thin plasmachemical silicon carbon nitride films deposited using hexamethyldisilane. Powder Metallurgy and Metal Ceramics, 2009, 48, 66-72.	0.8	12
26	Structure and properties of nanostructured NbN and Nb-Si-N films depending on the conditions of deposition: Experiment and theory. Physics of Metals and Metallography, 2015, 116, 1015-1028.	1.0	11
27	First-principles calculations for the mechanical properties of Ti-Nb-B2 solid solutions. Computational Materials Science, 2017, 129, 82-88.	3.0	11
28	Gap states in a-SiC from optical measurements and band structure models. Journal of Physics Condensed Matter, 2002, 14, 1799-1812.	1.8	10
29	Structural and mechanical properties of Alâ€•Mgâ€•B films: Experimental study and first-principles calculations. Thin Solid Films, 2016, 599, 72-77.	1.8	10
30	Investigation of NbN and Nb-Si-N Coatings Deposited by Magnetron Sputtering. Acta Physica Polonica A, 2015, 128, 949-953.	0.5	10
31	Peculiarities of preparing a-SiC:H films from methyltrichlorosilane. Applied Surface Science, 2001, 184, 128-134.	6.1	7
32	First-principles study of the Pdâ€"Si system and Pd(0 0 1)/SiC(0 0 1) hetero-structure. Journal of Nuclear Materials, 2014, 454, 308-314.	2.7	7
33	Comparative investigation of NbN and Nb-Si-N films: Experiment and theory. Journal of Superhard Materials, 2014, 36, 381-392.	1.2	7
34	Effect of the nitrogen flow on the properties of Si-C-N amorphous thin films produced by magnetron sputtering. Journal of Superhard Materials, 2015, 37, 300-309.	1.2	7
35	Structure and properties of nanocomposite Nb-Al-N films. Physics of the Solid State, 2015, 57, 1642-1646.	0.6	7
36	An effect of hydrogenation on the photoemission of amorphous SiCN films. International Journal of Hydrogen Energy, 2022, 47, 7263-7273.	7.1	7

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37	Phase diagram, electronic, mechanical and thermodynamic properties of TiB2â€“ZrB2 solid solutions: A first-principles study. Materials Chemistry and Physics, 2021, 263, 124340.	4.0	7
38	Electronic Structure of YC_{<i>x</i>}. Physica Status Solidi (B): Basic Research, 1984, 121, 583-588.	1.5	6
39	Production of Tiâ€“Alâ€“Siâ€“Bâ€“N Films by Magnetron Sputtering and Study of Their Mechanical Properties. Powder Metallurgy and Metal Ceramics, 2014, 53, 353-358.	0.8	6
40	The effect of Al target current on the structure and properties of (Nb2Al)N films with an amorphous AlN phase. Technical Physics Letters, 2015, 41, 697-700.	0.7	6
41	Stability and mechanical properties of molybdenum carbides and the Tiâ€“Moâ€“C solid solutions: A first-principles study. Materials Chemistry and Physics, 2022, 275, 125178.	4.0	6
42	Hard plasma chemical coatings based on silicon carbon nitride. Powder Metallurgy and Metal Ceramics, 2007, 46, 543-549.	0.8	5
43	Deep gap states of a single vacancy in cubic SiC. Journal of Physics Condensed Matter, 1999, 11, 3265-3272.	1.8	4
44	The use of liquid precursors in plasmachemical technology of obtaining a-SiC:H thin films. Applied Surface Science, 1999, 138-139, 444-448.	6.1	4
45	Characterization of Al-Mg-B-C films based on experimental and first-principles investigations. Surface and Coatings Technology, 2017, 309, 164-171.	4.8	4
46	Microstructure and Mechanical Properties of Multilayer Î±-AlN/Î±-BCN Coating as Functions of the Current Density during Sputtering of a B4C Target. Physics of the Solid State, 2018, 60, 2030-2033.	0.6	4
47	Phase diagrams and mechanical properties of TiC-SiC solid solutions from first-principles. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2019, 66, 101643.	1.6	4
48	Amorphous AlB<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>, AlBC, and AlBN alloys: A first-principles study. Journal of Non-Crystalline Solids, 2022, 577, 121315.	3.1	4
49	Plausible interpretation of optical absorption spectra of a-SiC:H thin films. Applied Surface Science, 2001, 184, 214-220.	6.1	3
50	Hard coatings on cutting tools. Powder Metallurgy and Metal Ceramics, 2004, 43, 606-610.	0.8	3
51	Plasma-Enhanced CVD Equipment for Deposition of Nanocomposite Nanolayered Films. Journal of Superhard Materials, 2019, 41, 32-37.	1.2	3
52	Stabilization of complex orthorhombic o-Cr3C2 thin films under high energetic growth conditions: Experiments and calculations. Journal of Alloys and Compounds, 2020, 848, 156373.	5.5	3
53	The Effect of Substrate Treatment on the Properties of TiAlSiYN/CrN Nanocomposite Coatings. Surfaces and Interfaces, 2022, 30, 101902.	3.0	3
54	Investigation of the electronic structure of cubic Mo_{<i>x</i>}Ti_{1âˆ’<i>x</i>}C_{<i>y</i>} carbide alloys. Physica Status Solidi (B): Basic Research, 1996, 194, 575-583.	1.5	2

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55	Effect of metallic vacancies on the electronic structure of niobium nitride. Powder Metallurgy and Metal Ceramics, 1997, 36, 430-432.	0.8	2
56	Effect of inhomogeneous deformation on the electronic structure of SnO2 and Sn x Sb1â€“x O2 phases. Powder Metallurgy and Metal Ceramics, 2012, 51, 353-362.	0.8	2
57	Hard plasmachemical a-SiCN coatings. Journal of Superhard Materials, 2016, 38, 263-270.	1.2	2
58	Grigorii Samsonovâ€™s Contribution in Creating and Developing of Materials Science of Refractory Compounds. Powder Metallurgy and Metal Ceramics, 2018, 57, 1-8.	0.8	2
59	Deposition and Characterization of Thin Si-B-C-N Films by DC Reactive Magnetron Sputtering of Composed Si/B4C Target. Journal of Superhard Materials, 2019, 41, 90-97.	1.2	2
60	Tight-binding-molecular-dynamics investigation of the atomic and electronic structure properties of a-C, a-Si and a-SiC. Diamond and Related Materials, 2003, 12, 993-997.	3.9	1
61	Characteristics and Plasmochemical Deposition of Coatings Based on Amorphous Hydrogenated Silicon Carbide. Powder Metallurgy and Metal Ceramics, 2005, 44, 363-371.	0.8	1
62	Characteristics of monolayer and multilayer titanium nitride plasmochemical coatings. Powder Metallurgy and Metal Ceramics, 2006, 45, 547-552.	0.8	1
63	Mechanical and tribological properties of TiN and SiCN nanocomposite coatings deposited using methyltrichlorosilane. Powder Metallurgy and Metal Ceramics, 2008, 47, 95-101.	0.8	1
64	Structural and mechanical properties of TIN/BCN coatings. Powder Metallurgy and Metal Ceramics, 2013, 52, 73-82.	0.8	1
65	Characterization of Ti-B-C-N films deposited by dc magnetron sputtering of bicomponent Ti/B4C target. Journal of Superhard Materials, 2015, 37, 14-20.	1.2	1
66	Magnetron Sputtering System for Deposition of Multinanolayered Coatings With Reactive Gas Activation in Microwave Discharge. IEEE Transactions on Plasma Science, 2016, 44, 3028-3031.	1.3	1
67	First-principles study of the stability of NbC-SiC solid solutions. , 2017, , .		1
68	Influence of Nitrogen on the Microstructure, Hardness, and Tribological Properties of Crâ€“Niâ€“Bâ€“Câ€“N Films Deposited by DC Magnetron Sputtering. Journal of Superhard Materials, 2020, 42, 68-77.	1.2	1
69	Charge transport in SiCN/Si heterostructures. Materials Science in Semiconductor Processing, 2022, 143, 106515.	4.0	1
70	An effect of nitrogen incorporation on the structure and properties of amorphous SiC: First-principles molecular dynamics simulations. Thin Solid Films, 2022, 756, 139349.	1.8	1
71	Increasing the Adhesion of Plastic Coatings to Metal Dentures. Powder Metallurgy and Metal Ceramics, 2002, 41, 570-574.	0.8	0
72	Bright emission from amorphous sicn thin films. , 2010, , .		0

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73	First-Principles Models of Amorphous SiC and SiCN. , 2019, , .		0