

Valeriu Chirita

List of Publications by Year in descending order

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19
papers

564
citations

687363

13
h-index

794594

19
g-index

19
all docs

19
docs citations

19
times ranked

438
citing authors

#	ARTICLE	IF	CITATIONS
1	Toughness enhancement in hard ceramic thin films by alloy design. <i>APL Materials</i> , 2013, 1, .	5.1	109
2	Ab initio and classical molecular dynamics simulations of N ₂ desorption from TiN(001) surfaces. <i>Surface Science</i> , 2014, 624, 25-31.	1.9	52
3	Structure and mechanical properties of TiAlN-WNx thin films. <i>Surface and Coatings Technology</i> , 2011, 205, 4821-4827.	4.8	47
4	Dynamics of Ti, N, and TiN admolecule transport on TiN(001) surfaces. <i>Physical Review B</i> , 2012, 86, .	3.2	47
5	Effect of WN content on toughness enhancement in V _{1-x} W _x N/MgO(001) thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014, 32, .	2.1	45
6	Ti adatom diffusion on TiN(001): Ab initio and classical molecular dynamics simulations. <i>Surface Science</i> , 2014, 627, 34-41.	1.9	40
7	Ab Initio Molecular Dynamics Simulations of Nitrogen/VN(001) Surface Reactions: Vacancy-Catalyzed N ₂ Dissociative Chemisorption, N Adatom Migration, and N ₂ Desorption. <i>Journal of Physical Chemistry C</i> , 2016, 120, 12503-12516.	3.1	39
8	N and Ti adatom dynamics on stoichiometric polar TiN(111) surfaces. <i>Surface Science</i> , 2016, 649, 72-79.	1.9	32
9	Effects of incident N atom kinetic energy on TiN/TiN(001) film growth dynamics: A molecular dynamics investigation. <i>Journal of Applied Physics</i> , 2017, 121, .	2.5	31
10	Large-scale molecular dynamics simulations of TiN/TiN(001) epitaxial film growth. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016, 34, .	2.1	30
11	Ti and N adatom descent pathways to the terrace from atop two-dimensional TiN/TiN(001) islands. <i>Thin Solid Films</i> , 2014, 558, 37-46.	1.8	29
12	Effects of surface vibrations on interlayer mass transport: Ab initio molecular dynamics investigation of Ti adatom descent pathways and rates from TiN/TiN(001) islands. <i>Physical Review B</i> , 2018, 97, .	3.2	21
13	Elastic modulus of amorphous boron suboxide thin films studied by theoretical and experimental methods. <i>Journal of Applied Physics</i> , 2003, 93, 940-944.	2.5	18
14	The dynamics of TiNx (x = 1-3) admolecule interlayer and intralayer transport on TiN/TiN(001) islands. <i>Thin Solid Films</i> , 2015, 589, 133-144.	1.8	12
15	TiN film growth on misoriented TiN grains with simultaneous low-energy bombardment: Restructuring leading to epitaxy. <i>Thin Solid Films</i> , 2019, 688, 137380.	1.8	7
16	Missing-atom structure of diamond(111) twist grain boundary. <i>Physical Review B</i> , 2011, 84, .	3.2	2
17	Quantum design and synthesis of a boron-oxygen-yttrium phase. <i>Applied Physics Letters</i> , 2003, 82, 4286-4288.	3.3	1
18	Effect of chemical composition on the elastic and electrical properties of the boron-oxygen-yttrium system studied by ab initio and experimental means. <i>Physical Review B</i> , 2004, 69, .	3.2	1

#	ARTICLE	IF	CITATIONS
19	Mechanical properties of VMoNO as a function of oxygen concentration: Toward development of hard and tough refractory oxynitrides. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	1