Gregory Abadias

List of Publications by Year
in descending order

49 papers	2,045 citations	279798 23 h-index	233421 45 g-index
58 all docs	58 docs citations	58 times ranked	2256 citing authors

#	Article	IF	Citations
1	Review Article: Stress in thin films and coatings: Current status, challenges, and prospects. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	482
2	Stress and preferred orientation in nitride-based PVD coatings. Surface and Coatings Technology, 2008, 202, 2223-2235.	4.8	228
3	Stress, interfacial effects and mechanical properties of nanoscale multilayered coatings. Surface and Coatings Technology, 2007, 202, 844-853.	4.8	96
4	Nanoindentation hardness and structure of ion beam sputtered TiN, W and TiN/W multilayer hard coatings. Surface and Coatings Technology, 2006, 200, 6538-6543.	4.8	86
5	Stress, phase stability and oxidation resistance of ternary Tiâ€“Meâ€“N (Me=Zr, Ta) hard coatings. Thin Solid Films, 2013, 538, 56-70.	1.8	73
6	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
7	On the origin of the metastable Î²-Ta phase stabilization in tantalum sputtered thin films. Acta Materialia, 2017, 126, 481-493.	7.9	70
8	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
9	Benefits of energetic ion bombardment for tailoring stress and microstructural evolution during growth of Cu thin films. Acta Materialia, 2017, 141, 120-130.	7.9	53
10	Stress evolution in magnetron sputtered Tiâ€“Zrâ€“N and Tiâ€“Taâ€“N films studied by in situ wafer curvature: Role of energetic particles. Thin Solid Films, 2009, 518, 1532-1537.	1.8	51
11	Stress and microstructure evolution during growth of magnetron-sputtered low-mobility metal films: Influence of the nucleation conditions. Thin Solid Films, 2010, 519, 1655-1661.	1.8	50
12	Electronic structure and mechanical properties of ternary ZrTaN alloys studied by<i>ab initio</i>calculations and thin-film growth experiments. Physical Review B, 2014, 90, .	3.2	45
13	Real-time stress evolution during early growth stages of sputter-deposited metal films: Influence of adatom mobility. Vacuum, 2014, 100, 36-40.	3.5	45
14	Nanocolumnar TiN thin film growth by oblique angle sputter-deposition: Experiments vs. simulations. Materials and Design, 2018, 160, 338-349.	7.0	44
15	Alloying effects on the structure and elastic properties of hard coatings based on ternary transition metal (M = Ti, Zr or Ta) nitrides. Surface and Coatings Technology, 2014, 257, 129-137.	4.8	43
16	Three-dimensional kinetic Monte Carlo simulations of cubic transition metal nitride thin film growth. Physical Review B, 2016, 93, .	3.2	43
17	Epitaxial growth of Cu(001) thin films onto Si(001) using a single-step HiPIMS process. Scientific Reports, 2017, 7, 1655.	3.3	38
18	3D-to-2D Morphology Manipulation of Sputter-Deposited Nanoscale Silver Films on Weakly Interacting Substrates via Selective Nitrogen Deployment for Multifunctional Metal Contacts. ACS Applied Nano Materials, 2020, 3, 4728-4738.	5.0	38

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19	Tuning high power impulse magnetron sputtering discharge and substrate bias conditions to reduce the intrinsic stress of TiN thin films. Thin Solid Films, 2019, 688, 137335.	1.8	37
20	Nanoscaled composite TiN/Cu multilayer thin films deposited by dual ion beam sputtering: growth and structural characterisation. Thin Solid Films, 2003, 433, 166-173.	1.8	35
21	Influence of Phase Transformation on Stress Evolution during Growth of Metal Thin Films on Silicon. Physical Review Letters, 2010, 104, 096101.	7.8	30
22	Study of columnar growth, texture development and wettability of reactively sputter-deposited TiN, ZrN and HfN thin films at glancing angle incidence. Surface and Coatings Technology, 2020, 399, 126130.	4.8	30
23	Large influence of vacancies on the elastic constants of cubic epitaxial tantalum nitride layers grown by reactive magnetron sputtering. Acta Materialia, 2020, 184, 254-266.	7.9	26
24	Manipulation of thin silver film growth on weakly interacting silicon dioxide substrates using oxygen as a surfactant. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	24
25	Influence of Al content on the phase formation, growth stress and mechanical properties of TiZrAlN coatings. Thin Solid Films, 2013, 538, 32-41.	1.8	22
26	Magnetron Sputtering Deposition of Ag/TiO₂ Nanocomposite Thin Films for Repeatable and Multicolor Photochromic Applications on Flexible Substrates. Advanced Materials Interfaces, 2015, 2, 1500134.	3.7	22
27	Direct Observation of the Thickness-Induced Crystallization and Stress Build-Up during Sputter-Deposition of Nanoscale Silicide Films. ACS Applied Materials & Interfaces, 2016, 8, 34888-34895.	8.0	21
28	P-type Al-doped Cr-deficient CrN thin films for thermoelectrics. Applied Physics Express, 2018, 11, 051003.	2.4	21
29	Texture and Stress Evolution in HfN Films Sputter-Deposited at Oblique Angles. Coatings, 2019, 9, 712.	2.6	20
30	In Situ and Real-Time Nanoscale Monitoring of Ultra-Thin Metal Film Growth Using Optical and Electrical Diagnostic Tools. Nanomaterials, 2020, 10, 2225.	4.1	17
31	Structural and photoelectrochemical properties of Ti1â^'xWxO2 thin films deposited by magnetron sputtering. Surface and Coatings Technology, 2011, 205, S265-S270.	4.8	15
32	Spectral and Color Changes of Ag/TiO₂ Photochromic Films Deposited on Diffusing Paper and Transparent Flexible Plastic Substrates. Applied Spectroscopy, 2017, 71, 1271-1279.	2.2	14
33	Structure, stress, and mechanical properties of Mo-Al-N thin films deposited by dc reactive magnetron cosputtering: Role of point defects. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	12
34	A relation between the Au-surfactant effect and the chemical mixing during the epitaxial growth of Ni on Au(0 0 1). Applied Surface Science, 2001, 177, 273-281.	6.1	11
35	Epitaxial growth and mechanical properties of (001) ZrN/W nanolaminates. Surface and Coatings Technology, 2008, 202, 3683-3687.	4.8	11
36	Impact of Ge alloying on the early growth stages, microstructure and stress evolution of sputter-deposited Cu-Ge thin films. Acta Materialia, 2018, 159, 286-295.	7.9	10

#	Article	IF	Citations
37	On the Nanostructure of Cu in Ti_xCu_{1-x} and TiN/Cu Films: A XAFS Study. Journal of Nano Research, 2009, 6, 43-50.	0.8	8
38	Interfacial Silicide Formation and Stress Evolution during Sputter Deposition of Ultrathin Pd Layers on a-Si. ACS Applied Materials & Interfaces, 2019, 11, 39315-39323.	8.0	6
39	Manipulation of thin metal film morphology on weakly interacting substrates via selective deployment of alloying species. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	2.1	6
40	Structural evolution of Au[001]/Ni MBE thin films and Au1âˆ’cNic solid solutions with temperature: a HREM study. Thin Solid Films, 1998, 318, 209-214.	1.8	5
41	Effect of temperature on the growth of TiN thin films by oblique angle sputter-deposition: A three-dimensional atomistic computational study. Computational Materials Science, 2021, 197, 110662.	3.0	5
42	Thermal Stability of TiZrAlN and TiZrSiN Films Formed by Reactive Magnetron Sputtering. Inorganic Materials: Applied Research, 2018, 9, 418-426.	0.5	4
43	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>p</mml:mi></mml:math> -type behavior of CrN thin films via control of point defects. Physical Review B, 2022, 105, .	3.2	4
44	Structural Properties and Oxidation Resistance of ZrN/SiNx, CrN/SiNx and AlN/SiNx Multilayered Films Deposited by Magnetron Sputtering Technique. Coatings, 2020, 10, 149.	2.6	3
45	Structure, electrical, and optical properties of reactively sputter-deposited Taâ€"Alâ€"N thin films. Journal of Applied Physics, 2022, 131, 105303.	2.5	3
46	Microstructure Characterization of Multilayer Thin Coatings ZrN/Si₃N₄ by Xâ€Ray Diffraction Using Noncoplanar Measurement Geometry. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700670.	1.8	2
47	On the Stability of Multilayer ZrN/SiNx and CrN/SiNx Coatings Formed by Magnetron Sputtering to High-Temperature Oxidation. Journal of Surface Investigation, 2020, 14, 351-358.	0.5	1
48	Design of defected TaN supercells dataset for structural and elastic properties from ab initio simulations and comparison to experimental data. Data in Brief, 2020, 30, 105411.	1.0	1
49	ICMCTF 2011 â€" Preface. Surface and Coatings Technology, 2011, 206, 1511.	4.8	0