

# Gregory Abadias

## List of Publications by Year in descending order

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49  
papers

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citations

279798

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docs citations

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citing authors

#	ARTICLE	IF	CITATIONS
1	Structure, electrical, and optical properties of reactively sputter-deposited Ta <sub>1-x</sub> Al <sub>x</sub> N thin films. Journal of Applied Physics, 2022, 131, 105303.	2.5	3
2	$p$ -type behavior of CrN thin films via control of point defects. Physical Review B, 2022, 105, .	3.2	4
3	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
4	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
5	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
6	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
7	On the Stability of Multilayer ZrN/SiN <sub>x</sub> and CrN/SiN <sub>x</sub> Coatings Formed by Magnetron Sputtering to High-Temperature Oxidation. Journal of Surface Investigation, 2020, 14, 351-358.	0.5	1
8	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
9	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
10	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
11	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
12	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
13	Structural Properties and Oxidation Resistance of ZrN/SiN <sub>x</sub> , CrN/SiN <sub>x</sub> and AlN/SiN <sub>x</sub> Multilayered Films Deposited by Magnetron Sputtering Technique. Coatings, 2020, 10, 149.	2.6	3
14	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
15	Texture and Stress Evolution in HfN Films Sputter-Deposited at Oblique Angles. Coatings, 2019, 9, 712.	2.6	20
16	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
17	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
18	P-type Al-doped Cr-deficient CrN thin films for thermoelectrics. Applied Physics Express, 2018, 11, 051003.	2.4	21

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19	Microstructure Characterization of Multilayer Thin Coatings ZrN/Si <sub>3</sub> N <sub>4</sub> by X-Ray Diffraction Using Noncoplanar Measurement Geometry. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700670.	1.8	2
20	Nanocolumnar TiN thin film growth by oblique angle sputter-deposition: Experiments vs. simulations. Materials and Design, 2018, 160, 338-349.	7.0	44
21	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
22	Thermal Stability of TiZrAlN and TiZrSiN Films Formed by Reactive Magnetron Sputtering. Inorganic Materials: Applied Research, 2018, 9, 418-426.	0.5	4
23	On the origin of the metastable $\beta$ -Ta phase stabilization in tantalum sputtered thin films. Acta Materialia, 2017, 126, 481-493.	7.9	70
24	Epitaxial growth of Cu(001) thin films onto Si(001) using a single-step HiPIMS process. Scientific Reports, 2017, 7, 1655.	3.3	38
25	Spectral and Color Changes of Ag/TiO <sub>2</sub> Photochromic Films Deposited on Diffusing Paper and Transparent Flexible Plastic Substrates. Applied Spectroscopy, 2017, 71, 1271-1279.	2.2	14
26	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
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	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
29	Three-dimensional kinetic Monte Carlo simulations of cubic transition metal nitride thin film growth. Physical Review B, 2016, 93, .	3.2	43
30	Magnetron Sputtering Deposition of Ag/TiO <sub>2</sub> Nanocomposite Thin Films for Repeatable and Multicolor Photochromic Applications on Flexible Substrates. Advanced Materials Interfaces, 2015, 2, 1500134.	3.7	22
31	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
32	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
33	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
34	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
35	Stress, phase stability and oxidation resistance of ternary Ti-Me-N (Me=Zr, Ta) hard coatings. Thin Solid Films, 2013, 538, 56-70.	1.8	73
36	Structure, phase stability and elastic properties in the Ti <sub>1-x</sub> Zr <sub>x</sub> N thin-film system: Experimental and computational studies. Acta Materialia, 2012, 60, 5601-5614.	7.9	71

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37	Structural and photoelectrochemical properties of $Ti_{1-x}W_xO_2$ thin films deposited by magnetron sputtering. Surface and Coatings Technology, 2011, 205, S265-S270.	4.8	15
38	ICMCTF 2011 " Preface. Surface and Coatings Technology, 2011, 206, 1511.	4.8	0
39	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
40	Influence of Phase Transformation on Stress Evolution during Growth of Metal Thin Films on Silicon. Physical Review Letters, 2010, 104, 096101.	7.8	30
41	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
42	Stress evolution in magnetron sputtered $TiZrN$ and $TiTaN$ films studied by in situ wafer curvature: Role of energetic particles. Thin Solid Films, 2009, 518, 1532-1537.	1.8	51
43	Epitaxial growth and mechanical properties of (001) $ZrN/W$ nanolaminates. Surface and Coatings Technology, 2008, 202, 3683-3687.	4.8	11
44	Stress and preferred orientation in nitride-based PVD coatings. Surface and Coatings Technology, 2008, 202, 2223-2235.	4.8	228
45	Stress, interfacial effects and mechanical properties of nanoscale multilayered coatings. Surface and Coatings Technology, 2007, 202, 844-853.	4.8	96
46	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
47	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
48	A relation between the Au-surfactant effect and the chemical mixing during the epitaxial growth of $Ni$ on $Au(001)$ . Applied Surface Science, 2001, 177, 273-281.	6.1	11
49	Structural evolution of $Au[001]/Ni$ MBE thin films and $Au_{1-x}Ni_x$ solid solutions with temperature: a HREM study. Thin Solid Films, 1998, 318, 209-214.	1.8	5