David Horwat

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/1407888/publications.pdf

Version: 2024-02-01

93 papers	1,807 citations	257101 24 h-index	315357 38 g-index
96 all docs	96 docs citations	96 times ranked	2518 citing authors

#	Article	IF	Citations
1	Exciton and core-level electron confinement effects in transparent ZnO thin films. Scientific Reports, 2013, 3, .	1.1	202
2	Transmittance enhancement and optical band gap widening of Cu2O thin films after air annealing. Journal of Applied Physics, 2014, 115, .	1.6	109
3	Room temperature deposition of homogeneous, highly transparent and conductive Al-doped ZnO films by reactive high power impulse magnetron sputtering. Solar Energy Materials and Solar Cells, 2016, 157, 742-749.	1.1	85
4	Compression and strong rarefaction in high power impulse magnetron sputtering discharges. Journal of Applied Physics, 2010, 108, .	3.0	74
5	Addition of silver in copper nitride films deposited by reactive magnetron sputtering. Scripta Materialia, 2008, 58, 568-570.	1.1	73
6	Semi-Transparent p-Cu₂O/n-ZnO Nanoscale-Film Heterojunctions for Photodetection and Photovoltaic Applications. ACS Applied Nano Materials, 2019, 2, 4358-4366.	2.6	50
7	Effects of substrate position and oxygen gas flow rate on the properties of ZnO: Al films prepared by reactive co-sputtering. Thin Solid Films, 2007, 515, 5444-5448.	2.4	49
8	Tuning the structure and preferred orientation in reactively sputtered copper oxide thin films. Applied Surface Science, 2015, 335, 85-91.	0.8	48
9	Spatial distribution of average charge state and deposition rate in high power impulse magnetron sputtering of copper. Journal Physics D: Applied Physics, 2008, 41, 135210.	3.1	44
10	Spectral evidence of spinodal decomposition, phase transformation and molecular nitrogen formation in supersaturated TiAlN films upon annealing. Acta Materialia, 2011, 59, 6287-6296.	1.3	42
11	Influence of the nanoscale structural features on the properties and electronic structure of Al-doped ZnO thin films: An X-ray absorption study. Solar Energy Materials and Solar Cells, 2011, 95, 2341-2346.	3.8	35
12	On the deactivation of the dopant and electronic structure in reactively sputtered transparent Al-doped ZnO thin films. Journal Physics D: Applied Physics, 2010, 43, 132003.	3.0	35
13	Local Structure-Driven Localized Surface Plasmon Absorption and Enhanced Photoluminescence in ZnO-Au Thin Films. Journal of Physical Chemistry C, 2016, 120, 29405-29413.	1.3	34
14	Chemistry, phase formation, and catalytic activity of thin palladium-containing oxide films synthesized by plasma-assisted physical vapor deposition. Surface and Coatings Technology, 2011, 205, S171-S177.	1.5	34
15	Electronic structure and conductivity of nanocomposite metal (Au, Ag, Cu, Mo)-containing amorphous carbon films. Solid State Sciences, 2009, 11, 1742-1746.	2.2	33
16	Generalized Effective Medium Theory to Extract the Optical Properties of Two-Dimensional Nonspherical Metallic Nanoparticle Layers. Journal of Physical Chemistry C, 2014, 118, 4899-4905.	1.5	32
17	Influence of the current applied to the silver target on the structure and the properties of Agâ€“Cuâ€“O films deposited by reactive cosputtering. Applied Surface Science, 2007, 253, 7522-7526.	1.5	31
18		3.1	30

#	Article	IF	Citations
19	Controlling the preferred orientation in sputter-deposited Cu2O thin films: Influence of the initial growth stage and homoepitaxial growth mechanism. Acta Materialia, 2014, 76, 207-212.	3.8	30
20	Near-room temperature single-domain epitaxy of reactively sputtered ZnO films. Journal Physics D: Applied Physics, 2013, 46, 235107.	1.3	28
21	A novel sputtered Pd mesh architecture as an advanced electrocatalyst for highly efficient hydrogen production. Journal of Power Sources, 2016, 321, 248-256.	4.0	28
22	Effect of the oxygen flow rate on the structure and the properties of Agâ€“Cuâ€“O sputtered films deposited using a Ag/Cu target with eutectic composition. Applied Surface Science, 2008, 254, 6590-6594.	3.1	26
23	Tunable Localized Surface Plasmon Resonance and Broadband Visible Photoresponse of Cu Nanoparticles/ZnO Surfaces. ACS Applied Materials & Interfaces, 2018, 10, 40958-40965.	4.0	26
24	Enhancing oxygen reduction reaction of YSZ/La2NiO4+Î´ using an ultrathin La2NiO4+Î´ interfacial layer. Journal of Alloys and Compounds, 2018, 746, 413-420.	2.8	25
25	Effect of substrate temperature on the deposition of Al-doped ZnO thin films using high power impulse magnetron sputtering. Surface and Coatings Technology, 2018, 347, 245-251.	2.2	25
26	Growth, interfacial microstructure and optical properties of NiO thin films with various types of texture. Acta Materialia, 2019, 164, 648-653.	3.8	24
27	Ion acceleration and cooling in gasless self-sputtering. Applied Physics Letters, 2010, 97, .	1.5	21
28	Wurtzite CoO: a direct band gap oxide suitable for a photovoltaic absorber. Chemical Communications, 2018, 54, 13949-13952.	2.2	21
29	Controlling refractive index in AlN films by texture and crystallinity manipulation. Thin Solid Films, 2017, 636, 537-545.	0.8	20
30	Towards enhanced durability of electrochromic WO3 interfaced with liquid or ceramic sodium-based electrolytes. Electrochimica Acta, 2020, 360, 136931.	2.6	20
31	Properties of nanocrystalline and nanocomposite WxZr1âˆ’x thin films deposited by co-sputtering. Intermetallics, 2009, 17, 421-426.	1.8	18
32	Nitrogen chemical state in N-doped Cu2O thin films. Applied Physics Letters, 2017, 110, .	1.5	18
33	Local Structure and Point-Defect-Dependent Area-Selective Atomic Layer Deposition Approach for Facile Synthesis of p-Cu₂O/n-ZnO Segmented Nanojunctions. ACS Applied Materials & Interfaces, 2018, 10, 37671-37678.	4.0	17
34	Magnetron sputtering of NASICON (Na3Zr2Si2PO12) thin films. Surface and Coatings Technology, 2007, 201, 7060-7065.	2.2	16
35	Thermochromic effect in NdNiO3âˆ’Î´thin films annealed in ambient air. Journal Physics D: Applied Physics, 2009, 42, 182006.	1.3	15
36	Structureâ€“properties relationship in reactively sputtered Agâ€“Cuâ€“O films. Journal Physics D: Applied Physics, 2009, 42, 025304.	1.3	15

#	Article	IF	Citations
37	Mechanisms of Oxidation of NdNiO_{3â^Î´} Thermochromic Thin Films Synthesized by a Two-Step Method in Soft Conditions. Journal of Physical Chemistry C, 2014, 118, 5908-5917.	1.5	15
38	New strategies for the synthesis of ZnO and Al-doped ZnO films by reactive magnetron sputtering at room temperature. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 951-957.	0.8	15
39	High hardness, low Young's modulus and low friction of nanocrystalline ZrW2 Laves phase and Zr1â^'xWx thin films. Journal of Physics and Chemistry of Solids, 2012, 73, 554-558.	1.9	14
40	Thermal decomposition and fractal properties of sputter-deposited platinum oxide thin films. Journal of Materials Research, 2012, 27, 829-836.	1.2	13
41	Electrochemical activation of Au nanoparticles for the selective partial oxidation of methanol. Journal of Catalysis, 2014, 317, 293-302.	3.1	13
42	Coloration mechanism of electrochromic Na_xWO₃ thin films. Optics Letters, 2019, 44, 1104.	1.7	13
43	Effect of annealing temperature on the decomposition of reactively sputtered Ag2Cu2O3 films. Applied Surface Science, 2009, 255, 7700-7702.	3.1	12
44	Nano-scale and surface precipitation of metallic particles in laser interference patterned noble metal-based thin films. Applied Surface Science, 2011, 257, 5223-5229.	3.1	12
45	Strong Room Temperature Blue Emission from Rapid Thermal Annealed Cerium-Doped Aluminum (Oxy)Nitride Thin Films. ACS Photonics, 2017, 4, 1945-1953.	3.2	12
46	Comparative analysis of Cr-B coatings deposited by magnetron sputtering in DC and HIPIMS modes. Technical Physics Letters, 2014, 40, 614-617.	0.2	11
47	Bacterial adhesion on biomedical surfaces covered by yttria stabilized zirconia. Journal of Materials Science: Materials in Medicine, 2016, 27, 6.	1.7	11
48	Controlling surface morphology by nanocrystalline/amorphous competitive self-phase separation in thin films: Thickness-modulated reflectance and interference phenomena. Acta Materialia, 2019, 181, 78-86.	3.8	11
49	Influence of magnesium doping on microstructure, optical and photocatalytic activity of zinc oxide thin films synthesis by solâ€“gel route. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	11
50	Bacterial adhesion on biomedical surfaces covered by micrometric silver Islands. Journal of Biomedical Materials Research - Part A, 2012, 100A, 1521-1528.	2.1	10
51	Restoring the Properties of Transparent Al-Doped ZnO Thin Film Electrodes Exposed to Ambient Air. Journal of Physical Chemistry C, 2017, 121, 14426-14433.	1.5	10
52	Oxidation of magnetron sputtered La-Si thin films for solide oxide fuel cell electronlytes. Thin Solid Films, 2009, 517, 1895-1898.	0.8	9
53	Impact of Annealing on the Conductivity of Amorphous Carbon Films Incorporating Copper and Gold Nanoparticles Deposited by Pulsed Dual Cathodic Arc. Plasma Processes and Polymers, 2009, 6, S438.	1.6	9
54	Silver islands formed after air annealing of amorphous Agâ€“Cuâ€“Mnâ€“O sputtered films. Journal of Crystal Growth, 2009, 311, 349-354.	0.7	9

#	Article	IF	Citations
55	Deep oxidation of methane on particles derived from YSZ-supported Pdâ€“Pt-(O) coatings synthesized by Pulsed Filtered Cathodic Arc. Catalysis Communications, 2009, 10, 1410-1413.	1.6	9
56	Towards a thin films electrochromic device using NASICON electrolyte. Ionics, 2008, 14, 227-233.	1.2	8
57	Structure Control in Reactively Sputtered Ag/Cu/(Mn)/O Films. Plasma Processes and Polymers, 2009, 6, 393-400.	1.6	8
58	Local heteroepitaxial growth to promote the selective growth orientation, crystallization and interband transition of sputtered NiO thin films. CrystEngComm, 2016, 18, 1732-1739.	1.3	8
59	Composition-driven transition from amorphous to crystalline films enables bottom-up design of functional surfaces. Applied Surface Science, 2021, 538, 148133.	3.1	8
60	Sodium superionic conductor sputter-deposited coatings. Ionics, 2005, 11, 120-125.	1.2	7
61	Strontium-doped lanthanum manganite coatings crystallised after air annealing of amorphous co-sputtered films. Materials Chemistry and Physics, 2009, 116, 219-222.	2.0	7
62	Room temperature self-assembled growth of vertically aligned columnar copper oxide nanocomposite thin films on unmatched substrates. Scientific Reports, 2017, 7, 11122.	1.6	7
63	Elaboration of high-transparency ZnO thin films by ultrasonic spray pyrolysis with fast growth rate. Superlattices and Microstructures, 2021, 156, 106945.	1.4	7
64	Beneficial silver: antibacterial nanocomposite Ag-DLC coating to reduce osteolysis of orthopaedic implants. Journal of Physics: Conference Series, 2010, 252, 012005.	0.3	6
65	Efficient, Low Cost Synthesis of Sodium Platinum Bronze Na_xPt₃O₄. Chemistry of Materials, 2012, 24, 2429-2432.	3.2	6
66	Electrochemical promotion of propylene combustion on Ag catalytic coatings. Catalysis Communications, 2018, 104, 28-31.	1.6	6
67	From Blue to White Luminescence in Cerium-Doped Aluminum Oxynitride: Electronic Structure and Local Chemistry Perspectives. Journal of Physical Chemistry C, 2018, 122, 21623-21631.	1.5	6
68	Morphological and chemical dynamics upon electrochemical cyclic sodiation of electrochromic tungsten oxide coatings extracted by in situ ellipsometry. Applied Optics, 2020, 59, 3766.	0.9	6
69	Blue emission and twin structure of p-type copper iodide thin films. Surfaces and Interfaces, 2021, 27, 101500.	1.5	6
70	Magnetron sputtering of NASICON (Na3Zr2Si2PO12) thin films Part I: Limitations of the classical methods. Surface and Coatings Technology, 2007, 201, 7013-7017.	2.2	5
71	Local Modification of the Microstructure and Electrical Properties of Multifunctional Auâ€“YSZ Nanocomposite Thin Films by Laser Interference Patterning. ACS Applied Materials & Interfaces, 2014, 6, 13707-13715.	4.0	5
72	Structural and mechanical properties of Zr1â^'x Mox thin films: From the nano-crystalline to the amorphous state. Journal of Alloys and Compounds, 2017, 729, 137-143.	2.8	5

#	Article	IF	Citations
73	Growth kinetics and origin of residual stress of two-phase crystallineâ€“amorphous nanostructured films. Journal of Applied Physics, 2021, 129, .	1.1	5
74	Structural-electrical-optical properties relationship of sodium superionic conductor sputter-deposited coatings. Thin Solid Films, 2008, 516, 3387-3393.	0.8	4
75	Extended X-ray absorption fine structure (EXAFS) investigations of Ti bonding environment in sputter-deposited nanocomposite TiBC/a-C thin films. IOP Conference Series: Materials Science and Engineering, 2010, 12, 012012.	0.3	4
76	Influence of solvent on humidity sensing of sol-gel deposited ZnO thin films. EPJ Applied Physics, 2014, 65, 20302.	0.3	4
77	White light emission from Sm-doped YAG ceramic controlled by the excitation wavelengths. Optics and Laser Technology, 2021, 142, 107223.	2.2	4
78	Ag-based electrocatalysts for ethylene epoxidation. Electrochimica Acta, 2021, 394, 139018.	2.6	4
79	WTe₂ Synthesis by Tellurization of W Precursors Using Isothermal Close Space Vapor Transport Annealing. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800425.	0.8	3
80	5th International EEIGM/AMASE/FORGEMAT Conference on Advanced Materials Research. IOP Conference Series: Materials Science and Engineering, 2009, 5, 011001.	0.3	2
81	Antibacterial properties of biomedical surfaces containing micrometric silver islands. Journal of Physics: Conference Series, 2010, 252, 012015.	0.3	2
82	Influence of laser interference patterning on microstructure and friction behavior of gold/yttria-stabilized zirconia nanocomposite thin films. Journal of Materials Research, 2012, 27, 879-885.	1.2	2
83	Probing temperature-induced ordering in supersaturated Ti1â^'xAlxN coatings by electronic structure. Surface and Coatings Technology, 2014, 242, 207-213.	2.2	2
84	Local Homoepitaxial Growth in Sputtered NiO Thin Films: An Effective Approach to Tune the Crystallization, Preferred Growth Orientation, and Electrical Properties. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800191.	1.2	2
85	Ultraviolet optical excitation of near infrared emission of Yb-doped crystalline aluminum oxynitride thin films. Journal of Applied Physics, 2018, 124, 033102.	1.1	2
86	Rapid ellipsometric determination and mapping of alloy stoichiometry with a neural network. Optics Letters, 2022, 47, 2117.	1.7	2
87	Estimation of thickness of hydrothermal degraded layer in 3Y-TZP by X-ray diffraction. IOP Conference Series: Materials Science and Engineering, 2009, 5, 012023.	0.3	1
88	6th EEIGM International Conference on Advanced Materials Research. IOP Conference Series: Materials Science and Engineering, 2012, 31, 011001.	0.3	1
89	Evolution of structural and physical properties upon annealing of sputter-deposited Zr0.84Y0.16-O2films incorporating copper and palladium nanoparticles. IOP Conference Series: Materials Science and Engineering, 2009, 5, 012022.	0.3	0
90	Impact of the particles impingement on the electronic conductivity of Al doped ZnO films grown by reactive magnetron sputtering. IOP Conference Series: Materials Science and Engineering, 2010, 12, 012006.	0.3	0

#	Article	IF	Citations
91	Microstructure of sputter-deposited noble metal-incorporated oxide thin films patterned by means of laser interference. Materials Research Society Symposia Proceedings, 2011, 1339, 1.	0.1	0
92	Ultraviolet to infrared downshifting in Ce and Yb co-doped aluminum oxynitride thin films. Journal Physics D: Applied Physics, 2019, 52, 285105.	1.3	0
93	Comparison Between Ultrathin Films of YSZ Deposited at the Solid Oxide Fuel Cell Cathode/Electrolyte Interface by Atomic Layer Deposition, Dip-Coating or Sputtering. Open Fuels and Energy Science Journal, 2009, 2, 87-99.	0.2	0