# 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 | Rapid ellipsometric determination and mapping of alloy stoichiometry with a neural network. Optics Letters, 2022, 47, 2117. | 1.7 | 2 |
| 2 | Composition-driven transition from amorphous to crystalline films enables bottom-up design of functional surfaces. Applied Surface Science, 2021, 538, 148133. | 3.1 | 8 |
| 3 | 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 |
| 4 | Growth kinetics and origin of residual stress of two-phase crystallineâ€“amorphous nanostructured films. Journal of Applied Physics, 2021, 129, . | 1.1 | 5 |
| 5 | Elaboration of high-transparency ZnO thin films by ultrasonic spray pyrolysis with fast growth rate. Superlattices and Microstructures, 2021, 156, 106945. | 1.4 | 7 |
| 6 | White light emission from Sm-doped YAG ceramic controlled by the excitation wavelengths. Optics and Laser Technology, 2021, 142, 107223. | 2.2 | 4 |
| 7 | Ag-based electrocatalysts for ethylene epoxidation. Electrochimica Acta, 2021, 394, 139018. | 2.6 | 4 |
| 8 | Blue emission and twin structure of p-type copper iodide thin films. Surfaces and Interfaces, 2021, 27, 101500. | 1.5 | 6 |
| 9 | Towards enhanced durability of electrochromic WO3 interfaced with liquid or ceramic sodium-based electrolytes. Electrochimica Acta, 2020, 360, 136931. | 2.6 | 20 |
| 10 | 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 |
| 11 | 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 |
| 12 | Semi-Transparent p-Cu<sub>2</sub>O/n-ZnO Nanoscale-Film Heterojunctions for Photodetection and Photovoltaic Applications. ACS Applied Nano Materials, 2019, 2, 4358-4366. | 2.4 | 49 |
| 13 | 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 |
| 14 | Growth, interfacial microstructure and optical properties of NiO thin films with various types of texture. Acta Materialia, 2019, 164, 648-653. | 3.8 | 24 |
| 15 | Coloration mechanism of electrochromic Na<sub>x</sub>WO<sub>3</sub> thin films. Optics Letters, 2019, 44, 1104. | 1.7 | 13 |
| 16 | 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 |
| 17 | Electrochemical promotion of propylene combustion on Ag catalytic coatings. Catalysis Communications, 2018, 104, 28-31. | 1.6 | 6 |
| 18 | Wurtzite CoO: a direct band gap oxide suitable for a photovoltaic absorber. Chemical Communications, 2018, 54, 13949-13952. | 2.2 | 21 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | 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 |
| 20 | Local Structure and Point-Defect-Dependent Area-Selective Atomic Layer Deposition Approach for Facile Synthesis of p-Cu<sub>2</sub>O/n-ZnO Segmented Nanojunctions. ACS Applied Materials & Interfaces, 2018, 10, 37671-37678. | 4.0 | 17 |
| 21 | WTe<sub>2</sub> 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 |
| 22 | 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 |
| 23 | 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 |
| 24 | 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 |
| 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 | 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 |
| 27 | Nitrogen chemical state in N-doped Cu2O thin films. Applied Physics Letters, 2017, 110, . | 1.5 | 18 |
| 28 | 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 |
| 29 | Structural and mechanical properties of Zr1âˆ’x Mox thin films: From the nano-crystalline to the amorphous state. Journal of Alloys and Compounds, 2017, 729, 137-143. | 2.8 | 5 |
| 30 | Controlling refractive index in AlN films by texture and crystallinity manipulation. Thin Solid Films, 2017, 636, 537-545. | 0.8 | 20 |
| 31 | 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 |
| 32 | Electronic structures of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">u</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mo>,</mml:mo><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">u</mml:mi><mml:mn>4 | 1.1 | 202 |
| 33 | Local Structure-Driven Localized Surface Plasmon Absorption and Enhanced Photoluminescence in ZnO-Au Thin Films. Journal of Physical Chemistry C, 2016, 120, 29405-29413. | 1.5 | 34 |
| 34 | 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 |
| 35 | 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. | 3.0 | 74 |
| 36 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Bacterial adhesion on biomedical surfaces covered by yttria stabilized zirconia. Journal of Materials Science: Materials in Medicine, 2016, 27, 6. | 1.7 | 11 |
| 38 | 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 |
| 39 | Tuning the structure and preferred orientation in reactively sputtered copper oxide thin films. Applied Surface Science, 2015, 335, 85-91. | 3.1 | 44 |
| 40 | Transmittance enhancement and optical band gap widening of Cu2O thin films after air annealing. Journal of Applied Physics, 2014, 115, . | 1.1 | 85 |
| 41 | Probing temperature-induced ordering in supersaturated Ti1â^'xAlxN coatings by electronic structure. Surface and Coatings Technology, 2014, 242, 207-213. | 2.2 | 2 |
| 42 | 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 |
| 43 | 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 |
| 44 | Electrochemical activation of Au nanoparticles for the selective partial oxidation of methanol. Journal of Catalysis, 2014, 317, 293-302. | 3.1 | 13 |
| 45 | 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 | 31 |
| 46 | Mechanisms of Oxidation of NdNiO<sub>3â^'Î´</sub> Thermochromic Thin Films Synthesized by a Two-Step Method in Soft Conditions. Journal of Physical Chemistry C, 2014, 118, 5908-5917. | 1.5 | 15 |
| 47 | 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 |
| 48 | Influence of solvent on humidity sensing of sol-gel deposited ZnO thin films. EPJ Applied Physics, 2014, 65, 20302. | 0.3 | 4 |
| 49 | Near-room temperature single-domain epitaxy of reactively sputtered ZnO films. Journal Physics D: Applied Physics, 2013, 46, 235107. | 1.3 | 28 |
| 50 | Exciton and core-level electron confinement effects in transparent ZnO thin films. Scientific Reports, 2013, 3, . | 1.6 | 109 |
| 51 | 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 |
| 52 | Thermal decomposition and fractal properties of sputter-deposited platinum oxide thin films. Journal of Materials Research, 2012, 27, 829-836. | 1.2 | 13 |
| 53 | Efficient, Low Cost Synthesis of Sodium Platinum Bronze Na<sub>x</sub>Pt<sub>3</sub>O<sub>4</sub>. Chemistry of Materials, 2012, 24, 2429-2432. | 3.2 | 6 |
| 54 | Bacterial adhesion on biomedical surfaces covered by micrometric silver Islands. Journal of Biomedical Materials Research - Part A, 2012, 100A, 1521-1528. | 2.1 | 10 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | High hardness, low Young's modulus and low friction of nanocrystalline ZrW2 Laves phase and Zr1âˆ'xWx thin films. Journal of Physics and Chemistry of Solids, 2012, 73, 554-558. | 1.9 | 14 |
| 56 | 6th EEIGM International Conference on Advanced Materials Research. IOP Conference Series: Materials Science and Engineering, 2012, 31, 011001. | 0.3 | 1 |
| 57 | 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. | 2.2 | 33 |
| 58 | Spectral evidence of spinodal decomposition, phase transformation and molecular nitrogen formation in supersaturated TiAlN films upon annealing. Acta Materialia, 2011, 59, 6287-6296. | 3.8 | 35 |
| 59 | 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 |
| 60 | 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. | 3.0 | 35 |
| 61 | 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 |
| 62 | Antibacterial properties of biomedical surfaces containing micrometric silver islands. Journal of Physics: Conference Series, 2010, 252, 012015. | 0.3 | 2 |
| 63 | Beneficial silver: antibacterial nanocomposite Ag-DLC coating to reduce osteolysis of orthopaedic implants. Journal of Physics: Conference Series, 2010, 252, 012005. | 0.3 | 6 |
| 64 | Ion acceleration and cooling in gasless self-sputtering. Applied Physics Letters, 2010, 97, . | 1.5 | 21 |
| 65 | 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. | 1.3 | 34 |
| 66 | Compression and strong rarefaction in high power impulse magnetron sputtering discharges. Journal of Applied Physics, 2010, 108, . | 1.1 | 73 |
| 67 | 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 |
| 68 | 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 |
| 69 | 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 |
| 70 | 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 |
| 71 | Thermochromic effect in NdNiO3âˆ'Îthin films annealed in ambient air. Journal Physics D: Applied Physics, 2009, 42, 182006. | 1.3 | 15 |
| 72 | Electronic structure and conductivity of nanocomposite metal (Au, Ag, Cu, Mo)-containing amorphous carbon films. Solid State Sciences, 2009, 11, 1742-1746. | 1.5 | 32 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | 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 |
| 74 | Oxidation of magnetron sputtered La-Si thin films for solide oxide fuel cell electronlytes. Thin Solid Films, 2009, 517, 1895-1898. | 0.8 | 9 |
| 75 | Structure Control in Reactively Sputtered Ag/Cu/(Mn)/O Films. Plasma Processes and Polymers, 2009, 6, 393-400. | 1.6 | 8 |
| 76 | 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 |
| 77 | 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 |
| 78 | Effect of annealing temperature on the decomposition of reactively sputtered Ag2Cu2O3 films. Applied Surface Science, 2009, 255, 7700-7702. | 3.1 | 12 |
| 79 | Structureâ€“properties relationship in reactively sputtered Agâ€“Cuâ€“O films. Journal Physics D: Applied Physics, 2009, 42, 025304. | 1.3 | 15 |
| 80 | Properties of nanocrystalline and nanocomposite WxZr1â^'x thin films deposited by co-sputtering. Intermetallics, 2009, 17, 421-426. | 1.8 | 18 |
| 81 | 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 |
| 82 | 5th International EEIGM/AMASE/FORGEMAT Conference on Advanced Materials Research. IOP Conference Series: Materials Science and Engineering, 2009, 5, 011001. | 0.3 | 2 |
| 83 | 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 |
| 84 | 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 |
| 85 | Structural-electrical-optical properties relationship of sodium superionic conductor sputter-deposited coatings. Thin Solid Films, 2008, 516, 3387-3393. | 0.8 | 4 |
| 86 | Towards a thin films electrochromic device using NASICON electrolyte. Ionics, 2008, 14, 227-233. | 1.2 | 8 |
| 87 | Addition of silver in copper nitride films deposited by reactive magnetron sputtering. Scripta Materialia, 2008, 58, 568-570. | 2.6 | 50 |
| 88 | 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. | 1.3 | 42 |
| 89 | 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 |
| 90 | Magnetron sputtering of NASICON (Na3Zr2Si2PO12) thin films. Surface and Coatings Technology, 2007, 201, 7060-7065. | 2.2 | 16 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | 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. | 3.1 | 30 |
| 92 | 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. | 0.8 | 48 |
| 93 | Sodium superionic conductor sputter-deposited coatings. Ionics, 2005, 11, 120-125. | 1.2 | 7 |