# Ulf Helmersson

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3230859/publications.pdf

Version: 2024-02-01

| 210 | 12,408 | 26567 | 27345 |
|---|---|---|---|
| papers | citations | 56 h-index | 106 g-index |

| 213 | 213 | 213 | 6017 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A novel pulsed magnetron sputter technique utilizing very high target power densities. Surface and Coatings Technology, 1999, 122, 290-293. | 2.2 | 910 |
| 2 | Ionized physical vapor deposition (IPVD): A review of technology and applications. Thin Solid Films, 2006, 513, 1-24. | 0.8 | 886 |
| 3 | Growth of singleâ€crystal TiN/VN strainedâ€layer superlattices with extremely high mechanical hardness. Journal of Applied Physics, 1987, 62, 481-484. | 1.1 | 714 |
| 4 | High power impulse magnetron sputtering discharge. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, . | 0.9 | 568 |
| 5 | On the film density using high power impulse magnetron sputtering. Surface and Coatings Technology, 2010, 205, 591-596. | 2.2 | 317 |
| 6 | Microstructure modification of TiN by ion bombardment during reactive sputter deposition. Thin Solid Films, 1989, 169, 299-314. | 0.8 | 308 |
| 7 | Optical properties of anatase TiO2 thin films prepared by aqueous solâ€“gel process at low temperature. Thin Solid Films, 2002, 405, 50-54. | 0.8 | 286 |
| 8 | The ion energy distributions and ion flux composition from a high power impulse magnetron sputtering discharge. Thin Solid Films, 2006, 515, 1522-1526. | 0.8 | 279 |
| 9 | Influence of high power densities on the composition of pulsed magnetron plasmas. Vacuum, 2002, 65, 147-154. | 1.6 | 268 |
| 10 | High power pulsed magnetron sputtered CrN films. Surface and Coatings Technology, 2003, 163-164, 267-272. | 2.2 | 242 |
| 11 | Ionized sputter deposition using an extremely high plasma density pulsed magnetron discharge. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2000, 18, 1533-1537. | 0.9 | 235 |
| 12 | Ionization of sputtered metals in high power pulsed magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 18-22. | 0.9 | 214 |
| 13 | Ion-assisted physical vapor deposition for enhanced film properties on nonflat surfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 278-280. | 0.9 | 211 |
| 14 | Comparison of microstructure and mechanical properties of chromium nitride-based coatings deposited by high power impulse magnetron sputtering and by the combined steered cathodic arc/unbalanced magnetron technique. Thin Solid Films, 2004, 457, 270-277. | 0.8 | 196 |
| 15 | Spatial and temporal behavior of the plasma parameters in a pulsed magnetron discharge. Surface and Coatings Technology, 2002, 161, 249-256. | 2.2 | 189 |
| 16 | A spectroscopic ellipsometry study of cerium dioxide thin films grown on sapphire by rf magnetron sputtering. Journal of Applied Physics, 1995, 77, 5369-5376. | 1.1 | 186 |
| 17 | Lowâ€Temperature Superionic Conductivity in Strained Yttriaâ€Stabilized Zirconia. Advanced Functional Materials, 2010, 20, 2071-2076. | 7.8 | 150 |
| 18 | Evolution of the electron energy distribution and plasma parameters in a pulsed magnetron discharge. Applied Physics Letters, 2001, 78, 3427-3429. | 1.5 | 141 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Adhesion of titanium nitride coatings on highâ€speed steels. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1985, 3, 308-315. | 0.9 | 131 |
| 20 | Investigation of high power impulse magnetron sputtering pretreated interfaces for adhesion enhancement of hard coatings on steel. Surface and Coatings Technology, 2006, 200, 6495-6499. | 2.2 | 131 |
| 21 | Hysteresis-free reactive high power impulse magnetron sputtering. Thin Solid Films, 2008, 516, 6398-6401. | 0.8 | 123 |
| 22 | Lowâ€energy ion irradiation during film growth for reducing defect densities in epitaxial TiN(100) films deposited by reactiveâ€magnetron sputtering. Journal of Applied Physics, 1987, 61, 552-555. | 1.1 | 110 |
| 23 | Cross-field ion transport during high power impulse magnetron sputtering. Plasma Sources Science and Technology, 2008, 17, 035021. | 1.3 | 106 |
| 24 | Phase tailoring of Ta thin films by highly ionized pulsed magnetron sputtering. Thin Solid Films, 2007, 515, 3434-3438. | 0.8 | 104 |
| 25 | Low temperature deposition of Î±-Al[sub 2]O[sub 3] thin films by sputtering using a Cr[sub 2]O[sub 3] template. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 2134. | 0.9 | 103 |
| 26 | Fully dense, non-faceted 111-textured high power impulse magnetron sputtering TiN films grown in the absence of substrate heating and bias. Thin Solid Films, 2010, 518, 5978-5980. | 0.8 | 101 |
| 27 | Spatial electron density distribution in a high-power pulsed magnetron discharge. IEEE Transactions on Plasma Science, 2005, 33, 346-347. | 0.6 | 100 |
| 28 | Microstructure of Î±-alumina thin films deposited at low temperatures on chromia template layers. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 117-121. | 0.9 | 99 |
| 29 | Plasma dynamics in a highly ionized pulsed magnetron discharge. Plasma Sources Science and Technology, 2005, 14, 525-531. | 1.3 | 98 |
| 30 | A strategy for increased carbon ionization in magnetron sputtering discharges. Diamond and Related Materials, 2012, 23, 1-4. | 1.8 | 97 |
| 31 | High-power impulse magnetron sputtering of Tiâ€“Siâ€“C thin films from a Ti3SiC2 compound target. Thin Solid Films, 2006, 515, 1731-1736. | 0.8 | 96 |
| 32 | Phase control of Al2O3 thin films grown at low temperatures. Thin Solid Films, 2006, 513, 57-59. | 0.8 | 91 |
| 33 | Growth and field dependent dielectric properties of epitaxial Na0.5K0.5NbO3 thin films. Applied Physics Letters, 1998, 73, 927-929. | 1.5 | 90 |
| 34 | Guiding the deposition flux in an ionized magnetron discharge. Thin Solid Films, 2006, 515, 1928-1931. | 0.8 | 88 |
| 35 | Understanding the discharge current behavior in reactive high power impulse magnetron sputtering of oxides. Journal of Applied Physics, 2013, 113, . | 1.1 | 86 |
| 36 | Effects of substrate temperature and substrate material on the structure of reactively sputtered TiN films. Thin Solid Films, 1984, 122, 115-129. | 0.8 | 83 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Synthesis of Î±-Al <sub>2</sub> O <sub>3</sub> thin films using reactive high-power impulse magnetron sputtering. Europhysics Letters, 2008, 82, 36002. | 0.7 | 82 |
| 38 | Hysteresis and process stability in reactive high power impulse magnetron sputtering of metal oxides. Thin Solid Films, 2011, 519, 7779-7784. | 0.8 | 82 |
| 39 | Transition between the discharge regimes of high power impulse magnetron sputtering and conventional direct current magnetron sputtering. Plasma Sources Science and Technology, 2009, 18, 045008. | 1.3 | 79 |
| 40 | Cross-Section preparation for tem of film-substrate combinations with a large difference in sputtering yields. Journal of Electron Microscopy Technique, 1986, 4, 361-369. | 1.1 | 76 |
| 41 | Microstructure evolution in TiN films reactively sputter deposited on multiphase substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1986, 4, 500-503. | 0.9 | 76 |
| 42 | On the electron energy in the high power impulse magnetron sputtering discharge. Journal of Applied Physics, 2009, 105, . | 1.1 | 76 |
| 43 | 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 |
| 44 | Hydrogen uptake in alumina thin films synthesized from an aluminum plasma stream in an oxygen ambient. Applied Physics Letters, 1999, 74, 200-202. | 1.5 | 73 |
| 45 | Effect of peak power in reactive high power impulse magnetron sputtering of titanium dioxide. Surface and Coatings Technology, 2011, 205, 4828-4831. | 2.2 | 70 |
| 46 | Bipolar HiPIMS for tailoring ion energies in thin film deposition. Surface and Coatings Technology, 2019, 359, 433-437. | 2.2 | 70 |
| 47 | Sharp microfaceting of (001)-oriented cerium dioxide thin films and the effect of annealing on surface morphology. Surface Science, 1999, 429, 22-33. | 0.8 | 68 |
| 48 | Measurement of the magnetic field change in a pulsed high current magnetron discharge. Plasma Sources Science and Technology, 2004, 13, 654-661. | 1.3 | 64 |
| 49 | Understanding deposition rate loss in high power impulse magnetron sputtering: I. Ionization-driven electric fields. Plasma Sources Science and Technology, 2012, 21, 025005. | 1.3 | 64 |
| 50 | Reactively magnetron sputtered Hfâ€N films. II. Hardness and electrical resistivity. Journal of Applied Physics, 1985, 58, 3112-3117. | 1.1 | 61 |
| 51 | Yttrium oxide inclusions in YBa2Cu3Ox thin films. Physica C: Superconductivity and Its Applications, 1992, 202, 69-74. | 0.6 | 61 |
| 52 | Energy flux measurements in high power impulse magnetron sputtering. Journal Physics D: Applied Physics, 2009, 42, 185202. | 1.3 | 60 |
| 53 | Studies of hysteresis effect in reactive HiPIMS deposition of oxides. Surface and Coatings Technology, 2011, 205, S303-S306. | 2.2 | 59 |
| 54 | Anomalous electron transport in high power impulse magnetron sputtering. Plasma Sources Science and Technology, 2008, 17, 025007. | 1.3 | 58 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Growth of Ti-C nanocomposite films by reactive high power impulse magnetron sputtering under industrial conditions. Surface and Coatings Technology, 2012, 206, 2396-2402. | 2.2 | 58 |
| 56 | ZrB2 thin films grown by high power impulse magnetron sputtering from a compound target. Thin Solid Films, 2012, 526, 163-167. | 0.8 | 58 |
| 57 | Growth, structural characterization and properties of hard and wear-protective layered materials. Thin Solid Films, 1990, 193-194, 818-831. | 0.8 | 55 |
| 58 | Solâ€“gel synthesis and characterization of Na0.5K0.5NbO3 thin films. Journal of Crystal Growth, 2005, 281, 468-474. | 0.7 | 54 |
| 59 | Microstructural and microchemical characterization of hard coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1986, 4, 2770-2783. | 0.9 | 53 |
| 60 | Structure and ammonia sensitivity of thin platinum or iridium gates in metal-oxide-silicon capacitors. Thin Solid Films, 1989, 177, 77-93. | 0.8 | 53 |
| 61 | Electrical properties of SrTiO3 thin films on Si deposited by magnetron sputtering at low temperature. Applied Physics Letters, 2001, 79, 1513-1515. | 1.5 | 53 |
| 62 | Energy distributions of positive and negative ions during magnetron sputtering of an Al target in Arâˆ•O2 mixtures. Journal of Applied Physics, 2006, 100, 033305. | 1.1 | 53 |
| 63 | Highly reflective rear surface passivation design for ultra-thin Cu(In,Ga)Se 2 solar cells. Thin Solid Films, 2015, 582, 300-303. | 0.8 | 51 |
| 64 | Formation of Cuâ€rich particles on the surface of YBa2Cu3O7âˆ’xthin film grown byinsituoffâ€axis sputtering. Journal of Applied Physics, 1994, 75, 2020-2025. | 1.1 | 50 |
| 65 | A nanostructured NiO/cubic SiC pâ€“n heterojunction photoanode for enhanced solar water splitting. Journal of Materials Chemistry A, 2019, 7, 4721-4728. | 5.2 | 50 |
| 66 | Faster-than-Bohm Cross-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>B</mml:mi></mml:math>Electron Transport in Strongly Pulsed Plasmas. Physical Review Letters, 2009, 103, 225003. | 2.9 | 49 |
| 67 | A bulk plasma model for dc and HiPIMS magnetrons. Plasma Sources Science and Technology, 2008, 17, 045009. | 1.3 | 48 |
| 68 | Reactively magnetron sputtered Hfâ€N films. I. Composition and structure. Journal of Applied Physics, 1985, 58, 3104-3111. | 1.1 | 46 |
| 69 | Resputtering effects on the stoichiometry of YBa2Cu3Oxthin films. Journal of Applied Physics, 1991, 69, 390-395. | 1.1 | 46 |
| 70 | HTS/ferroelectric devices for microwave applications. IEEE Transactions on Applied Superconductivity, 1997, 7, 2458-2461. | 1.1 | 46 |
| 71 | Modelling of thin-film HTS/ferroelectric interdigital capacitors. IET Microwaves Antennas and Propagation, 1996, 143, 397. | 1.2 | 44 |
| 72 | Compressive intrinsic stress originates in the grain boundaries of dense refractory polycrystalline thin films. Journal of Applied Physics, 2016, 119, . | 1.1 | 44 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Structure of reactively magnetron sputtered Hfâ€N films. Applied Physics Letters, 1984, 44, 670-672. | 1.5 | 43 |
| 74 | Eliminating the hysteresis effect for reactive sputtering processes. Applied Physics Letters, 2005, 86, 164106. | 1.5 | 43 |
| 75 | High rate reactive dc magnetron sputter deposition of Al2O3 films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 639-643. | 0.9 | 42 |
| 76 | Ab initiostudies of Al, O, andO2adsorption onÎ±â^'Al2O3(0001)surfaces. Physical Review B, 2006, 74, . | 1.1 | 42 |
| 77 | Size-controlled growth of nanoparticles in a highly ionized pulsed plasma. Applied Physics Letters, 2013, 102, . | 1.5 | 42 |
| 78 | Initial growth of TiN on different phases of high speed steel. Thin Solid Films, 1985, 124, 163-170. | 0.8 | 41 |
| 79 | Composition, structure, and dielectric tunability of epitaxial SrTiO3 thin films grown by radio frequency magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 564-570. | 0.9 | 41 |
| 80 | Carbon Monoxide Oxidation on Copper Oxide Thin Films Supported on Corrugated Cerium Dioxide {111} and {001} Surfaces. Journal of Catalysis, 1999, 181, 6-15. | 3.1 | 41 |
| 81 | The role of Ohmic heating in dc magnetron sputtering. Plasma Sources Science and Technology, 2016, 25, 065024. | 1.3 | 41 |
| 82 | Î±-Alumina coatings on WC/Co substrates by physical vapor deposition. International Journal of Refractory Metals and Hard Materials, 2009, 27, 507-512. | 1.7 | 37 |
| 83 | Plasma characteristics at off-axis high pressure magnetron YBa2Cu3O7â^'Î´ sputtering. Journal of Applied Physics, 1997, 82, 1882-1889. | 1.1 | 36 |
| 84 | Ion-acoustic solitary waves in a high power pulsed magnetron sputtering discharge. Journal Physics D: Applied Physics, 2005, 38, 3417-3421. | 1.3 | 36 |
| 85 | Internal current measurements in high power impulse magnetron sputtering. Plasma Sources Science and Technology, 2011, 20, 045003. | 1.3 | 35 |
| 86 | Structural characterization of yttria (Y2O3) inclusions in YBa2Cu3O7â^'x films: Growth model and effect on critical current density. Thin Solid Films, 1993, 229, 237-248. | 0.8 | 34 |
| 87 | Epitaxial growth of W-doped VO2/V2O3 multilayer on Î±-Al2O3(110) by reactive magnetron sputtering. Thin Solid Films, 2000, 375, 128-131. | 0.8 | 34 |
| 88 | Evaluation of Intermittent Contact Mode AFM Probes by HREM and Using Atomically Sharp CeO2Ridges as Tip Characterizer. Langmuir, 2000, 16, 6267-6277. | 1.6 | 34 |
| 89 | Fast growth of nanoparticles in a hollow cathode plasma through orbit motion limited ion collection. Applied Physics Letters, 2013, 103, 193108. | 1.5 | 33 |
| 90 | Effects of additives in Î±- and Î¸-alumina: an ab initio study. Journal of Physics Condensed Matter, 2004, 16, 8971-8980. | 0.7 | 32 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Target presputtering effects on stoichiometry and deposition rate of Yâ€Baâ€Cuâ€O thin films grown by dc magnetron sputtering. Applied Physics Letters, 1988, 52, 1907-1909. | 1.5 | 30 |
| 92 | Elastic modulus-density relationship for amorphous boron suboxide thin films. Applied Physics A: Materials Science and Processing, 2003, 76, 269-271. | 1.1 | 30 |
| 93 | Bipolar high power impulse magnetron sputtering for energetic ion bombardment during TiN thin film growth without the use of a substrate bias. Thin Solid Films, 2019, 688, 137350. | 0.8 | 30 |
| 94 | Magnetoconductivity inYBa2Cu3O7âˆ'Îthin films. Physical Review B, 1995, 52, 3748-3755. | 1.1 | 28 |
| 95 | Microstructure and microwave dielectric properties of epitaxial SrTiO3 films on LaAlO3 substrates. Journal of Applied Physics, 1998, 83, 4884-4890. | 1.1 | 28 |
| 96 | Epitaxial cerium oxide buffer layers and YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7âˆ'Î´</sub> thin films for microwave device applications. Journal of Materials Research, 1999, 14, 2385-2393. | 1.2 | 28 |
| 97 | Influence of residual water on magnetron sputter deposited crystalline Al2O3 thin films. Thin Solid Films, 2008, 516, 3877-3883. | 0.8 | 28 |
| 98 | Influence of ionization degree on film properties when using high power impulse magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, . | 0.9 | 28 |
| 99 | Determination of the complex dielectric function of epitaxial SrTiO3 films using transmission electron energy-loss spectroscopy. Journal of Applied Physics, 1999, 85, 2828-2834. | 1.1 | 27 |
| 100 | Radio frequency dual magnetron sputtering deposition and characterization of nanocomposite Al2O3â€“ZrO2 thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 309-316. | 0.9 | 27 |
| 101 | Dual-magnetron open field sputtering system for sideways deposition of thin films. Surface and Coatings Technology, 2010, 204, 2165-2169. | 2.2 | 27 |
| 102 | Growth and characterization of epitaxial films of tungsten-doped vanadium oxides on sapphire (110) by reactive magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 1817-1821. | 0.9 | 25 |
| 103 | Ab initiocalculations on the effects of additives on alumina phase stability. Physical Review B, 2005, 71, . | 1.1 | 25 |
| 104 | Performance tuning of gas sensors based on epitaxial graphene on silicon carbide. Materials and Design, 2018, 153, 153-158. | 3.3 | 25 |
| 105 | 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 |
| 106 | High resolution X-ray diffraction mapping studies on the domain structure of LaAlO3 single crystal substrates and its influence on SrTiO3 film growth. Journal of Crystal Growth, 1997, 171, 401-408. | 0.7 | 24 |
| 107 | Peroxo solâ€“gel preparation: photochromic/electrochromic properties of Moâ€“Ti oxide gels and thin films. Journal of Materials Chemistry, 2000, 10, 2396-2400. | 6.7 | 24 |
| 108 | High Li+-Ion Storage Capacity and Double-Electrochromic Behavior of Solâˆ'Gel-Derived Iron Oxide Thin Films with Sulfate Residues. Chemistry of Materials, 2001, 13, 1976-1983. | 3.2 | 24 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Synthesis and mechanical properties of boron suboxide thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 335-337. | 0.9 | 24 |
| 110 | Growth and Characterization of Na<sub>0.5</sub>K<sub>0.5</sub>NbO<sub>3</sub> Thin Films on Polycrystalline Pt<sub>80</sub>Ir<sub>20</sub> Substrates. Journal of Materials Research, 2002, 17, 1183-1191. | 1.2 | 24 |
| 111 | Deposition of yttria-stabilized zirconia thin films by high power impulse magnetron sputtering and pulsed magnetron sputtering. Surface and Coatings Technology, 2014, 240, 1-6. | 2.2 | 24 |
| 112 | Low-energy ion irradiation in HiPIMS to enable anatase TiO<sub>2</sub> selective growth. Journal Physics D: Applied Physics, 2018, 51, 235301. | 1.3 | 24 |
| 113 | Low-Loss and Tunable Localized Mid-Infrared Plasmons in Nanocrystals of Highly Degenerate InN. Nano Letters, 2018, 18, 5681-5687. | 4.5 | 24 |
| 114 | Pulse length selection for optimizing the accelerated ion flux fraction of a bipolar HiPIMS discharge. Plasma Sources Science and Technology, 2020, 29, 125013. | 1.3 | 24 |
| 115 | Low temperature (Ts/Tmâ€‰<â€‰0.1) epitaxial growth of HfN/MgO(001) via reactive HiPIMS with metal-ion synchronized substrate bias. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, . | 0.9 | 23 |
| 116 | Process stabilization by peak current regulation in reactive high-power impulse magnetron sputtering of hafnium nitride. Journal Physics D: Applied Physics, 2016, 49, 065202. | 1.3 | 22 |
| 117 | Graphene Decorated with Iron Oxide Nanoparticles for Highly Sensitive Interaction with Volatile Organic Compounds. Sensors, 2019, 19, 918. | 2.1 | 22 |
| 118 | Synthesis of titanium-oxide nanoparticles with size and stoichiometry control. Journal of Nanoparticle Research, 2015, 17, 1. | 0.8 | 21 |
| 119 | Electronic properties of epitaxial TiN/VN(001) superlattices. Journal of Applied Physics, 1991, 70, 4963-4968. | 1.1 | 20 |
| 120 | Morphology changes of thin Pd films grown on SiO 2 : influence of adsorbates and temperature. Thin Solid Films, 1999, 342, 297-306. | 0.8 | 19 |
| 121 | Time-domain and energetic bombardment effects on the nucleation and coalescence of thin metal films on amorphous substrates. Journal Physics D: Applied Physics, 2013, 46, 215303. | 1.3 | 19 |
| 122 | Reduction of surface particles on YBa2Cu3O7âˆ'âˆ‚thin films through the use of nonstoichiometric sputtering targets and N2O in the sputtering gas. Journal of Applied Physics, 1995, 77, 6388-6393. | 1.1 | 18 |
| 123 | Monte Carlo simulations of the transport of sputtered particles. Computer Physics Communications, 1999, 120, 238-254. | 3.0 | 18 |
| 124 | Low temperature growth and characterization of (Na,K)NbOx thin films. Journal of Crystal Growth, 2003, 254, 400-404. | 0.7 | 18 |
| 125 | Elastic modulus of amorphous boron suboxide thin films studied by theoretical and experimental methods. Journal of Applied Physics, 2003, 93, 940-944. | 1.1 | 18 |
| 126 | Two-domain formation during the epitaxial growth of GaN (0001) on c-plane Al2O3 (0001) by high power impulse magnetron sputtering. Journal of Applied Physics, 2011, 110, . | 1.1 | 18 |

| # | Article | IF | Citations |
|---|---|---|---|
| 127 | Synthesis of hydrogenated diamondlike carbon thin films using neonâ€“acetylene based high power impulse magnetron sputtering discharges. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, 061504. | 0.9 | 18 |
| 128 | Experimental verification of deposition rate increase, with maintained high ionized flux fraction, by shortening the HiPIMS pulse. Plasma Sources Science and Technology, 2021, 30, 045006. | 1.3 | 18 |
| 129 | Flux pinning in YBa2Cu3O7 thin films grown by d.c. magnetron sputtering. Cryogenics, 1992, 32, 1084-1088. | 0.9 | 17 |
| 130 | X-ray-diffraction mapping of epitaxialYBa2Cu3O7âˆ’xthin films: Determination of in-plane epitaxy anda-,b-, andc-axis lengths in films with varying oxygen deficiency. Physical Review B, 1993, 47, 3431-3434. | 1.1 | 17 |
| 131 | Stabilization of potential superhardRuO2phases: A theoretical study. Physical Review B, 2002, 66, . | 1.1 | 17 |
| 132 | Modeling the extraction of sputtered metal from high power impulse hollow cathode discharges. Plasma Sources Science and Technology, 2013, 22, 035006. | 1.3 | 17 |
| 133 | Microstructure/dielectric property relationship of low temperature synthesised (Na,K)NbOx thin films. Journal of Crystal Growth, 2004, 262, 322-326. | 0.7 | 16 |
| 134 | Principles for designing sputtering-based strategies for high-rate synthesis of dense and hard hydrogenated amorphous carbon thin films. Diamond and Related Materials, 2014, 44, 117-122. | 1.8 | 16 |
| 135 | Catalytic Nanotruss Structures Realized by Magnetic Self-Assembly in Pulsed Plasma. Nano Letters, 2018, 18, 3132-3137. | 4.5 | 16 |
| 136 | Bipolar HiPIMS: The role of capacitive coupling in achieving ion bombardment during growth of dielectric thin films. Surface and Coatings Technology, 2021, 416, 127152. | 2.2 | 16 |
| 137 | Copper thin films deposited using different ion acceleration strategies in HiPIMS. Surface and Coatings Technology, 2021, 422, 127487. | 2.2 | 16 |
| 138 | Electrical characterisation of SrTiO3/Si interfaces. Journal of Non-Crystalline Solids, 2002, 303, 185-189. | 1.5 | 14 |
| 139 | The influence of pressure and gas flow on size and morphology of titanium oxide nanoparticles synthesized by hollow cathode sputtering. Journal of Applied Physics, 2016, 120, 044308. | 1.1 | 14 |
| 140 | Structural and electrical characterization of sputter-deposited SrTiO3 thin films. Microelectronic Engineering, 1995, 29, 123-127. | 1.1 | 13 |
| 141 | Reduction of density of subgrain boundaries and misfit dislocations in epitaxial (001) SrTiO3 thin films: Effect on dielectric tunability. Journal of Applied Physics, 1999, 85, 3976-3983. | 1.1 | 12 |
| 142 | Influence of high-energy Si+ ion irradiation on microstructure and mechanical properties of alumina films. Surface and Coatings Technology, 2002, 158-159, 534-537. | 2.2 | 12 |
| 143 | Deep energy levels in RuO2âˆ•4Hâ€“SiC Schottky barrier structures. Applied Physics Letters, 2006, 88, 153509. | 1.5 | 12 |
| 144 | Investigation of RuO2/4Hâ€“SiC Schottky diode contacts by deep level transient spectroscopy. Chemical Physics Letters, 2006, 429, 617-621. | 1.2 | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 145 | Low-temperature Î±-alumina thin film growth:ab initiostudies of Al adatom surface migration. Journal Physics D: Applied Physics, 2009, 42, 125302. | 1.3 | 11 |
| 146 | Formation of secondary phases in YBa2Cu3O7âˆ'Î´/SrTiO3 multilayers. Physica C: Superconductivity and Its Applications, 1998, 304, 245-254. | 0.6 | 10 |
| 147 | Modeling of the deposition of stoichiometric Al2O3 using nonarcing direct current magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 1286-1292. | 0.9 | 10 |
| 148 | Growth of SrTiO3 thin films on LaAlO3(001) substrates; the influence of growth temperature on composition, orientation, and surface morphology. Thin Solid Films, 2000, 360, 181-186. | 0.8 | 10 |
| 149 | Role of carbon in boron suboxide thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1355-1358. | 0.9 | 10 |
| 150 | Molecular content of the deposition flux during reactive Arâ•O2 magnetron sputtering of Al. Applied Physics Letters, 2006, 88, 054101. | 1.5 | 10 |
| 151 | Ab initio calculations and synthesis of the off-stoichiometric half-Heusler phase Ni1âˆ'xMn1+xSb. Journal of Applied Physics, 2010, 108, 093712. | 1.1 | 10 |
| 152 | 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 |
| 153 | Low temperature growth of stress-free single phase Î±-W films using HiPIMS with synchronized pulsed substrate bias. Journal of Applied Physics, 2021, 129, . | 1.1 | 10 |
| 154 | Dynamics of bipolar HiPIMS discharges by plasma potential probe measurements. Plasma Sources Science and Technology, 2022, 31, 025007. | 1.3 | 10 |
| 155 | Dislocations, strain, and defects in heteroepitaxial YBa2Cu3O7âˆ'x/SrTiO3 multilayers. Physica C: Superconductivity and Its Applications, 1998, 304, 307-313. | 0.6 | 9 |
| 156 | Growth of semi-coherent Ni and NiO dual-phase nanoparticles using hollow cathode sputtering. Journal of Nanoparticle Research, 2019, 21, 1. | 0.8 | 9 |
| 157 | Pt/CeO2 SIC Schottky diodes with high response to hydrogen and hydrocarbons. , 2001, , 832-835. | | 9 |
| 158 | Magnetically Collected Platinum/Nickel Alloy Nanoparticles as Catalysts for Hydrogen Evolution. ACS Applied Nano Materials, 2021, 4, 12957-12965. | 2.4 | 9 |
| 159 | The effect of oxygen and substrate temperature on the growth of Ti thin films on stainlessâ€steel substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1983, 1, 301-304. | 0.9 | 8 |
| 160 | Modified Epitaxial Graphene on SiC for Extremely Sensitive and Selective Gas Sensors. Materials Science Forum, 2016, 858, 1145-1148. | 0.3 | 8 |
| 161 | The use of Highly Ionized Pulsed Plasmas for the Synthesis of Advanced Thin Films and Nanoparticles. KONA Powder and Particle Journal, 2014, 31, 171-180. | 0.9 | 7 |
| 162 | Roomâ€Temperature Micropillar Growth of Lithiumâ€“Titanateâ€“Carbon Composite Structures by Selfâ€Biased Direct Current Magnetron Sputtering for Lithium Ion Microbatteries. Advanced Functional Materials, 2019, 29, 1904306. | 7.8 | 7 |

| # | Article | IF | Citations |
|---|---|---|---|
| 163 | Tuning the stress in TiN films by regulating the doubly charged ion fraction in a reactive HiPIMS discharge. Journal of Applied Physics, 2020, 127, . | 1.1 | 7 |
| 164 | Observation of metallic resistivity behavior following a 1/ï300Kdependence ofTcin aYBa2Cu3O7â^'xthin film with varyingab initioxygen deficiency. Physical Review B, 1993, 48, 7708-7711. | 1.1 | 6 |
| 165 | Characteristics of SrTiO<sub>3</sub> thin films deposited on Si by rf magnetron sputtering at various substrate temperatures. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2002, 82, 891-903. | 0.6 | 6 |
| 166 | Properties of Alâ€"SrTiO<tex>$_3$</tex>â€"ITO Capacitors for Microelectronic Device Applications. IEEE Transactions on Electron Devices, 2004, 51, 1202-1205. | 1.6 | 6 |
| 167 | Double oxide shell layer formed on a metal nanoparticle as revealed by aberration corrected (scanning) transmission electron microscopy. Materials Research Express, 2014, 1, 025016. | 0.8 | 6 |
| 168 | Characteristics of SrTiO 3 thin films deposited on Si by rf magnetron sputtering at various substrate temperatures. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2002, 82, 891-903. | 0.6 | 6 |
| 169 | Molecular dynamics simulation of the growth of Cu nanoclusters from Cu ions in a plasma. Physical Review B, 2014, 90, . | 1.1 | 5 |
| 170 | Nanoparticle growth by collection of ions: orbital motion limited theory and collision-enhanced collection. Journal Physics D: Applied Physics, 2016, 49, 395208. | 1.3 | 5 |
| 171 | Impact of nanoparticle magnetization on the 3D formation of dual-phase Ni/NiO nanoparticle-based nanotrusses. Journal of Nanoparticle Research, 2019, 21, 1. | 0.8 | 5 |
| 172 | Summary Abstract: The role of lowâ€energy ion bombardment during the growth of epitaxial TiN(100) films by reactive magnetron sputtering: Defect formation and annihilation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1987, 5, 2162-2164. | 0.9 | 4 |
| 173 | Identification of semi-coherent Y2O3 inclusions in YBa2Cu3Ox superconducting thin films by HREM. Micron and Microscopica Acta, 1992, 23, 231-232. | 0.2 | 4 |
| 174 | Title is missing!. Journal of Materials Science: Materials in Electronics, 1999, 10, 203-208. | 1.1 | 4 |
| 175 | Microwave properties of tunable capacitors basee on magnetron sputtered ferroelectric Na0.5K0.5NbO3 film on low and high resistivity silicon substrates. Integrated Ferroelectrics, 2001, 39, 359-366. | 0.3 | 4 |
| 176 | Nucleation of titanium nanoparticles in an oxygen-starved environment. II: theory. Journal Physics D: Applied Physics, 2018, 51, 455202. | 1.3 | 4 |
| 177 | Plasma-based processes for planar and 3D surface patterning of functional nanoparticles. Journal of Nanoparticle Research, 2019, 21, 1. | 0.8 | 4 |
| 178 | Pressure dependence of the resputtering of Y-Ba-Cu-O thin films grown by DC magnetron sputtering. Superconductor Science and Technology, 1991, 4, S379-S381. | 1.8 | 3 |
| 179 | Transmission electron microscopy of epitaxial SrTiO3 films on LaAlO3 substrates. Microelectronic Engineering, 1995, 29, 309-312. | 1.1 | 3 |
| 180 | Hydrogen sensing by NKN thin film with high dielectric constant and ferroelectric property. Sensors and Actuators B: Chemical, 2005, 108, 490-495. | 4.0 | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 181 | Nucleation of titanium nanoparticles in an oxygen-starved environment. I: experiments. Journal Physics D: Applied Physics, 2018, 51, 455201. | 1.3 | 3 |
| 182 | Growth, structure and properties of TiN coatings on steel substrates. AIP Conference Proceedings, 1986, , . | 0.3 | 2 |
| 183 | The influence of target oxygen on the YBa2Cu3O6+Î´ directâ€current magnetron sputtering process. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1991, 9, 2165-2169. | 0.9 | 2 |
| 184 | Spontaneous conductance fluctuations and percolation in YBa/sub 2/Cu/sub 3/O/sub 7/ thin films. IEEE Transactions on Magnetics, 1993, 29, 3574-3576. | 1.2 | 2 |
| 185 | Study of magnetoresistance in oriented YBa2Cu3O7âˆ’Î´ thin film. Physica B: Condensed Matter, 1994, 194-196, 2291-2292. | 1.3 | 2 |
| 186 | Microstructure of SrTiO<sub>3</sub> Thin Films as Single Layer and Incorporated in Yba<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub>/SrTiO<sub>3</sub> Multilayers. Materials Research Society Symposia Proceedings, 1995, 401, 369. | 0.1 | 2 |
| 187 | Ionized-PVD by pulsed sputtering of Ta for metallization of high-aspect-ratio structures in VLSI. , 0, , . | | 2 |
| 188 | RF-Magnetron Sputtered Au/(Na,K)NbO3/SiO2/Si MFIS-diode Structures. Materials Research Society Symposia Proceedings, 2001, 688, 1. | 0.1 | 2 |
| 189 | Semi-Coherent Yttria Inclusions Occurring Spontaneously in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+Ã—</sub> Films Grown by Dc Magnetron Sputtering. Materials Research Society Symposia Proceedings, 1992, 275, 389. | 0.1 | 1 |
| 190 | Conductance noise in YBCO thin films. Physica B: Condensed Matter, 1994, 194-196, 1635-1636. | 1.3 | 1 |
| 191 | Low temperature growth of SrTiO3thin films on glass fiber laminate substrates. Ferroelectrics, 1999, 225, 287-294. | 0.3 | 1 |
| 192 | Quantum design and synthesis of a boronâ€“oxygenâ€“yttrium phase. Applied Physics Letters, 2003, 82, 4286-4288. | 1.5 | 1 |
| 193 | Effect of chemical composition on the elastic and electrical properties of the boron-oxygen-yttrium system studied byab initioand experimental means. Physical Review B, 2004, 69, . | 1.1 | 1 |
| 194 | Erratum to â€œSpatial Electron Density Distribution in a High-Power Pulsed Magnetron Dischargeâ€• IEEE Transactions on Plasma Science, 2005, 33, 1129-1129. | 0.6 | 1 |
| 195 | Characterisation of Nanoparticle Structure by High Resolution Electron Microscopy. Journal of Physics: Conference Series, 2014, 522, 012065. | 0.3 | 1 |
| 196 | Iron Oxide Nanoparticle Decorated Graphene for Ultra-Sensitive Detection of Volatile Organic Compounds. Proceedings (mdpi), 2018, 2, . | 0.2 | 1 |
| 197 | Cross-section preparation for tem of film-substrate combinations with large differences in sputtering yields. Ultramicroscopy, 1985, 17, 172. | 0.8 | 0 |
| 198 | The dc magnetron sputter deposition process of YBa 2 Cu 3 O x thin films. Physica C: Superconductivity and Its Applications, 1989, 162-164, 599-600. | 0.6 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 199 | Fluctuation magnetoconductivity in an YBa2Cu3O7âˆ'Î´ thin film. Physica C: Superconductivity and Its Applications, 1994, 235-240, 1925-1926. | 0.6 | 0 |
| 200 | Characterization of Sputtered Cerium Dioxide Thin Films. Materials Research Society Symposia Proceedings, 1994, 355, 209. | 0.1 | 0 |
| 201 | Monte Carlo simulations of the transport of sputtered particles. , 0, , . | | 0 |
| 202 | Electrostatic powder impact deposition (EPID) of Ge on Si and Cu substrates, microstructure and morphology study. Journal Physics D: Applied Physics, 2000, 33, 1155-1160. | 1.3 | 0 |
| 203 | Growth and characterization of RuO/sub 2/ films prepared by reactive unbalanced magnetron sputtering. , 0, , . | | 0 |
| 204 | Investigation of 4H-SiC diode with RuO/sub 2/ Schottky contact by DLTS. , 0, , . | | 0 |
| 205 | The spatial and temporal variation of the electron energy distribution function (EEDF) in the HiPIMS discharge. , 2009, , . | | 0 |
| 206 | Publisher's Note: Molecular dynamics simulation of the growth of Cu nanoclusters from Cu ions in a plasma [Phys. Rev. B90, 165421 (2014)]. Physical Review B, 2015, 91, . | 1.1 | 0 |
| 207 | Complex 3D nanocoral like structures formed by copper nanoparticle aggregation on nanostructured zinc oxide rods. Materials Letters, 2016, 184, 127-130. | 1.3 | 0 |
| 208 | Phase separation within NiSiN coatings during reactive HiPIMS discharges: A new pathway to grow NixSi nanocrystals composites at low temperature. Applied Surface Science, 2018, 454, 148-156. | 3.1 | 0 |
| 209 | Reproducible Fabrication of YBa2Cu3O6+Î´ Thin Films by DC Magnetron Sputtering. , 1990, , 93-100. | | 0 |
| 210 | Microstructure and microwave loss studies on epitaxial YBa2Cu3Ox thin films. , 1992, , 219-224. | | 0 |