# Sebastian Siol

List of Publications by Year
in descending order

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|---|---|---|---|
| 56 papers | 1,890 citations | 304743 22 h-index | 265206 42 g-index |
| 59 all docs | 59 docs citations | 59 times ranked | 3634 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Electrochemical ruthenium-catalysed Câ€“H activation in water through heterogenization of a molecular catalyst. Catalysis Science and Technology, 2022, 12, 1512-1519. | 4.1 | 4 |
| 2 | Sulfur Treatment Passivates Bulk Defects in Sb<sub>2</sub>Se<sub>3</sub> Photocathodes for Water Splitting. Advanced Functional Materials, 2022, 32, . | 14.9 | 18 |
| 3 | Chemical state analysis of reactively sputtered zinc vanadium nitride: The Auger parameter as a tool in materials design. Applied Surface Science, 2022, 601, 154172. | 6.1 | 7 |
| 4 | Hard x-ray photoelectron spectroscopy: a snapshot of the state-of-the-art in 2020. Journal of Physics Condensed Matter, 2021, 33, 233001. | 1.8 | 55 |
| 5 | Thiolâ€Amineâ€Based Solution Processing of Cu<sub>2</sub>S Thin Films for Photoelectrochemical Water Splitting. ChemSusChem, 2021, 14, 3967-3974. | 6.8 | 10 |
| 6 | Synthesis and Characterization of the Ternary Nitride Semiconductor Zn<sub>2</sub>VN<sub>3</sub>: Theoretical Prediction, Combinatorial Screening, and Epitaxial Stabilization. Chemistry of Materials, 2021, 33, 9306-9316. | 6.7 | 12 |
| 7 | A combinatorial guide to phase formation and surface passivation of tungsten titanium oxide prepared by thermal oxidation. Acta Materialia, 2020, 186, 95-104. | 7.9 | 12 |
| 8 | Effect of internal stress on short-circuit diffusion in thin films and nanolaminates: Application to Cu/W nano-multilayers. Applied Surface Science, 2020, 508, 145254. | 6.1 | 24 |
| 9 | Templated Growth of Metastable Polymorphs on Amorphous Substrates with Seed Layers. Physical Review Applied, 2020, 13, . | 3.8 | 7 |
| 10 | Sb<sub>2</sub>S<sub>3</sub>/TiO<sub>2</sub> Heterojunction Photocathodes: Band Alignment and Water Splitting Properties. Chemistry of Materials, 2020, 32, 7247-7253. | 6.7 | 34 |
| 11 | Microwave-Hydrothermal Tuning of Spinel-Type Co3O4 Water Oxidation Catalysts. Frontiers in Chemistry, 2020, 8, 473. | 3.6 | 8 |
| 12 | In situ oxidation studies of Cu thin films: Growth kinetics and oxide phase evolution. Journal of Applied Physics, 2020, 127, . | 2.5 | 35 |
| 13 | Wurtzite materials in alloys of rock salt compounds. Journal of Materials Research, 2020, 35, 972-980. | 2.6 | 2 |
| 14 | CO 2 â€Promoted Catalytic Process Forming Higher Alcohols with Tunable Nature at Record Productivity. ChemCatChem, 2020, 12, 2732-2744. | 3.7 | 14 |
| 15 | Concepts for chemical state analysis at constant probing depth by labâ€based XPS/HAXPES combining soft and hard Xâ€ray sources. Surface and Interface Analysis, 2020, 52, 802-810. | 1.8 | 28 |
| 16 | Electron scattering mechanisms in polycrystalline sputtered zinc tin oxynitride thin films. Journal of Applied Physics, 2019, 126, 035701. | 2.5 | 13 |
| 17 | Effect of the individual layer thickness on the transformation of Cu/W nano-multilayers into nanocomposites. Materialia, 2019, 7, 100400. | 2.7 | 23 |
| 18 | Operandoelectrochemical study of charge carrier processes in water splitting photoanodes protected by atomic layer deposited TiO<sub>2</sub>. Sustainable Energy and Fuels, 2019, 3, 3085-3092. | 4.9 | 11 |

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|---|---|---|---|
| 19 | Preparative History vs Driving Force in Water Oxidation Catalysis: Parameter Space Studies of Cobalt Spinels. ACS Omega, 2019, 4, 15444-15456. | 3.5 | 9 |
| 20 | Stable and tunable phosphonic acid dipole layer for band edge engineering of photoelectrochemical and photovoltaic heterojunction devices. Energy and Environmental Science, 2019, 12, 1901-1909. | 30.8 | 41 |
| 21 | Anodizing of Self-Passivating W<sub>x</sub>Ti<sub>1â€“x</sub> Precursors for W<sub>x</sub>Ti<sub>1â€“x</sub>O<sub>n</sub> Oxide Alloys with Tailored Stability. ACS Applied Materials & Interfaces, 2019, 11, 9510-9518. | 8.0 | 8 |
| 22 | Accessing Metastability in Heterostructural Semiconductor Alloys. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800858. | 1.8 | 4 |
| 23 | Negative-pressure polymorphs made by heterostructural alloying. Science Advances, 2018, 4, eaaq1442. | 10.3 | 34 |
| 24 | An Activated TiCâ€“SiC Composite for Natural Gas Upgrading via Catalytic Oxyhalogenation. ChemCatChem, 2018, 10, 1282-1290. | 3.7 | 11 |
| 25 | Carbon nanofibres-supported KCoMo catalysts for syngas conversion into higher alcohols. Catalysis Science and Technology, 2018, 8, 187-200. | 4.1 | 24 |
| 26 | Design of Molecular Water Oxidation Catalysts Stabilized by Ultrathin Inorganic Overlayersâ€”Is Active Site Protection Necessary?. Inorganics, 2018, 6, 105. | 2.7 | 9 |
| 27 | Role of Carbonaceous Supports and Potassium Promoter on Higher Alcohols Synthesis over Copperâ€“Iron Catalysts. ACS Catalysis, 2018, 8, 9604-9618. | 11.2 | 58 |
| 28 | Stabilization of wide band-gap p-type wurtzite MnTe thin films on amorphous substrates. Journal of Materials Chemistry C, 2018, 6, 6297-6304. | 5.5 | 21 |
| 29 | Zinc-Stabilized Manganese Telluride with Wurtzite Crystal Structure. Journal of Physical Chemistry C, 2018, 122, 18769-18775. | 3.1 | 13 |
| 30 | IIIâ€“V Solar Cells Grown on Unpolished and Reusable Spalled Ge Substrates. IEEE Journal of Photovoltaics, 2018, 8, 1384-1389. | 2.5 | 11 |
| 31 | Implications of heterostructural alloying for enhanced piezoelectric performance of (Al,Sc)N. Physical Review Materials, 2018, 2, . | 2.4 | 47 |
| 32 | Perovskite-Inspired Photovoltaic Materials: Toward Best Practices in Materials Characterization and Calculations. Chemistry of Materials, 2017, 29, 1964-1988. | 6.7 | 116 |
| 33 | Solubility limits in quaternary SnTe-based alloys. RSC Advances, 2017, 7, 24747-24753. | 3.6 | 14 |
| 34 | Novel phase diagram behavior and materials design in heterostructural semiconductor alloys. Science Advances, 2017, 3, e1700270. | 10.3 | 46 |
| 35 | Perovskite ink with wide processing window for scalable high-efficiency solar cells. Nature Energy, 2017, 2, . | 39.5 | 499 |
| 36 | Photocorrosion-resistant Sb<sub>2</sub>Se<sub>3</sub>photocathodes with earth abundant MoS<sub>x</sub>hydrogen evolution catalyst. Journal of Materials Chemistry A, 2017, 5, 23139-23145. | 10.3 | 83 |

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|---|---|---|---|
| 37 | Optoelectronic Properties of Strontium and Barium Copper Sulfides Prepared by Combinatorial Sputtering. Chemistry of Materials, 2017, 29, 8239-8248. | 6.7 | 28 |
| 38 | Influence of dipping cycles on physical, optical, and electrical properties of Cu2NiSnS4: Direct solution dip coating for photovoltaic applications. Journal of Alloys and Compounds, 2017, 725, 510-518. | 5.5 | 36 |
| 39 | Using heterostructural alloying to tune the structure and properties of the thermoelectric Sn<sub>1â^'x</sub>Ca<sub>x</sub>Se. Journal of Materials Chemistry A, 2017, 5, 16873-16882. | 10.3 | 19 |
| 40 | Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub> Growth at Room Temperature: In Situ X-ray Diffraction Monitoring and Thermal Behavior. ACS Omega, 2017, 2, 8213-8221. | 3.5 | 9 |
| 41 | Design of Metastable Tin Titanium Nitride Semiconductor Alloys. Chemistry of Materials, 2017, 29, 6511-6517. | 6.7 | 27 |
| 42 | Automated algorithms for band gap analysis from optical absorption spectra. Materials Discovery, 2017, 10, 43-52. | 3.3 | 17 |
| 43 | Copper (I) Oxide (Cu<sub>2</sub>O) based back contact for pâ€îâ€n CdTe solar cells. Progress in Photovoltaics: Research and Applications, 2016, 24, 1229-1236. | 8.1 | 23 |
| 44 | Device engineering towards improved tin sulfide solar cell performance and performance reproducibility. , 2016, , . | | 1 |
| 45 | Highly conductive grain boundaries in copper oxide thin films. Journal of Applied Physics, 2016, 119, . | 2.5 | 20 |
| 46 | Combinatorial Reactive Sputtering of In<sub>2</sub>S<sub>3</sub> as an Alternative Contact Layer for Thin Film Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 14004-14011. | 8.0 | 67 |
| 47 | Synthesis and Characterization of (Sn,Zn)O Alloys. Chemistry of Materials, 2016, 28, 7765-7772. | 6.7 | 16 |
| 48 | Combinatorial Chemical Bath Deposition of CdS Contacts for Chalcogenide Photovoltaics. ACS Combinatorial Science, 2016, 18, 583-589. | 3.8 | 23 |
| 49 | Combinatorial In Situ Photoelectron Spectroscopy Investigation of Sb<sub>2</sub>Se<sub>3</sub>/ZnS Heterointerfaces. Advanced Materials Interfaces, 2016, 3, 1600755. | 3.7 | 28 |
| 50 | Band Alignment Engineering at Cu<sub>2</sub>O/ZnO Heterointerfaces. ACS Applied Materials & Interfaces, 2016, 8, 21824-21831. | 8.0 | 101 |
| 51 | Cu 2 S as ohmic back contact for CdTe solar cells. Thin Solid Films, 2015, 582, 336-339. | 1.8 | 14 |
| 52 | Intrinsic energy band alignment of functional oxides. Physica Status Solidi - Rapid Research Letters, 2014, 8, 571-576. | 2.4 | 60 |
| 53 | PVD of copper sulfide (Cu2S) for PIN-structured solar cells. Journal Physics D: Applied Physics, 2013, 46, 495112. | 2.8 | 27 |
| 54 | Detailed photoluminescence studies of thin film Cu2S for determination of quasi-Fermi level splitting and defect levels. Journal of Applied Physics, 2013, 114, 233506. | 2.5 | 8 |

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|---|---|---|---|
| 55 | Spectral Calibrated and Confocal Photoluminescence of Cu2S Thin-Film Absorber. Materials Research Society Symposia Proceedings, 2013, 1538, 191-196. | 0.1 | 1 |
| 56 | Cooling and Trapping of Neutral Mercury Atoms in a Magneto-Optical Trap. , 2010, , . | | 0 |