# Yuxuan Xie

List of Publications by Year
in descending order

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Version: 2024-02-01

| | | 218677 | 243625 |
|---|---|---|---|
| 78 | 2,148 | 26 | 44 |
| papers | citations | h-index | g-index |

| | | | |
|---|---|---|---|
| 79 | 79 | 79 | 2445 |
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Formation of Magnesium Dendrites during Electrodeposition. ACS Energy Letters, 2019, 4, 375-376. | 17.4 | 221 |
| 2 | Microstructural evolution of pure magnesium under high strain rate loading. Acta Materialia, 2015, 87, 56-67. | 7.9 | 168 |
| 3 | Pyramidal I slip in c-axis compressed Mg single crystals. Scripta Materialia, 2016, 112, 75-78. | 5.2 | 105 |
| 4 | Strengthening from Nb-rich clusters in a Nb-microalloyed steel. Scripta Materialia, 2012, 66, 710-713. | 5.2 | 91 |
| 5 | Microstructural characterization of boron-rich boron carbide. Acta Materialia, 2017, 136, 202-214. | 7.9 | 91 |
| 6 | Nanocrystalline Î²-Ti alloy with high hardness, low Young's modulus and excellent in vitro biocompatibility for biomedical applications. Materials Science and Engineering C, 2013, 33, 3530-3536. | 7.3 | 81 |
| 7 | Mapping mechanisms and growth regimes of magnesium electrodeposition at high current densities. Materials Horizons, 2020, 7, 843-854. | 12.2 | 77 |
| 8 | Anomalous work hardening behavior of Fe40Mn40Cr10Co10 high entropy alloy single crystals deformed by twinning and slip. Acta Materialia, 2019, 181, 555-569. | 7.9 | 72 |
| 9 | Bioactive mesoporeâ€glass microspheres with controllable proteinâ€delivery properties by biomimetic surface modification. Journal of Biomedical Materials Research - Part A, 2010, 95A, 476-485. | 4.0 | 70 |
| 10 | Nanotwinned metal MEMS films with unprecedented strength and stability. Science Advances, 2017, 3, e1700685. | 10.3 | 68 |
| 11 | Superstrength through Nanotwinning. Nano Letters, 2016, 16, 7573-7579. | 9.1 | 62 |
| 12 | Atomic-Level Understanding of â€œAsymmetric Twinsâ€•in Boron Carbide. Physical Review Letters, 2015, 115, 175501. | 7.8 | 56 |
| 13 | New Ground-State Crystal Structure of Elemental Boron. Physical Review Letters, 2016, 117, 085501. | 7.8 | 44 |
| 14 | Enhanced grain refinement of an Alâ€“Mgâ€“Si alloy by high-pressure torsion processing at 100Â°C. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 552, 415-418. | 5.6 | 43 |
| 15 | Effect of Nb Microalloying and Hot Rolling on Microstructure and Properties of Ultrathin Cast Strip Steels Produced by the CASTRIPÂ® Process. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 2199-2206. | 2.2 | 42 |
| 16 | Locating Si atoms in Si-doped boron carbide: A route to understand amorphization mitigation mechanism. Acta Materialia, 2018, 157, 106-113. | 7.9 | 42 |
| 17 | Significant disparity of non-basal dislocation activities in hot-rolled highly-textured Mg and Mg-3Al-1Zn alloy under tension. Acta Materialia, 2021, 207, 116691. | 7.9 | 41 |
| 18 | Effect of Alumina on the Structure and Mechanical Properties of Spark Plasma Sintered Boron Carbide. Journal of the American Ceramic Society, 2014, 97, 3710-3718. | 3.8 | 36 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Microstructural Characterization of a Commercial Hotâ€Pressed Boron Carbide Armor Plate. Journal of the American Ceramic Society, 2016, 99, 2834-2841. | 3.8 | 36 |
| 20 | Effect of crystallite geometries on electrochemical performance of porous intercalation electrodes by multiscale operando investigation. Nature Materials, 2022, 21, 217-227. | 27.5 | 35 |
| 21 | The effect of pre-existing defects on the strength and deformation behavior of Î±-Fe nanopillars. Acta Materialia, 2013, 61, 439-452. | 7.9 | 33 |
| 22 | Damage evolution of hot-pressed boron carbide under confined dynamic compression. International Journal of Impact Engineering, 2017, 99, 75-84. | 5.0 | 33 |
| 23 | Breaking the icosahedra in boron carbide. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12012-12016. | 7.1 | 31 |
| 24 | The effect of Si on the microstructure and mechanical properties of spark plasma sintered boron carbide. Materials Characterization, 2017, 134, 274-278. | 4.4 | 31 |
| 25 | Resolving the Morphology of Niobium Carbonitride Nano-Precipitates in Steel Using Atom Probe Tomography. Microscopy and Microanalysis, 2014, 20, 1100-1110. | 0.4 | 30 |
| 26 | Exploring the origins of the indentation size effect at submicron scales. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 7.1 | 29 |
| 27 | Cluster strengthening of Nb-microalloyed ultra-thin cast strip steels produced by the CASTRIPÂ® process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 568, 88-95. | 5.6 | 26 |
| 28 | Tuning the deformation mechanisms of boron carbide via silicon doping. Science Advances, 2019, 5, eaay0352. | 10.3 | 26 |
| 29 | A facile method to in situ formation of hydroxyapatite single crystal architecture for enhanced osteoblast adhesion. Journal of Materials Chemistry, 2012, 22, 19081. | 6.7 | 25 |
| 30 | Activation and suppression of ã€ˆcÂ+Âaã€‰ dislocations in a textured Mgâ€“3Alâ€“1Zn alloy. Scripta Materialia, 2020, 179, 49-54. | 5.2 | 22 |
| 31 | The effect of clustering on the mobility of dislocations during aging in Nb-microalloyed strip cast steels: In situ heating TEM observations. Scripta Materialia, 2013, 69, 481-484. | 5.2 | 21 |
| 32 | Effect of temperature on the transition in deformation modes in Mg single crystals. Acta Materialia, 2019, 178, 241-248. | 7.9 | 21 |
| 33 | Insight into the deformation mechanisms of Î±-Fe at the nanoscale. Scripta Materialia, 2011, 65, 1037-1040. | 5.2 | 20 |
| 34 | Understanding of Lithium Insertion into 3D Porous Carbon Scaffolds with Hybridized Lithiophobic and Lithiophilic Surfaces by In-Operando Study. Nano Letters, 2020, 20, 3681-3687. | 9.1 | 20 |
| 35 | Ultrahigh-strength submicron-sized metallic glass wires. Scripta Materialia, 2014, 84-85, 27-30. | 5.2 | 17 |
| 36 | Fabrication of dense B4C-preceramic polymer derived SiC composite. Journal of the European Ceramic Society, 2019, 39, 718-725. | 5.7 | 17 |

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|---|---|---|---|
| 37 | Overcoming challenges in the study of nitrided microalloyed steels using atom probe. Ultramicroscopy, 2012, 112, 32-38. | 1.9 | 15 |
| 38 | Understanding the interaction of extension twinning and basal-plate precipitates in Mg-9Al using precession electron diffraction. Materialia, 2021, 15, 101044. | 2.7 | 15 |
| 39 | Experimental observations of the mechanisms associated with the high hardening and low strain to failure of magnesium. Materialia, 2019, 8, 100504. | 2.7 | 13 |
| 40 | Grain-subdivision-dominated microstructure evolution in shear bands at high rates. Materials Research Letters, 2020, 8, 328-334. | 8.7 | 13 |
| 41 | In vitro study of the effect of cyclic strains on the dermal fibroblast (GM3384) morphologyâ€"Mapping of cell responses to strain field. Medical Engineering and Physics, 2012, 34, 826-831. | 1.7 | 12 |
| 42 | Precipitation of AlN in a commercial hot-pressed boron carbide. Scripta Materialia, 2015, 101, 95-98. | 5.2 | 12 |
| 43 | An etÂal. Reply:. Physical Review Letters, 2017, 118, 089602. | 7.8 | 12 |
| 44 | Small amount TiB<sub>2</sub> addition into B<sub>4</sub>C through sputter deposition and hot pressing. Journal of the American Ceramic Society, 2019, 102, 4421-4426. | 3.8 | 12 |
| 45 | Molten salt synthesis of highly ordered and nanostructured hexagonal boron nitride. Diamond and Related Materials, 2019, 93, 179-186. | 3.9 | 12 |
| 46 | Twin boundary migration mechanisms in quasi-statically compressed and plate-impacted Mg single crystals. Science Advances, 2021, 7, eabg3443. | 10.3 | 12 |
| 47 | Twinning pathways enabled by precipitates in AZ91. Materialia, 2022, 21, 101292. | 2.7 | 12 |
| 48 | Addressing amorphization and transgranular fracture of B<sub>4</sub>C through Si doping and TiB<sub>2</sub> microparticle reinforcing. Journal of the American Ceramic Society, 2022, 105, 2959-2977. | 3.8 | 11 |
| 49 | High Moisture Barrier with Synergistic Combination of SiO<sub>x</sub> and Polyelectrolyte Nanolayers. Advanced Materials Interfaces, 2019, 6, 1900740. | 3.7 | 10 |
| 50 | Effect of synthesis conditions of BCNO on the formation and structural ordering of boron nitride at high temperatures. Journal of Solid State Chemistry, 2019, 269, 212-219. | 2.9 | 10 |
| 51 | Formation of metastable wurtzite phase boron nitride by emulsion detonation synthesis. Journal of the American Ceramic Society, 2018, 101, 3276-3281. | 3.8 | 9 |
| 52 | Non-dissociated <c+a> dislocations in an AZ31 alloy revealed by transmission electron microscopy. Materials Research Letters, 2020, 8, 145-150. | 8.7 | 8 |
| 53 | Nano-scale Elastic Strain Maps of Twins in Magnesium Alloys. Microscopy and Microanalysis, 2018, 24, 970-971. | 0.4 | 7 |
| 54 | On the exceptionally high ductility of Mgâ€"2Zn-0.3Ca-0.2Ce-0.1Mn alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 819, 141484. | 5.6 | 6 |

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|---|---|---|---|
| 55 | Large areal capacity and dendrite-free anodes with long lifetime enabled by distributed lithium plating with mossy manganese oxides. Journal of Materials Chemistry A, 2021, 9, 9291-9300. | 10.3 | 6 |
| 56 | Effect of local twin Schmid factor on the tension twinning activities in a highly textured Mgâ€“3Alâ€“1Zn alloy under different strain paths. MRS Communications, 2022, 12, 217-222. | 1.8 | 6 |
| 57 | Decoupling the metalâ€“insulator transition temperature and hysteresis of VO<sub>2</sub> using Ge alloying and oxygen vacancies. Chemical Communications, 2022, 58, 6586-6589. | 4.1 | 6 |
| 58 | Spatial decomposition of molecular ions within 3D atom probe reconstructions. Ultramicroscopy, 2013, 132, 92-99. | 1.9 | 5 |
| 59 | The Effect of Microstructure Morphology on Indentation Response of Ta/Ti Nanocomposite Thin Films. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 5677-5690. | 2.2 | 5 |
| 60 | The mechanical behaviour of TiN and multi-layered coating of TiN/Ti on Ti6Al4V substrate during nano-indentation. International Journal of Surface Science and Engineering, 2014, 8, 95. | 0.4 | 4 |
| 61 | Persistence of crystal orientations across sub-micron-scale â€œsuper-grainsâ€•in self-organized Cu-W nanocomposites. Scripta Materialia, 2021, 194, 113677. | 5.2 | 4 |
| 62 | Experimental observations of amorphization in multiple generations of boron carbide. Journal of the American Ceramic Society, 2022, 105, 3008-3029. | 3.8 | 4 |
| 63 | Structure and substructure characterization of solution-treated Ni50.3Ti29.7Hf20 high-temperature shape memory alloy. Scripta Materialia, 2022, 219, 114888. | 5.2 | 4 |
| 64 | High Strength and Retained Ductility Achieved in a Nitrided Strip Cast Nb-Microalloyed Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 848-855. | 2.2 | 3 |
| 65 | Interface stability of laser powder-bed-fused AlSi12 under simulated atmospheric conditions. Corrosion Science, 2020, 175, 108861. | 6.6 | 3 |
| 66 | The effect of boron and aluminum additions on the microstructure of arcâ€•melted boron carbide. Journal of the American Ceramic Society, 2020, 103, 3453-3457. | 3.8 | 3 |
| 67 | Nitriding of a Nb-Microalloyed Thin Strip Cast Steel at 525Â°C. Materials Science Forum, 0, 654-656, 106-109. | 0.3 | 2 |
| 68 | An Overview of the Effect of Nb in Strengthening Castrip<sup>Â®</sup> Steel. Materials Science Forum, 2013, 753, 559-562. | 0.3 | 2 |
| 69 | The mechanical behavior of single crystal and polycrystalline pure magnesium. Mechanics of Materials, 2021, 163, 104078. | 3.2 | 2 |
| 70 | Damage relief of ion-irradiated Inconel alloy 718 via annealing. Nuclear Instruments & Methods in Physics Research B, 2020, 479, 157-162. | 1.4 | 2 |
| 71 | Revealing the Microstructural Information of the Quasi-Plastic Zone in a Boron Carbide Using the Advanced Precession Electron Diffraction Technique. Microscopy and Microanalysis, 2019, 25, 788-789. | 0.4 | 1 |
| 72 | Dislocation Imaging by Precession Electron Diffraction. Microscopy and Microanalysis, 2020, 26, 226-227. | 0.4 | 1 |

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|---|---|---|---|
| 73 | Comparative study of helium bubbles in a Ti-Ta alloy and a Ti/Ta nanocomposite. Philosophical Magazine Letters, 2020, 100, 307-318. | 1.2 | 1 |
| 74 | In vitro studies of cells grown on the superconductor PrOxFeAs. Micron, 2009, 40, 476-479. | 2.2 | 0 |
| 75 | Effect of Twin Schmid Factor on the Tension Twinning Activities in a Highly Textured Mg-3Al-1Zn. SSRN Electronic Journal, 0, , . | 0.4 | 0 |
| 76 | Dislocation imaging via the virtual dark-field technique using the precession electron diffraction data. Microscopy and Microanalysis, 2021, 27, 2916-2917. | 0.4 | 0 |
| 77 | Applications of analytical electron microscopy to guide the design of boron carbide. Journal of the American Ceramic Society, 0, , . | 3.8 | 0 |
| 78 | Deformation behavior of Mg single crystals compressed along c-axis. , 2016, , 209-211. | | 0 |