Xavier Maeder

List of Publications by Year
in descending order

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49 papers	995 citations	430874 18 h-index	454955 30 g-index
51 all docs	51 docs citations	51 times ranked	1180 citing authors

#	Article	IF	Citations
1	Abnormal grain growth in ultrafine grained Ni under high-cycle loading. Scripta Materialia, 2022, 209, 114372.	5.2	9
2	In-situ diffraction based observations of slip near phase boundaries in titanium through micropillar compression. Materials Characterization, 2022, 184, 111695.	4.4	3
3	Phase and microstructure control of electrodeposited Manganese Oxide with enhanced optical properties. Applied Surface Science, 2022, 580, 152289.	6.1	13
4	Anomalous high strain rate compressive behavior of additively manufactured copper micropillars. Applied Materials Today, 2022, 27, 101415.	4.3	5
5	Evolution of deformation twinning mechanisms in magnesium from low to high strain rates. Materials and Design, 2022, 217, 110646.	7.0	8
6	Processability, microstructure and precipitation of a Zr-modified 2618 aluminium alloy fabricated by laser powder bed fusion. Journal of Alloys and Compounds, 2022, 913, 165346.	5.5	11
7	Monolithic and Single-Crystalline Aluminumâ€“Silicon Heterostructures. ACS Applied Materials & Interfaces, 2022, 14, 26238-26244.	8.0	13
8	Dynamic cryo-mechanical properties of additively manufactured nanocrystalline nickel 3D microarchitectures. Materials and Design, 2022, 220, 110836.	7.0	4
9	{<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:mn>10</mml:mn><mml:mover accent="true"><mml:mn>1</mml:mn><mml:mo stretchy="true">Â¯</mml:mo></mml:mover><mml:mn>2</mml:mn></mml:math>} twinning mechanism during in situ micro-tensile loading of pure Mg: Role of basal slip and twin-twin interactions. Materials and Design, 2021, 197, 109206.	7.0	24
10	In Situ Atomic Force Microscopy Depth-Corrected Three-Dimensional Focused Ion Beam Based Time-of-Flight Secondary Ion Mass Spectroscopy: Spatial Resolution, Surface Roughness, Oxidation. Microscopy and Microanalysis, 2021, 27, 65-73.	0.4	6
11	High temperature nanoindentation of Cuâ€“TiN nanolaminates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 804, 140522.	5.6	5
12	Monolithic Metalâ€“Semiconductorâ€“Metal Heterostructures Enabling Next-Generation Germanium Nanodevices. ACS Applied Materials & Interfaces, 2021, 13, 12393-12399.	8.0	13
13	Polycrystalline Ge Nanosheets Embedded in Metalâ€Semiconductor Heterostructures Enabling Waferâ€Scale 3D Integration of Ge Nanodevices with Selfâ€Aligned Al Contacts. Advanced Electronic Materials, 2021, 7, 2100101.	5.1	5
14	Revealing Nanoscale deformation mechanisms caused by shear-based material removal on individual grains of a Ni-based superalloy. Acta Materialia, 2021, 212, 116929.	7.9	15
15	3D Bi₂Te₃ Interconnected Nanowire Networks to Increase Thermoelectric Efficiency. ACS Applied Energy Materials, 2021, 4, 13556-13566.	5.1	9
16	Investigation of geometrically necessary dislocation structures in compressed Cu micropillars by 3-dimensional HR-EBSD. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 770, 138499.	5.6	26
17	Combinatorial investigation of Alâ€“Cu intermetallics using small-scale mechanical testing. Journal of Alloys and Compounds, 2020, 822, 153536.	5.5	24
18	3D magnetic patterning in additive manufacturing via site-specific in-situ alloy modification. Applied Materials Today, 2020, 18, 100512.	4.3	13

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19	3D HR-EBSD Characterization of the plastic zone around crack tips in tungsten single crystals at the micron scale. Acta Materialia, 2020, 200, 211-222.	7.9	30
20	Synthesis of model Al-Al2O3 multilayer systems with monolayer oxide thickness control by circumventing native oxidation. Thin Solid Films, 2020, 711, 138287.	1.8	14
21	Crystal Structure Evolution, Microstructure Formation, and Properties of Mechanically Alloyed Ultrafine-Grained Ti-Zr-Nb Alloys at 36â‰Tiâ‰70 (at. %). Materials, 2020, 13, 587.	2.9	7
22	A computational and experimental comparison on the nucleation of fatigue cracks in statistical volume elements. International Journal of Fatigue, 2020, 137, 105633.	5.7	14
23	Dual-templated electrodeposition and characterization of regular metallic foam based microarchitectures. Applied Materials Today, 2020, 20, 100667.	4.3	5
24	A self-aligning microtensile setup: Application to single-crystal GaAs microscale tensionâ€“compression asymmetry. Journal of Materials Research, 2019, 34, 2517-2534.	2.6	18
25	Grain refinement mechanism of nickel-based superalloy by severe plastic deformation - Mechanical machining case. Acta Materialia, 2019, 180, 2-14.	7.9	103
26	The effect of Î´-hydride on the micromechanical deformation of a Zr alloy studied by in situ high angular resolution electron backscatter diffraction. Scripta Materialia, 2019, 173, 101-105.	5.2	18
27	Pulsed current-voltage electrodeposition of stoichiometric Bi2Te3 nanowires and their crystallographic characterization by transmission electron backscatter diffraction. Science and Technology of Advanced Materials, 2019, 20, 1022-1030.	6.1	7
28	Mechanical Anisotropy Investigated in the Complex SLMâ€Processed Scâ€•and Zrâ€Modified Alâ€“Mg Alloy Microstructure. Advanced Engineering Materials, 2019, 21, 1801113.	3.5	26
29	The role of Î²-titanium ligaments in the deformation of dual phase titanium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 746, 394-405.	5.6	22
30	Microstructural and micromechanical investigations of surface strengthening mechanisms induced by repeated impacts on pure iron. Materials and Design, 2018, 147, 56-64.	7.0	21
31	Interplay of stresses, plasticity at crack tips and small sample dimensions revealed by in-situ microcantilever tests in tungsten. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 710, 400-412.	5.6	15
32	In situ micromechanical testing of tungsten micro-cantilevers using HR-EBSD for the assessment of deformation evolution. Materials and Design, 2017, 117, 265-266.	7.0	23
33	Microstructure and mechanical properties of near net shaped aluminium/alumina nanocomposites fabricated by powder metallurgy. Journal of Alloys and Compounds, 2017, 714, 133-143.	5.5	43
34	Elevated temperature, micro-compression transient plasticity tests on nanocrystalline Palladium-Gold: Probing activation parameters at the lower limit of crystallinity. Acta Materialia, 2017, 129, 124-137.	7.9	13
35	Electrodeposition of dilute Ni-W alloy with enhanced thermal stability: Accessing nanotwinned to nanocrystalline microstructures. Materials Today Communications, 2017, 12, 63-71.	1.9	14
36	Reversible, high temperature softening of plasma-nitrided hot-working steel studied using in situ micro-pillar compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 680, 433-436.	5.6	4

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37	Annealing-Based Electrical Tuning of Cobaltâ€“Carbon Deposits Grown by Focused-Electron-Beam-Induced Deposition. ACS Applied Materials & Interfaces, 2016, 8, 32496-32503.	8.0	28
38	Microstructure, Mechanical, and Impression Creep Properties of AlMg5â€“0.5 vol% Al₂O₃ Nanocomposites. Advanced Engineering Materials, 2016, 18, 1958-1966.	3.5	8
39	Silicon etch with chromium ions generated by a filtered or non-filtered cathodic arc discharge. Science and Technology of Advanced Materials, 2016, 17, 20-28.	6.1	1
40	Influence of microstructure and strengthening mechanism of AlMg5â€“Al 2 O 3 nanocomposites prepared via spark plasma sintering. Materials and Design, 2016, 95, 534-544.	7.0	49
41	Nanomechanical investigation of thin-film electroceramic/metal-organic framework multilayers. Applied Physics Letters, 2015, 107, .	3.3	9
42	Comparison of In Situ Micromechanical Strain-Rate Sensitivity Measurement Techniques. Jom, 2015, 67, 1684-1693.	1.9	35
43	Complex vein systems as a data source in tectonics: An example from the Ugab Valley, NW Namibia. Journal of Structural Geology, 2014, 62, 125-140.	2.3	10
44	Plasticity and fracture of sapphire at room temperature: Load-controlled microcompression of four different orientations. Ceramics International, 2014, 40, 2083-2090.	4.8	58
45	Crystallographic Services and Technology Support for Industry. Chimia, 2014, 68, 14-18.	0.6	0
46	Pinch-and-swell structure and shear zones in viscoplastic layers. Journal of Structural Geology, 2012, 37, 75-88.	2.3	49
47	Synthesis Mechanisms of Organized Gold Nanoparticles: Influence of Annealing Temperature and Atmosphere. Crystal Growth and Design, 2010, 10, 587-596.	3.0	122
48	Modelling of segment structures: Boudins, bone-boudins, mullions and related single- and multiphase deformation features. Journal of Structural Geology, 2009, 31, 817-830.	2.3	20
49	Flame foliation: Evidence for a schistosity formed normal to the extension direction. Journal of Structural Geology, 2007, 29, 378-384.	2.3	3