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	Synthesis Mechanisms of Organized Gold Nanoparticles: Influence of Annealing Temperature and Atmosphere. Crystal Growth and Design, 2010, 10, 587-596.	3.0	122
2	Grain refinement mechanism of nickel-based superalloy by severe plastic deformation - Mechanical machining case. Acta Materialia, 2019, 180, 2-14.	7.9	103
3	Plasticity and fracture of sapphire at room temperature: Load-controlled microcompression of four different orientations. Ceramics International, 2014, 40, 2083-2090.	4.8	58
4	Pinch-and-swell structure and shear zones in viscoplastic layers. Journal of Structural Geology, 2012, 37, 75-88.	2.3	49
5	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
6	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
7	Comparison of In Situ Micromechanical Strain-Rate Sensitivity Measurement Techniques. Jom, 2015, 67, 1684-1693.	1.9	35
8	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
9	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
10	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
11	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
12	Combinatorial investigation of Alâ€“Cu intermetallics using small-scale mechanical testing. Journal of Alloys and Compounds, 2020, 822, 153536.	5.5	24
13	{<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
14	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
15	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
16	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
17	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
18	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

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19	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
20	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
21	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
22	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
23	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
24	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
25	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
26	3D magnetic patterning in additive manufacturing via site-specific in-situ alloy modification. Applied Materials Today, 2020, 18, 100512.	4.3	13
27	Monolithic Metalâ€“Semiconductorâ€“Metal Heterostructures Enabling Next-Generation Germanium Nanodevices. ACS Applied Materials & Interfaces, 2021, 13, 12393-12399.	8.0	13
28	Phase and microstructure control of electrodeposited Manganese Oxide with enhanced optical properties. Applied Surface Science, 2022, 580, 152289.	6.1	13
29	Monolithic and Single-Crystalline Aluminumâ€“Silicon Heterostructures. ACS Applied Materials & Interfaces, 2022, 14, 26238-26244.	8.0	13
30	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
31	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
32	Nanomechanical investigation of thin-film electroceramic/metal-organic framework multilayers. Applied Physics Letters, 2015, 107, .	3.3	9
33	Abnormal grain growth in ultrafine grained Ni under high-cycle loading. Scripta Materialia, 2022, 209, 114372.	5.2	9
34	3D Bi₂Te₃ Interconnected Nanowire Networks to Increase Thermoelectric Efficiency. ACS Applied Energy Materials, 2021, 4, 13556-13566.	5.1	9
35	Microstructure, Mechanical, and Impression Creep Properties of AlMg5â€“0.5 vol% Al₂O₃ Nanocomposites. Advanced Engineering Materials, 2016, 18, 1958-1966.	3.5	8
36	Evolution of deformation twinning mechanisms in magnesium from low to high strain rates. Materials and Design, 2022, 217, 110646.	7.0	8

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37	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
38	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
39	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
40	High temperature nanoindentation of Cuâ€“TiN nanolaminates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 804, 140522.	5.6	5
41	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
42	Dual-templated electrodeposition and characterization of regular metallic foam based microarchitectures. Applied Materials Today, 2020, 20, 100667.	4.3	5
43	Anomalous high strain rate compressive behavior of additively manufactured copper micropillars. Applied Materials Today, 2022, 27, 101415.	4.3	5
44	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
45	Dynamic cryo-mechanical properties of additively manufactured nanocrystalline nickel 3D microarchitectures. Materials and Design, 2022, 220, 110836.	7.0	4
46	Flame foliation: Evidence for a schistosity formed normal to the extension direction. Journal of Structural Geology, 2007, 29, 378-384.	2.3	3
47	In-situ diffraction based observations of slip near phase boundaries in titanium through micropillar compression. Materials Characterization, 2022, 184, 111695.	4.4	3
48	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
49	Crystallographic Services and Technology Support for Industry. Chimia, 2014, 68, 14-18.	0.6	0