Marc Heggen

List of Publications by Year
in descending order

195 papers	10,297 citations	38742 50 h-index	37204 96 g-index
199 all docs	199 docs citations	199 times ranked	11206 citing authors

#	Article	IF	Citations
1	Compositional segregation in shaped Pt alloy nanoparticles and their structural behaviour during electrocatalysis. Nature Materials, 2013, 12, 765-771.	27.5	1,121
2	Octahedral PtNi Nanoparticle Catalysts: Exceptional Oxygen Reduction Activity by Tuning the Alloy Particle Surface Composition. Nano Letters, 2012, 12, 5885-5889.	9.1	522
3	A unique oxygen ligand environment facilitates water oxidation in hole-doped IrNiOx coreâ€“shell electrocatalysts. Nature Catalysis, 2018, 1, 841-851.	34.4	424
4	Coreâ€“Shell Compositional Fine Structures of Dealloyed Pt_{<i>x</i>}Ni_{1â€“<i>x</i>} Nanoparticles and Their Impact on Oxygen Reduction Catalysis. Nano Letters, 2012, 12, 5423-5430.	9.1	352
5	Al13Fe4 as a low-cost alternative for palladium in heterogeneous hydrogenation. Nature Materials, 2012, 11, 690-693.	27.5	344
6	Size-Dependent Morphology of Dealloyed Bimetallic Catalysts: Linking the Nano to the Macro Scale. Journal of the American Chemical Society, 2012, 134, 514-524.	13.7	340
7	Element-specific anisotropic growth of shaped platinum alloy nanocrystals. Science, 2014, 346, 1502-1506.	12.6	277
8	Synthesis, Structure, Properties, and Applications of Bimetallic Nanoparticles of Noble Metals. Advanced Functional Materials, 2020, 30, 1909260.	14.9	274
9	Visible-light-driven coproduction of diesel precursors and hydrogen from lignocellulose-derived methylfurans. Nature Energy, 2019, 4, 575-584.	39.5	268
10	Understanding and Controlling Nanoporosity Formation for Improving the Stability of Bimetallic Fuel Cell Catalysts. Nano Letters, 2013, 13, 1131-1138.	9.1	261
11	Rh-Doped Ptâ€“Ni Octahedral Nanoparticles: Understanding the Correlation between Elemental Distribution, Oxygen Reduction Reaction, and Shape Stability. Nano Letters, 2016, 16, 1719-1725.	9.1	238
12	Promoting Lignin Depolymerization and Restraining the Condensation via an Oxidationâ^'Hydrogenation Strategy. ACS Catalysis, 2017, 7, 3419-3429.	11.2	172
13	Synthesis and Catalytic Properties of Nanoparticulate Intermetallic Gaâ€“Pd Compounds. Journal of the American Chemical Society, 2011, 133, 9112-9118.	13.7	165
14	Creation and annihilation of free volume during homogeneous flow of a metallic glass. Journal of Applied Physics, 2005, 97, 033506.	2.5	161
15	Transport and retention of multi-walled carbon nanotubes in saturated porous media: Effects of input concentration and grain size. Water Research, 2013, 47, 933-944.	11.3	160
16	Acid-Promoter-Free Ethylene Methoxycarbonylation over Ru-Clusters/Ceria: The Catalysis of Interfacial Lewis Acidâ€“Base Pair. Journal of the American Chemical Society, 2018, 140, 4172-4181.	13.7	157
17	Elemental Anisotropic Growth and Atomic-Scale Structure of Shape-Controlled Octahedral Ptâ€“Niâ€“Co Alloy Nanocatalysts. Nano Letters, 2015, 15, 7473-7480.	9.1	156
18	Tuning the Electrocatalytic Oxygen Reduction Reaction Activity and Stability of Shape-Controlled Ptâ€“Ni Nanoparticles by Thermal Annealing â^' Elucidating the Surface Atomic Structural and Compositional Changes. Journal of the American Chemical Society, 2017, 139, 16536-16547.	13.7	144

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19	Confinedâ€Space Alloying of Nanoparticles for the Synthesis of Efficient PtNi Fuelâ€Cell Catalysts. Angewandte Chemie - International Edition, 2014, 53, 14250-14254.	13.8	136
20	Room temperature demonstration of a sodium superionic conductor with grain conductivity in excess of 0.01 S cm^{âˆ’1} and its primary applications in symmetric battery cells. Journal of Materials Chemistry A, 2019, 7, 7766-7776.	10.3	129
21	Engineering stable electrocatalysts by synergistic stabilization between carbide cores and Pt shells. Nature Materials, 2020, 19, 287-291.	27.5	120
22	Retention and Remobilization of Stabilized Silver Nanoparticles in an Undisturbed Loamy Sand Soil. Environmental Science & Technology, 2013, 47, 12229-12237.	10.0	118
23	Amorphizing noble metal chalcogenide catalysts at the single-layer limit towards hydrogen production. Nature Catalysis, 2022, 5, 212-221.	34.4	113
24	Stability of Dealloyed Porous Pt/Ni Nanoparticles. ACS Catalysis, 2015, 5, 5000-5007.	11.2	110
25	High CO₂ Selectivity in Methanol Steam Reforming through ZnPd/ZnO Teamwork. Angewandte Chemie - International Edition, 2013, 52, 4389-4392.	13.8	108
26	Formation and Analysis of Coreâ€“Shell Fine Structures in Pt Bimetallic Nanoparticle Fuel Cell Electrocatalysts. Journal of Physical Chemistry C, 2012, 116, 19073-19083.	3.1	105
27	Yin and Yang Dual Characters of CuO_{<i>x</i>} Clusters for Câ€“C Bond Oxidation Driven by Visible Light. ACS Catalysis, 2017, 7, 3850-3859.	11.2	103
28	Sizeâ€Controlled Synthesis of Subâ€10 nm PtNi₃ Alloy Nanoparticles and their Unusual Volcanoâ€Shaped Size Effect on ORR Electrocatalysis. Small, 2016, 12, 3189-3196.	10.0	99
29	Controlling Near-Surface Ni Composition in Octahedral PtNi(Mo) Nanoparticles by Mo Doping for a Highly Active Oxygen Reduction Reaction Catalyst. Nano Letters, 2019, 19, 6876-6885.	9.1	95
30	Carbon Monoxide-Assisted Size Confinement of Bimetallic Alloy Nanoparticles. Journal of the American Chemical Society, 2014, 136, 4813-4816.	13.7	91
31	Atomically dispersed Fe in a C₂N Based Catalyst as a Sulfur Host for Efficient Lithiumâ€“Sulfur Batteries. Advanced Energy Materials, 2021, 11, 2003507.	19.5	91
32	Shape-selected bimetallic nanoparticle electrocatalysts: evolution of their atomic-scale structure, chemical composition, and electrochemical reactivity under various chemical environments. Faraday Discussions, 2013, 162, 91.	3.2	86
33	A High Conductivity 1D Ï€â€“d Conjugated Metalâ€“Organic Framework with Efficient Polysulfide Trappingâ€Diffusionâ€Catalysis in Lithiumâ€“Sulfur Batteries. Advanced Materials, 2022, 34, e2108835.	21.0	86
34	The Effect of Surface Site Ensembles on the Activity and Selectivity of Ethanol Electrooxidation by Octahedral PtNiRh Nanoparticles. Angewandte Chemie - International Edition, 2017, 56, 6533-6538.	13.8	81
35	Cleavage of the lignin Î²-O-4 ether bond via a dehydroxylationâ€“hydrogenation strategy over a NiMo sulfide catalyst. Green Chemistry, 2016, 18, 6545-6555.	9.0	80
36	Thermal Facet Healing of Concave Octahedral Ptâ€“Ni Nanoparticles Imaged in Situ at the Atomic Scale: Implications for the Rational Synthesis of Durable High-Performance ORR Electrocatalysts. ACS Catalysis, 2016, 6, 692-695.	11.2	78

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37	Interface Engineering in Nanostructured Nickel Phosphide Catalyst for Efficient and Stable Water Oxidation. ACS Catalysis, 2017, 7, 5450-5455.	11.2	74
38	Dealloyed PtNi-Coreâ€“Shell Nanocatalysts Enable Significant Lowering of Pt Electrode Content in Direct Methanol Fuel Cells. ACS Catalysis, 2019, 9, 3764-3772.	11.2	66
39	Boosting Photoelectrochemical Water Oxidation of Hematite in Acidic Electrolytes by Surface State Modification. Advanced Energy Materials, 2019, 9, 1901836.	19.5	64
40	Plastic-deformation mechanism in complex solids. Nature Materials, 2010, 9, 332-336.	27.5	62
41	Unravelling Degradation Pathways of Oxideâ€Supported Pt Fuel Cell Nanocatalysts under In Situ Operating Conditions. Advanced Energy Materials, 2018, 8, 1701663.	19.5	62
42	Shape Stability of Octahedral PtNi Nanocatalysts for Electrochemical Oxygen Reduction Reaction Studied by <i>in situ</i> Transmission Electron Microscopy. ACS Nano, 2018, 12, 5306-5311.	14.6	62
43	Operando high-pressure investigation of size-controlled CuZn catalysts for the methanol synthesis reaction. Nature Communications, 2021, 12, 1435.	12.8	62
44	Formation of unexpectedly active Niâ€“Fe oxygen evolution electrocatalysts by physically mixing Ni and Fe oxyhydroxides. Chemical Communications, 2019, 55, 818-821.	4.1	57
45	Nanostructure of wet-chemically prepared, polymer-stabilized silverâ€“gold nanoalloys (6 nm) over the entire composition range. Journal of Materials Chemistry B, 2015, 3, 4654-4662.	5.8	56
46	Structureâ€“Activityâ€“Stability Relationships for Space-Confined Pt_{<i>x</i>}Ni_{<i>y</i>} Nanoparticles in the Oxygen Reduction Reaction. ACS Catalysis, 2016, 6, 8058-8068.	11.2	56
47	Niâ€“perovskite interaction and its structural and catalytic consequences in methane steam reforming and methanation reactions. Journal of Catalysis, 2016, 337, 26-35.	6.2	56
48	In Situ-Determined Catalytically Active State of LaNiO₃ in Methane Dry Reforming. ACS Catalysis, 2020, 10, 1102-1112.	11.2	55
49	Selective reduction of CO2 to CO under visible light by controlling coordination structures of CeOx-S/ZnIn2S4 hybrid catalysts. Applied Catalysis B: Environmental, 2019, 245, 262-270.	20.2	53
50	Exsolution of Fe and SrO Nanorods and Nanoparticles from Lanthanum Strontium Ferrite La_{0.6}Sr_{0.4}FeO_{3âˆ’Î´} Materials by Hydrogen Reduction. Journal of Physical Chemistry C, 2015, 119, 22050-22056.	3.1	52
51	Room-temperature all-solid-state sodium batteries with robust ceramic interface between rigid electrolyte and electrode materials. Nano Energy, 2019, 65, 104040.	16.0	52
52	Ultrasmall gold nanoparticles (2Ânm) can penetrate and enter cell nuclei in an in vitro 3D brain spheroid model. Acta Biomaterialia, 2020, 111, 349-362.	8.3	51
53	Shape-Controlled Nanoparticles in Pore-Confined Space. Journal of the American Chemical Society, 2018, 140, 15684-15689.	13.7	48
54	Reinvestigation of the Alâ€“Mnâ€“Pd alloy system in the vicinity of the T- and R-phases. Intermetallics, 2008, 16, 71-87.	3.9	46

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55	Features of Transport in Ultrathin Gold Nanowire Structures. Small, 2013, 9, 846-852.	10.0	44
56	Structure investigation of the (100) surface of the orthorhombic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Al</mml:mtext></mml:mrow><mml:mrow><mml:mn>13</mml:m Physical Review B, 2009, 80, .	3.2	43
57	Click Chemistry on the Surface of Ultrasmall Gold Nanoparticles (2 nm) for Covalent Ligand Attachment Followed by NMR Spectroscopy. Langmuir, 2019, 35, 7191-7204.	3.5	38
58	Steering the Methane Dry Reforming Reactivity of Ni/La₂O₃ Catalysts by Controlled In Situ Decomposition of Doped La₂NiO₄ Precursor Structures. ACS Catalysis, 2021, 11, 43-59.	11.2	38
59	Atomically dispersed hybrid nickel-iridium sites for photoelectrocatalysis. Nature Communications, 2017, 8, 1341.	12.8	37
60	Concave curvature facets benefit oxygen electroreduction catalysis on octahedral shaped PtNi nanocatalysts. Journal of Materials Chemistry A, 2019, 7, 1149-1159.	10.3	37
61	Peculiar hydrogenation reactivity of Niâ€"NiÎ´+ clusters stabilized by ceria in reducing nitrobenzene to azoxybenzene. Journal of Catalysis, 2017, 353, 107-115.	6.2	36
62	Conjugation of thiol-terminated molecules to ultrasmall 2 nm-gold nanoparticles leads to remarkably complex ¹H-NMR spectra. Journal of Materials Chemistry B, 2016, 4, 2179-2189.	5.8	35
63	Broken ergodicity, memory effect, and rejuvenation in Taylor-phase and decagonal<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">Al</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mrow><mml:mo>(</mml:mo><mml:mi) Tj ETQq1 1 0.78	3.2	34
64	Bimetallic silverâ€"platinum nanoparticles with combined osteo-promotive and antimicrobial activity. Nanotechnology, 2019, 30, 305101.	2.6	34
65	The effect of interfacial pH on the surface atomic elemental distribution and on the catalytic reactivity of shape-selected bimetallic nanoparticles towards oxygen reduction. Nano Energy, 2016, 27, 390-401.	16.0	33
66	Deciphering the Surface Composition and the Internal Structure of Alloyed Silverâ€"Gold Nanoparticles. Chemistry - A European Journal, 2018, 24, 9051-9060.	3.3	32
67	Cluster Beam Deposition of Ultrafine Cobalt and Ruthenium Clusters for Efficient and Stable Oxygen Evolution Reaction. ACS Applied Energy Materials, 2018, 1, 3013-3018.	5.1	29
68	Magnetic and transport properties of the giant-unit-cell Al3.26Mg2 complex metallic alloy. Intermetallics, 2007, 15, 1367-1376.	3.9	28
69	Plastic deformation properties of the orthorhombic complex metallic alloy phase Al13Co4. Intermetallics, 2007, 15, 1425-1431.	3.9	28
70	Time Evolution of the Stability and Oxygen Reduction Reaction Activity of PtCu/C Nanoparticles. ChemCatChem, 2013, 5, 2627-2635.	3.7	28
71	Composition-Tuned Pt-Skinned PtNi Bimetallic Clusters as Highly Efficient Methanol Dehydrogenation Catalysts. Chemistry of Materials, 2019, 31, 10040-10048.	6.7	28
72	Solution NMR Spectroscopy with Isotope-Labeled Cysteine (¹³C and ¹⁵N) Reveals the Surface Structure of <scp>l</scp>-Cysteine-Coated Ultrasmall Gold Nanoparticles (1.8) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.5	28

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73	A thermal memory cell. Journal of Applied Physics, 2009, 106, .	2.5	27
74	Probing the effect of surface chemistry on the electrical properties of ultrathin gold nanowire sensors. Nanoscale, 2014, 6, 5146-5155.	5.6	27
75	Molecular Engineering to Tune the Ligand Environment of Atomically Dispersed Nickel for Efficient Alcohol Electrochemical Oxidation. Advanced Functional Materials, 2021, 31, 2106349.	14.9	27
76	Single-crystal plasticity of the complex metallic alloy phase Î²-Alâ€"Mg. Intermetallics, 2007, 15, 833-837.	3.9	26
77	Novel metadislocation variants in orthorhombic Alâ€"Pdâ€"Fe. Acta Materialia, 2008, 56, 1849-1856.	7.9	26
78	Size and Composition Dependence of Oxygen Reduction Reaction Catalytic Activities of Mo-Doped PtNi/C Octahedral Nanocrystals. ACS Catalysis, 2021, 11, 11407-11415.	11.2	26
79	FEI Titan 80-300 STEM. Journal of Large-scale Research Facilities JLSRF, 0, 2, A42.	0.0	26
80	The Effect of Surface Site Ensembles on the Activity and Selectivity of Ethanol Electrooxidation by Octahedral PtNiRh Nanoparticles. Angewandte Chemie, 2017, 129, 6633-6638.	2.0	25
81	Combined experimental and theoretical study of acetylene semi-hydrogenation over Pd/Al2O3. International Journal of Hydrogen Energy, 2020, 45, 1283-1296.	7.1	25
82	Deformation behavior of an amorphous Cu64.5Zr35.5 alloy: A combined computer simulation and experimental study. Journal of Applied Physics, 2008, 104, .	2.5	24
83	Proving a Paradigm in Methanol Steam Reforming: Catalytically Highly Selective In_{<i>x</i>}Pd_{<i>y</i>}/In₂O₃ Interfaces. ACS Catalysis, 2021, 11, 304-312.	11.2	24
84	On the Crystallography of Silver Nanoparticles with Different Shapes. Crystal Growth and Design, 2016, 16, 3677-3687.	3.0	23
85	Metadislocations in the structurally complex orthorhombic alloy Al₁₃Co₄. Philosophical Magazine, 2008, 88, 2333-2338.	1.6	22
86	Structure of the (010) surface of the orthorhombic complex metallic alloy<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">T</mml:mi><mml:msub><mml:mrow><mml:mtext>-Al</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml Physical Review B, 2010, 81, .	3.2	22
87	The Role of Oxidative Etching in the Synthesis of Ultrathin Singleâ€Crystalline Au Nanowires. Chemistry - A European Journal, 2011, 17, 9503-9507.	3.3	22
88	Structural Complexity in Heterogeneous Catalysis: Cataloging Local Nanostructures. Journal of Physical Chemistry C, 2017, 121, 24093-24103.	3.1	22
89	Simultaneous Photonic and Excitonic Coupling in Spherical Quantum Dot Supercrystals. ACS Nano, 2020, 14, 13806-13815.	14.6	22
90	Atomic Insights into Aluminiumâ€Ion Insertion in Defective Anatase for Batteries. Angewandte Chemie - International Edition, 2020, 59, 19247-19253.	13.8	22

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91	Repairing Nanoparticle Surface Defects. Angewandte Chemie - International Edition, 2017, 56, 13795-13799.	13.8	21
92	Favoring the Growth of High-Quality, Three-Dimensional Supercrystals of Nanocrystals. Journal of Physical Chemistry C, 2020, 124, 11256-11264.	3.1	21
93	On the concept of metadislocations in complex metallic alloys. Philosophical Magazine, 2006, 86, 935-944.	1.6	20
94	A rapid, high-yield and large-scale synthesis of uniform spherical silver nanoparticles by a microwave-assisted polyol process. RSC Advances, 2015, 5, 92144-92150.	3.6	20
95	The ecotoxic potential of a new zero-valent iron nanomaterial, designed for the elimination of halogenated pollutants, and its effect on reductive dechlorinating microbial communities. Environmental Pollution, 2016, 216, 419-427.	7.5	20
96	Water-Gas Shift and Methane Reactivity on Reducible Perovskite-Type Oxides. Journal of Physical Chemistry C, 2015, 119, 11739-11753.	3.1	19
97	Anelastic strain and structural anisotropy in homogeneously deformed Cu64.5Zr35.5 metallic glass. Acta Materialia, 2008, 56, 5575-5583.	7.9	18
98	Enhanced oxygen evolution catalysis by aluminium-doped cobalt phosphide through <i>in situ</i> surface area increase. Catalysis Science and Technology, 2020, 10, 2398-2406.	4.1	18
99	NMR evidence for Coâ€“Alâ€“Co molecular groups trapped in cages of Co4Al13. Journal of Alloys and Compounds, 2009, 480, 141-143.	5.5	17
100	Interaction of phenol and dopamine with commercial MWCNTs. Journal of Colloid and Interface Science, 2011, 364, 469-475.	9.4	17
101	Lead adsorption on the Al₁₃Co₄(100) surface: heterogeneous nucleation and pseudomorphic growth. New Journal of Physics, 2011, 13, 103011.	2.9	17
102	Comparative biological effects of spherical noble metal nanoparticles (Rh, Pd, Ag, Pt, Au) with 4â€“8 nm diameter. Beilstein Journal of Nanotechnology, 2018, 9, 2763-2774.	2.8	17
103	Controlling the Surface Functionalization of Ultrasmall Gold Nanoparticles by Sequenceâ€Defined Macromolecules. Chemistry - A European Journal, 2021, 27, 1451-1464.	3.3	17
104	Peptide-Conjugated Ultrasmall Gold Nanoparticles (2 nm) for Selective Protein Targeting. ACS Applied Bio Materials, 2021, 4, 945-965.	4.6	17
105	Plastic deformation of Pd41Ni10Cu29P20 bulk metallic glass. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 1186-1190.	5.6	16
106	High-resolution scanning tunneling microscopy investigation of the (12110) and (10000) two-fold symmetric<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>-Al-Ni-Co quasicrystalline surfaces. Physical Review B, 2009, 80, .	3.2	16
107	Formation of ZnO Patches on ZnPd/ZnO during Methanol Steam Reforming: A Strong Metalâ€“Support Interaction Effect?. Journal of Physical Chemistry C, 2016, 120, 10460-10465.	3.1	16
108	Mechanistic in situ insights into the formation, structural and catalytic aspects of the La2NiO4 intermediate phase in the dry reforming of methane over Ni-based perovskite catalysts. Applied Catalysis A: General, 2021, 612, 117984.	4.3	16

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109	Anisotropic physical properties of the Taylor-phase<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>T</mml:mtext><mml:mtext>-Al</mml:mtext></mml:mrow><mm Physical Review B, 2010, 81, .	3.2	15
110	Electrochemically Induced Ostwald Ripening in Au/TiO₂ Nanocomposite. Journal of Physical Chemistry C, 2015, 119, 10336-10344.	3.1	15
111	Synthesis and biological characterization of alloyed silverâ€“platinum nanoparticles: from compact coreâ€“shell nanoparticles to hollow nanoalloys. RSC Advances, 2018, 8, 38582-38590.	3.6	15
112	Cobalt Hexacyanoferrate as a Selective and High Current Density Formate Oxidation Electrocatalyst. ACS Applied Energy Materials, 2020, 3, 9198-9207.	5.1	15
113	Strain and electric-field control of magnetism in supercrystalline iron oxide nanoparticleâ€“BaTiO₃ composites. Nanoscale, 2017, 9, 12957-12962.	5.6	14
114	High resolution transmission electron microscopy and electronic structure theory investigation of platinum nanoparticles on carbon black. Journal of Chemical Physics, 2019, 150, 041705.	3.0	14
115	Atomic-Scale Insights into Nickel Exsolution on LaNiO₃ Catalysts via <i>In Situ</i> Electron Microscopy. Journal of Physical Chemistry C, 2022, 126, 786-796.	3.1	14
116	Room temperature plasticity in m-Al13Co4 studied by microcompression and high resolution scanning transmission electron microscopy. Scripta Materialia, 2018, 146, 327-330.	5.2	13
117	Wetâ€Chemical Synthesis of Pdâ€Au Coreâ€Shell Nanoparticles (8â€…nm): From Nanostructure to Biological Properties. ChemistrySelect, 2018, 3, 4994-5001.	1.5	13
118	Repairing Nanoparticle Surface Defects. Angewandte Chemie, 2017, 129, 13983-13987.	2.0	13
119	An Efficient Method for Covalent Surface Functionalization of Ultrasmall Metallic Nanoparticles by Surface Azidation Followed by Copperâ€Catalyzed Azideâ€Alkyne Cycloaddition (Click Chemistry). ChemNanoMat, 2021, 7, 1330-1339.	2.8	13
120	Plastic deformation of icosahedral Zn-Mg-Dy single quasicrystals. Philosophical Magazine Letters, 2000, 80, 129-136.	1.2	12
121	Comprehensive model of metadislocation movement in Al 13 Co 4. Scripta Materialia, 2015, 98, 24-27.	5.2	12
122	The solâ€“gel autocombustion as a route towards highly CO₂-selective, active and long-term stable Cu/ZrO₂ methanol steam reforming catalysts. Materials Chemistry Frontiers, 2021, 5, 5093-5105.	5.9	12
123	New Tools to Probe the Protein Surface: Ultrasmall Gold Nanoparticles Carry Amino Acid Binders. Journal of Physical Chemistry B, 2021, 125, 115-127.	2.6	12
124	Metadislocations in the complex metallic alloys Tâ€“Alâ€“Mnâ€“ (Pd, Fe). Acta Materialia, 2011, 59, 4458-4466.	7.9	11
125	Core Structure and Motion of Metadislocations in the Orthorhombic Structurally Complex Alloy Al₁₃Co₄. Materials Research Letters, 2014, 2, 146-151.	8.7	11
126	Differentiating the structure of PtNi octahedral nanoparticles through combined ADFâ€“EDX simulations. Advanced Structural and Chemical Imaging, 2018, 4, 2.	4.0	11

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127	Enhanced antibacterial performance of ultrathin silver/platinum nanopatches by a sacrificial anode mechanism. Nanomedicine: Nanotechnology, Biology, and Medicine, 2020, 24, 102126.	3.3	11
128	Metadislocation arrangements in the complex metallic alloyÎ¾â€²-Alâ€“Pdâ€“Mn. Philosophical Magazine, 2006, 86, 985-990.	1.6	10
129	Morphological, Structural, and Compositional Evolution of Ptâ€“Ni Octahedral Electrocatalysts with Ptâ€Rich Edges and Niâ€Rich Core: Toward the Rational Design of Electrocatalysts for the Oxygen Reduction Reaction. Particle and Particle Systems Characterization, 2019, 36, 1800442.	2.3	10
130	Targeting the Surface of the Protein 14â€3â€3 by Ultrasmall (1.5â€…nm) Gold Nanoparticles Carrying the Specific Peptide CRaf. ChemBioChem, 2021, 22, 1456-1463.	2.6	10
131	Metalâ€“Ligand Interface and Internal Structure of Ultrasmall Silver Nanoparticles (2 nm). Journal of Physical Chemistry B, 2021, 125, 5645-5659.	2.6	10
132	Metadislocation reactions and metadislocation networks in the complex metallic alloy Î¾â€²-Alâ€“Pdâ€“Mn. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 400-401, 89-92.	5.6	9
133	Structural variations inÎµ-type Alâ€“Pdâ€“(Mn, Fe) complex metallic alloy phases. Philosophical Magazine, 2008, 88, 507-521.	1.6	9
134	X-ray powder diffraction to analyse bimetallic coreâ€“shell nanoparticles (gold and palladium; 7â€“8 nm). RSC Advances, 2019, 9, 26628-26636.	3.6	9
135	Combining Small-Angle X-ray Scattering and X-ray Powder Diffraction to Investigate Size, Shape and Crystallinity of Silver, Gold and Alloyed Silver-Gold Nanoparticles. Brazilian Journal of Physics, 2019, 49, 183-190.	1.4	9
136	Plasticity of icosahedral Znâ€“Mgâ€“Dy single quasicrystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 294-296, 781-785.	5.6	8
137	Metadislocation core structure and atomic model for metadislocation motion. Acta Materialia, 2013, 61, 3851-3857.	7.9	8
138	Chemical Vapor Deposition of Al₁₃Fe₄ Highly Selective Catalytic Films for the Semiâ€Hydrogenation of Acetylene. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700692.	1.8	8
139	Enhanced dissolution of silver nanoparticles in a physical mixture with platinum nanoparticles based on the sacrificial anode effect. Nanotechnology, 2020, 31, 055703.	2.6	8
140	Microstructural analysis of plastically deformed icosahedral Znâ€“Mgâ€“Dy single quasicrystals. Journal of Alloys and Compounds, 2002, 342, 330-336.	5.5	7
141	Defects in complex intermetallics and quasicrystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 84-89.	5.6	7
142	X-ray photoelectron diffraction on the 6-fold (001) Î¼-Al4Mn approximant surface. Philosophical Magazine, 2008, 88, 2095-2102.	1.6	7
143	Chapter 94 Metadislocations. Dislocations in Solids, 2010, , 109-170.	1.6	7
144	The growth and degradation of binary and ternary octahedral Ptâ€“Ni-based fuel cell catalyst nanoparticles studied using advanced transmission electron microscopy. Advances in Physics: X, 2017, 2, 281-301.	4.1	7

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145	Unprecedented Catalytic Activity and Selectivity in Methanol Steam Reforming by Reactive Transformation of Intermetallic Inâ€“Pt Compounds. Journal of Physical Chemistry C, 2021, 125, 9809-9817.	3.1	7
146	Antiphase domains in plastically deformed Zn-Mg-Dy single quasicrystals. Physical Review B, 2001, 64, .	3.2	6
147	Elastic energy of metadislocations in complex metallic alloys. Acta Materialia, 2012, 60, 1703-1711.	7.9	6
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