Marc Heggen

List of Publications by Year
in descending order

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

#	Article	IF	Citations
1	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
2	Water-Based Synthesis of Ultrasmall Nanoparticles of Platinum Group Metal Oxides (1.8 nm). Inorganic Chemistry, 2022, 61, 5133-5147.	4.0	6
3	Amorphizing noble metal chalcogenide catalysts at the single-layer limit towards hydrogen production. Nature Catalysis, 2022, 5, 212-221.	34.4	113
4	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
5	Highly Active and Stable Large Mo-Doped Ptâ€“Ni Octahedral Catalysts for ORR: Synthesis, Post-treatments, and Electrochemical Performance and Stability. ACS Applied Materials & Interfaces, 2022, 14, 29690-29702.	8.0	6
6	Lowâ€Pt NiNCâ€Supported PtNi Nanoalloy Oxygen Reduction Reaction Electrocatalystsâ€"In Situ Tracking of the Atomic Alloying Process. Angewandte Chemie, 2022, 134, .	2.0	1
7	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
8	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
9	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
10	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
11	Controlling the Surface Functionalization of Ultrasmall Gold Nanoparticles by Sequenceâ€Defined Macromolecules. Chemistry - A European Journal, 2021, 27, 1451-1464.	3.3	17
12	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
13	Peptide-Conjugated Ultrasmall Gold Nanoparticles (2 nm) for Selective Protein Targeting. ACS Applied Bio Materials, 2021, 4, 945-965.	4.6	17
14	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
15	The Impact of Antimony on the Performance of Antimony Doped Tin Oxide Supported Platinum for the Oxygen Reduction Reaction. Journal of the Electrochemical Society, 2021, 168, 024502.	2.9	4
16	Operando high-pressure investigation of size-controlled CuZn catalysts for the methanol synthesis reaction. Nature Communications, 2021, 12, 1435.	12.8	62
17	Combining quantitative ADF STEM with SiNx membrane-based MEMS devices: A simulation study with Pt nanoparticles. Ultramicroscopy, 2021, 231, 113270.	1.9	0
18	Optimizing Experimental Conditions for Accurate Quantitative Energy-Dispersive X-ray Analysis of Interfaces at the Atomic Scale. Microscopy and Microanalysis, 2021, 27, 528-542.	0.4	6

#	Article	IF	Citations
19	Metalâ€“Ligand Interface and Internal Structure of Ultrasmall Silver Nanoparticles (2 nm). Journal of Physical Chemistry B, 2021, 125, 5645-5659.	2.6	10
20	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
21	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
22	Pathways for Oral and Rectal Delivery of Gold Nanoparticles (1.7 nm) and Gold Nanoclusters into the Colon: Enteric-Coated Capsules and Suppositories. Molecules, 2021, 26, 5069.	3.8	5
23	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
24	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
25	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
26	Combined experimental and theoretical study of acetylene semi-hydrogenation over Pd/Al2O3. International Journal of Hydrogen Energy, 2020, 45, 1283-1296.	7.1	25
27	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
28	Enhanced antibacterial performance of ultrathin silver/platinum nanopatches by a sacrificial anode mechanism. Nanomedicine: Nanotechnology, Biology, and Medicine, 2020, 24, 102126.	3.3	11
29	Engineering stable electrocatalysts by synergistic stabilization between carbide cores and Pt shells. Nature Materials, 2020, 19, 287-291.	27.5	120
30	In Situ-Determined Catalytically Active State of LaNiO₃ in Methane Dry Reforming. ACS Catalysis, 2020, 10, 1102-1112.	11.2	55
31	Temperature-Induced Stress Relaxation in Alloyed Silverâ€“Gold Nanoparticles (7â€“8 nm) by in Situ X-ray Powder Diffraction. Crystal Growth and Design, 2020, 20, 107-115.	3.0	4
32	Synergizing hole accumulation and transfer on composite Ni/CoO_x for photoelectrochemical water oxidation. Chemical Communications, 2020, 56, 10179-10182.	4.1	3
33	Cobalt Hexacyanoferrate as a Selective and High Current Density Formate Oxidation Electrocatalyst. ACS Applied Energy Materials, 2020, 3, 9198-9207.	5.1	15
34	Simultaneous Photonic and Excitonic Coupling in Spherical Quantum Dot Supercrystals. ACS Nano, 2020, 14, 13806-13815.	14.6	22
35	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
36	A Comparative Study of the Catalytic Performance of Pt-Based Bi and Trimetallic Nanocatalysts Towards Methanol, Ethanol, Ethylene Glycol, and Glycerol Electro-Oxidation. Journal of Nanoscience and Nanotechnology, 2020, 20, 6274-6285.	0.9	3

#	Article	IF	Citations
37	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
38	Synthesis, Structure, Properties, and Applications of Bimetallic Nanoparticles of Noble Metals. Advanced Functional Materials, 2020, 30, 1909260.	14.9	274
39	Atomic Insights into Aluminiumâ€Ion Insertion in Defective Anatase for Batteries. Angewandte Chemie - International Edition, 2020, 59, 19247-19253.	13.8	22
40	Solute Incorporation at Oxideâ€“Oxide Interfaces Explains How Ternary Mixedâ€Metal Oxide Nanocrystals Support Elementâ€Specific Anisotropic Growth. Advanced Functional Materials, 2020, 30, 1909054.	14.9	2
41	Favoring the Growth of High-Quality, Three-Dimensional Supercrystals of Nanocrystals. Journal of Physical Chemistry C, 2020, 124, 11256-11264.	3.1	21
42	Boosting Photoelectrochemical Water Oxidation of Hematite in Acidic Electrolytes by Surface State Modification. Advanced Energy Materials, 2019, 9, 1901836.	19.5	64
43	Photoelectrochemical Water Splitting: Boosting Photoelectrochemical Water Oxidation of Hematite in Acidic Electrolytes by Surface State Modification (Adv. Energy Mater. 34/2019). Advanced Energy Materials, 2019, 9, 1970131.	19.5	1
44	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
45	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
46	Frontispiece: Nanoscopic Porous Iridium/Iridium Dioxide Superstructures (15â€…nm): Synthesis and Thermal Conversion by Inâ€…Situ Transmission Electron Microscopy. Chemistry - A European Journal, 2019, 25, .	3.3	0
47	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
48	Concave curvature facets benefit oxygen electroreduction catalysis on octahedral shaped PtNi nanocatalysts. Journal of Materials Chemistry A, 2019, 7, 1149-1159.	10.3	37
49	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
50	Visible-light-driven coproduction of diesel precursors and hydrogen from lignocellulose-derived methylfurans. Nature Energy, 2019, 4, 575-584.	39.5	268
51	Nanoscopic Porous Iridium/Iridium Dioxide Superstructures (15â€…nm): Synthesis and Thermal Conversion by Inâ€…Situ Transmission Electron Microscopy. Chemistry - A European Journal, 2019, 25, 11048-11057.	3.3	4
52	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
53	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
54	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

#	Article	IF	Citations
55	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
56	Bimetallic silverâ€“platinum nanoparticles with combined osteo-promotive and antimicrobial activity. Nanotechnology, 2019, 30, 305101.	2.6	34
57	Composition-Tuned Pt-Skinned PtNi Bimetallic Clusters as Highly Efficient Methanol Dehydrogenation Catalysts. Chemistry of Materials, 2019, 31, 10040-10048.	6.7	28
58	Magnetoelectric coupling in iron oxide nanoparticleâ€"barium titanate composites. Journal Physics D: Applied Physics, 2019, 52, 065301.	2.8	6
59	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
60	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
61	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
62	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
63	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
64	Deciphering the Surface Composition and the Internal Structure of Alloyed Silverâ€“Gold Nanoparticles. Chemistry - A European Journal, 2018, 24, 9051-9060.	3.3	32
65	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
66	Differentiating the structure of PtNi octahedral nanoparticles through combined ADFâ€“EDX simulations. Advanced Structural and Chemical Imaging, 2018, 4, 2.	4.0	11
67	Unravelling Degradation Pathways of Oxideâ€Supported Pt Fuel Cell Nanocatalysts under In Situ Operating Conditions. Advanced Energy Materials, 2018, 8, 1701663.	19.5	62
68	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
69	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
70	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
71	A unique oxygen ligand environment facilitates water oxidation in hole-doped IrNiOx coreâ€“shell electrocatalysts. Nature Catalysis, 2018, 1, 841-851.	34.4	424
72	Shape-Controlled Nanoparticles in Pore-Confined Space. Journal of the American Chemical Society, 2018, 140, 15684-15689.	13.7	48

#	Article	IF	Citations
73	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
74	Wetâ€Chemical Synthesis of Pdâ€Au Coreâ€Shell Nanoparticles (8â€…nm): From Nanostructure to Biological Properties. ChemistrySelect, 2018, 3, 4994-5001.	1.5	13
75	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
76	On the twinning in ZnPd. Physical Chemistry Chemical Physics, 2017, 19, 5778-5785.	2.8	1
77	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
78	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
79	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
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	Threeâ€Dimensional Probing of Catalyst Ageing on Different Length Scales: A Case Study of Changes in Microstructure and Activity for CO Oxidation of a Ptâ€“Pd/Al₂O₃ Catalyst. ChemCatChem, 2017, 9, 3544-3553.	3.7	2
82	Promoting Lignin Depolymerization and Restraining the Condensation via an Oxidationâ˘Hydrogenation Strategy. ACS Catalysis, 2017, 7, 3419-3429.	11.2	172
83	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
84	Structural Complexity in Heterogeneous Catalysis: Cataloging Local Nanostructures. Journal of Physical Chemistry C, 2017, 121, 24093-24103.	3.1	22
85	Repairing Nanoparticle Surface Defects. Angewandte Chemie - International Edition, 2017, 56, 13795-13799.	13.8	21
86	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
87	Strain and electric-field control of magnetism in supercrystalline iron oxide nanoparticleâ€“BaTiO₃ composites. Nanoscale, 2017, 9, 12957-12962.	5.6	14
88	Atomically dispersed hybrid nickel-iridium sites for photoelectrocatalysis. Nature Communications, 2017, 8, 1341.	12.8	37
89	Interface Engineering in Nanostructured Nickel Phosphide Catalyst for Efficient and Stable Water Oxidation. ACS Catalysis, 2017, 7, 5450-5455.	11.2	74
90	Repairing Nanoparticle Surface Defects. Angewandte Chemie, 2017, 129, 13983-13987.	2.0	13

#	Article	IF	Citations
91	Crystallographic investigation of metallic and bimetallic nanoparticles. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C356-C356.	0.1	0
92	An in situ tensile test device for thermo-mechanical characterisation of interfaces between carbon nanotubes and metals. , 2016, , .		1
93	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
94	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
95	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
96	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
97	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
98	On the Crystallography of Silver Nanoparticles with Different Shapes. Crystal Growth and Design, 2016, 16, 3677-3687.	3.0	23
99	Towards nanoreliability of sensors incorporating interfaces between single-walled carbon nanotubes and metals: molecular dynamics simulations and in situ experiments using electron microscopy. Mechatronics, 2016, 40, 270-280.	3.3	3
100	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
101	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
102	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
103	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
104	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
105	Towards nanoreliability of CNT-based sensor applications: Investigations of CNT-metal interfaces combining molecular dynamics simulations, advanced in situ experiments and analytics. , 2015, , .		2
106	Stability of Dealloyed Porous Pt/Ni Nanoparticles. ACS Catalysis, 2015, 5, 5000-5007.	11.2	110
107	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
108	Water-Gas Shift and Methane Reactivity on Reducible Perovskite-Type Oxides. Journal of Physical Chemistry C, 2015, 119, 11739-11753.	3.1	19

#	Article	IF	Citations
109	Electrochemically Induced Ostwald Ripening in Au/TiO₂ Nanocomposite. Journal of Physical Chemistry C, 2015, 119, 10336-10344.	3.1	15
110	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
111	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
112	Exsolution of Fe and SrO Nanorods and Nanoparticles from Lanthanum Strontium Ferrite La_{0.6}Sr_{0.4}FeO_{3â˜Î´} Materials by Hydrogen Reduction. Journal of Physical Chemistry C, 2015, 119, 22050-22056.	3.1	52
113	Comprehensive model of metadislocation movement in Al 13 Co 4. Scripta Materialia, 2015, 98, 24-27.	5.2	12
114	Core Structure and Motion of Metadislocations in the Orthorhombic Structurally Complex Alloy Al₁₃Co₄. Materials Research Letters, 2014, 2, 146-151.	8.7	11
115	Element-specific anisotropic growth of shaped platinum alloy nanocrystals. Science, 2014, 346, 1502-1506.	12.6	277
116	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
117	Carbon Monoxide-Assisted Size Confinement of Bimetallic Alloy Nanoparticles. Journal of the American Chemical Society, 2014, 136, 4813-4816.	13.7	91
118	Probing the effect of surface chemistry on the electrical properties of ultrathin gold nanowire sensors. Nanoscale, 2014, 6, 5146-5155.	5.6	27
119	On the stability of metadislocations with 16 associated phason planes. Intermetallics, 2014, 53, 187-191.	3.9	0
120	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
121	Time Evolution of the Stability and Oxygen Reduction Reaction Activity of PtCu/C Nanoparticles. ChemCatChem, 2013, 5, 2627-2635.	3.7	28
122	Structural investigation of Pb adsorption on the (010) surface of the orthorhombic T-Al3(Mn,Pd) crystal. Surface Science, 2013, 611, 74-79.	1.9	2
123	Retention and Remobilization of Stabilized Silver Nanoparticles in an Undisturbed Loamy Sand Soil. Environmental Science & Technology, 2013, 47, 12229-12237.	10.0	118
124	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
125	Features of Transport in Ultrathin Gold Nanowire Structures. Small, 2013, 9, 846-852.	10.0	44
126	Understanding and Controlling Nanoporosity Formation for Improving the Stability of Bimetallic Fuel Cell Catalysts. Nano Letters, 2013, 13, 1131-1138.	9.1	261

#	Article	IF	Citations
127	Metadislocation core structure and atomic model for metadislocation motion. Acta Materialia, 2013, 61, 3851-3857.	7.9	8
128	Formation and stability of small well-defined Cu- and Ni oxide particles. Materials Chemistry and Physics, 2013, 143, 184-194.	4.0	3
129	Influences of perfluorooctanoic acid on the aggregation of multi-walled carbon nanotubes. Journal of Environmental Sciences, 2013, 25, 466-472.	6.1	4
130	Compositional segregation in shaped Pt alloy nanoparticles and their structural behaviour during electrocatalysis. Nature Materials, 2013, 12, 765-771.	27.5	1,121
131	High CO₂ Selectivity in Methanol Steam Reforming through ZnPd/ZnO Teamwork. Angewandte Chemie - International Edition, 2013, 52, 4389-4392.	13.8	108
132	Ultrathin Nanowires: Features of Transport in Ultrathin Gold Nanowire Structures (Small 6/2013). Small, 2013, 9, 960-960.	10.0	0
133	Atomic Imaging and Spectroscopy of Size-Dependent Degradation of Pt Bimetallic Fuel Cell Catalysts. ECS Transactions, 2013, 58, 1471-1475.	0.5	0
134	Metadislocations: The case of pure glide. Materials Research Society Symposia Proceedings, 2013, 1517, 1.	0.1	1
135	Core-Shell Fine Structure and Size-Dependent Morphology of Dealloyed Pt Bimetallic Nanoparticle Fuel Cell Electrocatalysts. ECS Transactions, 2013, 50, 1633-1641.	0.5	2
136	Subsurface Enrichment of Highly Active Dealloyed Pt-Ni Catalyst Nanoparticles for Oxygen Reduction Reaction. ECS Transactions, 2013, 50, 1627-1631.	0.5	2
137	Structural and Compositional Behaviors of Shaped Pt Alloy Nanoparticle Electrocatalysts. ECS Transactions, 2013, 58, 575-579.	0.5	0
138	<i>In situ</i>fabrication of ultrathin porous alumina and its application for nanopatterning Au nanocrystals on the surface of ion-sensitive field-effect transistors. Nanotechnology, 2012, 23, 485301.	2.6	3
139	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
140	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
141	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
142	Octahedral PtNi Nanoparticle Catalysts: Exceptional Oxygen Reduction Activity by Tuning the Alloy Particle Surface Composition. Nano Letters, 2012, 12, 5885-5889.	9.1	522
143	Core-Shell Fine Structure and Size-Dependent Morphology of Dealloyed Pt Bimetallic Nanoparticle Fuel Cell Electrocatalysts. ECS Meeting Abstracts, 2012, , .	0.0	0
144	Al13Fe4 as a low-cost alternative for palladium in heterogeneous hydrogenation. Nature Materials, 2012, 11, 690-693.	27.5	344

#	Article	IF	Citations
145	Elastic energy of metadislocations in complex metallic alloys. Acta Materialia, 2012, 60, 1703-1711.	7.9	6
146	Novel defects in Alâ€“Pdâ€“Fe complex metallic alloys: A micromechanical modelling approach. Intermetallics, 2011, 19, 99-104.	3.9	3
147	Interaction of phenol and dopamine with commercial MWCNTs. Journal of Colloid and Interface Science, 2011, 364, 469-475.	9.4	17
148	Metadislocations in Complex Metallic Alloys and their Relation to Dislocations in Icosahedral Quasicrystals. Israel Journal of Chemistry, 2011, 51, 1235-1245.	2.3	2
149	Synthesis and Catalytic Properties of Nanoparticulate Intermetallic Gaâ€“Pd Compounds. Journal of the American Chemical Society, 2011, 133, 9112-9118.	13.7	165
150	Metadislocations in the complex metallic alloys Tâ€“Alâ€“Mnâ€“ (Pd, Fe). Acta Materialia, 2011, 59, 4458-4466.	7.9	11
151	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
152	Geometric origin of magnetic frustration in the Î¼-Al4Mn giant-unit-cell complex intermetallic. Journal of Physics Condensed Matter, 2011, 23, 045702.	1.8	4
153	Electrical resistivity of the Î¼-Al4Mn giant-unit-cell complex metallic alloy. Philosophical Magazine, 2011, 91, 2756-2764.	1.6	2
154	Lead adsorption on the Al₁₃Co₄(100) surface: heterogeneous nucleation and pseudomorphic growth. New Journal of Physics, 2011, 13, 103011.	2.9	17
155	Plastic-deformation mechanism in complex solids. Nature Materials, 2010, 9, 332-336.	27.5	62
156	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><mml: Physical Review B, 2010, 81, .	3.2	15
157	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></m Physical Review B, 2010, 81, .	3.2	22
158	Chapter 94 Metadislocations. Dislocations in Solids, 2010, , 109-170.	1.6	7
159	Composite defects in the complex metallic alloy c2-Alâ€“Pdâ€“Fe. Intermetallics, 2010, 18, 1560-1564.	3.9	1
160	Plastic deformation properties of the complex metallic alloy phase Î¼-Alâ€“Mn. Intermetallics, 2010, 18, 1737-1743.	3.9	4
161	Hall effect in Taylor-phase and decagonal Al3(Mn,Fe) complex intermetallics. Zeitschrift Fur Kristallographie - Crystalline Materials, 2009, 224, 49-52.	0.8	3
162	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

#	Article	IF	Citations
163	A thermal memory cell. Journal of Applied Physics, 2009, 106, .	2.5	27
164	Synthesis and Structural Characterization of Ultra-thin Flexible Au Nanowires. Materials Research Society Symposia Proceedings, 2009, 1206, 162901.	0.1	1
165	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
166	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
167	Novel metadislocation variants in orthorhombic Alâ€“Pdâ€“Fe. Acta Materialia, 2008, 56, 1849-1856.	7.9	26
168	Anelastic strain and structural anisotropy in homogeneously deformed Cu64.5Zr35.5 metallic glass. Acta Materialia, 2008, 56, 5575-5583.	7.9	18
169	Quasicrystal plasticity in the framework of a constitutive model: Interaction of the microstructural parameters at high strain rates. Philosophical Magazine, 2008, 88, 2325-2331.	1.6	1
170	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
171	Structural variations inÏµ-type Alâ€“Pdâ€“(Mn, Fe) complex metallic alloy phases. Philosophical Magazine, 2008, 88, 507-521.	1.6	9
172	X-ray photoelectron diffraction on the 6-fold (001) Î¼-Al4Mn approximant surface. Philosophical Magazine, 2008, 88, 2095-2102.	1.6	7
173	Metadislocations in the structurally complex orthorhombic alloy Al₁₃Co₄. Philosophical Magazine, 2008, 88, 2333-2338.	1.6	22
174	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
175	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
176	Spin Glass-Like Transition in Orthorhombic T-Phase Al-Pd(Fe)-Mn Complex Metallic Alloys. Acta Physica Polonica A, 2008, 113, 19-22.	0.5	2
177	Microstructural analysis of plastically deformed complex metallic alloy Îº-AlMnNi. , 2008, , 459-460.		0
178	Metadislocations in complex metallic alloys: core structures investigated by aberration-corrected scanning transmission electron microscopy. , 2008, , 645-646.		0
179	Single-crystal plasticity of the complex metallic alloy phase Î²-Alâ€“Mg. Intermetallics, 2007, 15, 833-837.	3.9	26
180	Magnetic and transport properties of the giant-unit-cell Al3.26Mg2 complex metallic alloy. Intermetallics, 2007, 15, 1367-1376.	3.9	28

#	Article	IF	Citations
181	Plastic deformation properties of the orthorhombic complex metallic alloy phase Al13Co4. Intermetallics, 2007, 15, 1425-1431.	3.9	28
182	Metadislocation arrangements in the complex metallic alloyÎ¾â€²-Alâ€"Pdâ€"Mn. Philosophical Magazine, 2006, 86, 985-990.	1.6	10
183	On the concept of metadislocations in complex metallic alloys. Philosophical Magazine, 2006, 86, 935-944.	1.6	20
184	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
185	Creation and annihilation of free volume during homogeneous flow of a metallic glass. Journal of Applied Physics, 2005, 97, 033506.	2.5	161
186	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
187	Defects in complex intermetallics and quasicrystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 84-89.	5.6	7
188	Constitutive model of quasicrystal plasticity: Strain-rate and temperature dependence. Materials Research Society Symposia Proceedings, 2003, 805, 158.	0.1	0
189	Evolution of the Free Volume during Homogeneous Flow of a Metallic Glass. Materials Research Society Symposia Proceedings, 2003, 806, 303.	0.1	0
190	Microstructural analysis of plastically deformed icosahedral Znâ€"Mgâ€"Dy single quasicrystals. Journal of Alloys and Compounds, 2002, 342, 330-336.	5.5	7
191	Antiphase domains in plastically deformed Zn-Mg-Dy single quasicrystals. Physical Review B, 2001, 64, .	3.2	6
192	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
193	Plastic deformation of icosahedral Zn-Mg-Dy single quasicrystals. Philosophical Magazine Letters, 2000, 80, 129-136.	1.2	12
194	FEI Titan 80-300 STEM. Journal of Large-scale Research Facilities JLSRF, 0, 2, A42.	0.0	26
195	Boosting Photoelectrochemical Water Oxidation of Hematite by Surface States Modification. SSRN Electronic Journal, 0, , .	0.4	1