Claudia Zlotea

List of Publications by Year
in descending order

97	4,651	36	66
papers	citations	h-index	g-index
		101384	102304

101	101	101	4597
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Materials for hydrogen-based energy storage â€“ past, recent progress and future outlook. Journal of Alloys and Compounds, 2020, 827, 153548.	2.8	518
2	Pd Nanoparticles Embedded into a Metal-Organic Framework: Synthesis, Structural Characteristics, and Hydrogen Sorption Properties. Journal of the American Chemical Society, 2010, 132, 2991-2997.	6.6	320
3	Review of magnesium hydride-based materials: development and optimisation. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	274
4	Effect of NH2 and CF3 functionalization on the hydrogen sorption properties of MOFs. Dalton Transactions, 2011, 40, 4879.	1.6	257
5	Superior hydrogen storage in high entropy alloys. Scientific Reports, 2016, 6, 36770.	1.6	255
6	Hydrogen sorption in TiZrNbHfTa high entropy alloy. Journal of Alloys and Compounds, 2019, 775, 667-674.	2.8	145
7	Structure and Hydrogenation Properties of a HfNbTiVZr High-Entropy Alloy. Inorganic Chemistry, 2018, 57, 2103-2110.	1.9	121
8	Perpendicular Magnetocrystalline Anisotropy in Tetragonally Distorted Fe-Co Alloys. Physical Review Letters, 2006, 96, 037205.	2.9	118
9	Nanoconfined light metal hydrides for reversible hydrogen storage. MRS Bulletin, 2013, 38, 488-494.	1.7	105
10	Occurrence of Uncommon Infinite Chains Consisting of Edge-Sharing Octahedra in a Porous Metal Organic Framework-Type Aluminum Pyromellitate Al₄(OH)₈[C₁₀O₈H₂] (MIL-120): Synthesis, Structure, and Gas Sorption Properties. Chemistry of Materials, 2009, 21, 5783-5791.	3.2	102
11	Size-Dependent Hydrogen Sorption in Ultrasmall Pd Clusters Embedded in a Mesoporous Carbon Template. Journal of the American Chemical Society, 2010, 132, 7720-7729.	6.6	89
12	Hydrogen storage in hybrid nanostructured carbon/palladium materials: Influence of particle size and surface chemistry. International Journal of Hydrogen Energy, 2013, 38, 952-965.	3.8	87
13	Experimental evidence of an upper limit for hydrogen storage at 77 K on activated carbons. Carbon, 2010, 48, 1902-1911.	5.4	79
14	Role of nanoconfinement on hydrogen sorption properties of metal nanoparticles hybrids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 439, 117-130.	2.3	78
15	A Round Robin characterisation of the hydrogen sorption properties of a carbon based material. International Journal of Hydrogen Energy, 2009, 34, 3044-3057.	3.8	73
16	Activated carbons doped with Pd nanoparticles for hydrogen storage. International Journal of Hydrogen Energy, 2012, 37, 5072-5080.	3.8	73
17	Optimization of activated carbons for hydrogen storage. International Journal of Hydrogen Energy, 2011, 36, 11746-11751.	3.8	72
18	Bottom-up preparation of MgH₂ nanoparticles with enhanced cycle life stability during electrochemical conversion in Li-ion batteries. Nanoscale, 2014, 6, 14459-14466.	2.8	72

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19	Ultrasmall MgH₂ Nanoparticles Embedded in an Ordered Microporous Carbon Exhibiting Rapid Hydrogen Sorption Kinetics. Journal of Physical Chemistry C, 2015, 119, 18091-18098.	1.5	70
20	TiVZrNb Multi-Principal-Element Alloy: Synthesis Optimization, Structural, and Hydrogen Sorption Properties. Molecules, 2019, 24, 2799.	1.7	65
21	Improving the hydrogen cycling properties by Mg addition in Ti-V-Zr-Nb refractory high entropy alloy. Scripta Materialia, 2021, 194, 113699.	2.6	62
22	Tunable synthesis of (Mgâ€"Ni)-based hydrides nanoconfined in templated carbon studied by in situ synchrotron diffraction. Nano Energy, 2013, 2, 12-20.	8.2	61
23	Hydrogen storage properties of the refractory Tiâ€"Vâ€"Zrâ€"Nbâ€"Ta multi-principal element alloy. Journal of Alloys and Compounds, 2020, 835, 155376.	2.8	61
24	Synthesis of small metallic Mg-based nanoparticles confined in porous carbon materials for hydrogen sorption. Faraday Discussions, 2011, 151, 117.	1.6	54
25	Activated carbons with appropriate micropore size distribution for hydrogen adsorption. International Journal of Hydrogen Energy, 2011, 36, 5431-5434.	3.8	54
26	Metal (boro-) hydrides for high energy density storage and relevant emerging technologies. International Journal of Hydrogen Energy, 2020, 45, 33687-33730.	3.8	53
27	Metal Hydrides and Related Materials. Energy Carriers for Novel Hydrogen and Electrochemical Storage. Journal of Physical Chemistry C, 2020, 124, 7599-7607.	1.5	52
28	Understanding the mechanism of hydrogen uptake at low pressure in carbon/palladium nanostructured composites. Journal of Materials Chemistry, 2011, 21, 17765.	6.7	50
29	Hydrogen desorption studies of the Mg24Y5â€"H system: Formation of Mg tubes, kinetics and cycling effects. Acta Materialia, 2008, 56, 2421-2428.	3.8	49
30	Elucidating the Effects of the Composition on Hydrogen Sorption in TiVZrNbHf-Based High-Entropy Alloys. Inorganic Chemistry, 2021, 60, 1124-1132.	1.9	49
31	Electrochemical oxidation of urea on nickel-rhodium nanoparticles/carbon composites. Electrochimica Acta, 2019, 297, 715-724.	2.6	45
32	Controlled synthesis of NiCo nanoalloys embedded in ordered porous carbon by a novel soft-template strategy. Carbon, 2014, 67, 260-272.	5.4	44
33	Hydrogen Storage Properties of Nanoconfined LiBH₄â€"Mg₂NiH₄ Reactive Hydride Composites. Journal of Physical Chemistry C, 2015, 119, 5819-5826.	1.5	42
34	A Round Robin Test exercise on hydrogen absorption/desorption properties of a magnesium hydride based material. International Journal of Hydrogen Energy, 2013, 38, 6704-6717.	3.8	41
35	Nanoalloying bulk-immiscible iridium and palladium inhibits hydride formation and promotes catalytic performances. Nanoscale, 2014, 6, 9955-9959.	2.8	40
36	Mesoporous Metalâ€"Organic Framework MIL-101 at High Pressure. Journal of the American Chemical Society, 2020, 142, 15012-15019.	6.6	37

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37	Design of TiVNb-(Cr, Ni or Co) multicomponent alloys with the same valence electron concentration for hydrogen storage. Journal of Alloys and Compounds, 2021, 865, 158767.	2.8	37
38	Formation of one-dimensional MgH2 nano-structures by hydrogen induced disproportionation. Journal of Alloys and Compounds, 2006, 426, 357-362.	2.8	36
39	Hydrogen absorption in 1Ânm Pd clusters confined in MIL-101(Cr). Journal of Materials Chemistry A, 2017, 5, 23043-23052.	5.2	33
40	Determination of the crystal and magnetic structures of Rn+1Co3n+5B2n (n=1,â€,2,â€,andâ€,3; R=Pr, Nd, and) Tj ETQq0 0 0 rgBT /Over	1.1	32
41	Direct assessment from cyclic voltammetry of size effect on the hydrogen sorption properties of Pd nanoparticle/carbon hybrids. Journal of Electroanalytical Chemistry, 2013, 706, 33-39.	1.9	30
42	Neutron powder diffraction and magnetic phase diagram of RCo4Ga compounds (R=Y and Pr). Journal of Alloys and Compounds, 2002, 346, 29-37.	2.8	28
43	Thermodynamic modelling of hydrogen-multicomponent alloy systems: Calculating pressure-composition-temperature diagrams. Acta Materialia, 2021, 215, 117070.	3.8	28
44	First Evidence of Rh Nano-Hydride Formation at Low Pressure. Nano Letters, 2015, 15, 4752-4757.	4.5	27
45	An International Laboratory Comparison Study of Volumetric and Gravimetric Hydrogen Adsorption Measurements. ChemPhysChem, 2019, 20, 1997-2009.	1.0	26
46	Role of hydrogen absorption in supported Pd nanocatalysts during CO-PROX: Insights from operando X-ray absorption spectroscopy. Applied Catalysis B: Environmental, 2018, 237, 1059-1065.	10.8	23
47	How 10 at% Al Addition in the Ti-V-Zr-Nb High-Entropy Alloy Changes Hydrogen Sorption Properties. Molecules, 2021, 26, 2470.	1.7	23
48	One-pot laser-assisted synthesis of porous carbon with embedded magnetic cobalt nanoparticles. Nanoscale, 2015, 7, 10111-10122.	2.8	22
49	Crystal and magnetic structure of hexagonal RCo4Al intermetallic compounds (R=Y and Pr). Journal of Magnetism and Magnetic Materials, 2002, 253, 118-129.	1.0	21
50	Hydrogen uptake and optical properties of sputtered Mgâ€"Ni thin films. Journal of Physics Condensed Matter, 2004, 16, 7649-7662.	0.7	21
51	Synthesis of Mg2Cu nanoparticles on carbon supports with enhanced hydrogen sorption kinetics. Journal of Materials Chemistry A, 2013, 1, 9983.	5.2	21
52	Hydrogen Storage in Pristine and d10-Block Metal-Anchored Activated Carbon Made from Local Wastes. Energies, 2015, 8, 3578-3590.	1.6	20
53	In-situ Pdâ€"Pt nanoalloys growth in confined carbon spaces and their interactions with hydrogen. Nano Structures Nano Objects, 2017, 9, 1-12.	1.9	20
54	Hydrogen sorption properties of Pdâ€"Co nanoalloys embedded into mesoporous carbons. Nanoscale, 2015, 7, 15469-15476.	2.8	19

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55	Electrocatalytic Reduction of Nitrate and Nitrite at CuRh Nanoparticles/C Composite Electrodes. Electrocatalysis, 2018, 9, 343-351.	1.5	19
56	Structural and magnetic properties of hexagonal DyCo4M compounds (M = Al,Ga). Journal of Physics Condensed Matter, 2003, 15, 8327-8337.	0.7	18
57	Growth and hydrogen uptake of Mgâ€“Y thin films. Journal of Applied Physics, 2005, 97, 104903.	1.1	18
58	Facile and rapid one-pot microwave-assisted synthesis of Pd-Ni magnetic nanoalloys confined in mesoporous carbons. Journal of Nanoparticle Research, 2016, 18, 1.	0.8	18
59	The effect of 10Âat.% Al addition on the hydrogen storage properties of the Ti0.33V0.33Nb0.33 multi-principal element alloy. Intermetallics, 2022, 146, 107590.	1.8	18
60	Composition and size dependence of hydrogen interaction with carbon supported bulk-immiscible Pdâ€“Rh nanoalloys. Nanotechnology, 2016, 27, 465401.	1.3	17
61	Hydrogen sorption properties of Pd nanoparticles dispersed on graphitic carbon studied with a cavity microelectrode. Electrochimica Acta, 2012, 83, 133-139.	2.6	15
62	Hydrogenation-Induced Structure and Property Changes in the Rare-Earth Metal Gallide NdGa: Evolution of a [GaH]^{2â€“} Polyanion Containing Peierls-like Gaâ€“H Chains. Inorganic Chemistry, 2016, 55, 345-352.	1.9	15
63	Interactions of Hydrogen with Pd@MOF Composites. ChemPhysChem, 2019, 20, 1282-1295.	1.0	15
64	Size-dependent hydrogen trapping in palladium nanoparticles. Journal of Materials Chemistry A, 2021, 9, 10354-10363.	5.2	15
65	Neutron diffraction and magnetic investigations of the TbCo4M compounds (M Â Al and Ga). Journal of Physics Condensed Matter, 2002, 14, 10211-10220.	0.7	14
66	Hydrogen sorption properties of a Mgâ€“Yâ€“Ti alloy. Journal of Alloys and Compounds, 2010, 489, 375-378.	2.8	14
67	One-pot synthesis of tailored Pdâ€“Co nanoalloy particles confined in mesoporous carbon. Microporous and Mesoporous Materials, 2016, 223, 79-88.	2.2	14
68	Microstructural modifications induced by hydrogen absorption in Mg5Ga2 and Mg6Pd. Acta Materialia, 2006, 54, 5559-5564.	3.8	13
69	Structure of Feâ€“Co/Pt(001) superlattices: a realization of tetragonal Feâ€“Co alloys. Journal of Physics Condensed Matter, 2007, 19, 016008.	0.7	13
70	Nanoconfinement of Mg₆Pd particles in porous carbon: size effects on structural and hydrogenation properties. Journal of Materials Chemistry A, 2014, 2, 18444-18453.	5.2	13
71	Experimental Challenges in Studying Hydrogen Absorption in Ultrasmall Metal Nanoparticles. Frontiers in Energy Research, 2016, 4, .	1.2	13
72	Absorbed hydrogen enhances the catalytic hydrogenation activity of Rh-based nanocatalysts. Catalysis Science and Technology, 2018, 8, 2707-2715.	2.1	12

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73	Synthesis and stability of Pdâ€“Rh nanoalloys with fully tunable particle size and composition. Nano Structures Nano Objects, 2016, 7, 92-100.	1.9	11
74	Hydrogen absorption properties of carbon supported Pdâ€“Ni nanoalloys. International Journal of Hydrogen Energy, 2017, 42, 1004-1011.	3.8	11
75	Hydrogen Sorption Properties of a Novel Refractory Ti-V-Zr-Nb-Mo High Entropy Alloy. Hydrogen, 2021, 2, 399-413.	1.7	11
76	Hydrogen absorption/desorption reactions of the (TiVNb)85Cr15 multicomponent alloy. Journal of Alloys and Compounds, 2022, 901, 163620.	2.8	11
77	Structural and magnetic properties of RCo4Al compounds (R=Y, Pr). Journal of Magnetism and Magnetic Materials, 2002, 242-245, 832-835.	1.0	9
78	Influence of nanosizing on hydrogen electrosorption properties of rhodium based nanoparticles/carbon composites. Electrochimica Acta, 2017, 228, 528-536.	2.6	9
79	Optimization of the synthesis of Pd-Au nanoalloys confined in mesoporous carbonaceous materials. Journal of Colloid and Interface Science, 2017, 505, 410-420.	5.0	9
80	On the feasibility of the bottom-up synthesis of Mg2CoH5 nanoparticles supported on a porous carbon and their hydrogen desorption behaviour. Nano Structures Nano Objects, 2018, 16, 144-150.	1.9	8
81	Hydrogen Storage Properties of a New Ti-V-Cr-Zr-Nb High Entropy Alloy. Hydrogen, 2022, 3, 270-284.	1.7	8
82	Magnetic properties of the hexagonal DyCo4Al compound. Physica B: Condensed Matter, 2004, 350, E155-E158.	1.3	7
83	Structure and hydrogen storage properties of the hexagonal Laves phase Sc(Al1âˆ’xNix)2. Journal of Solid State Chemistry, 2012, 196, 132-137.	1.4	7
84	Fully reversible hydrogen absorption and desorption reactions with Sc(Al1âˆ’xMgx), x=0.0, 0.15, 0.20. Journal of Solid State Chemistry, 2011, 184, 104-108.	1.4	6
85	Synthesis of destabilized nanostructured lithium hydride via hydrogenation of lithium electrochemically inserted into graphite. International Journal of Hydrogen Energy, 2015, 40, 13936-13941.	3.8	5
86	Enhanced Stability of the Metalâ€“Organic Framework MIL-101(Cr) by Embedding Pd Nanoparticles for Densification through Compression. ACS Applied Nano Materials, 2022, 5, 4196-4203.	2.4	5
87	Unveiling the Ir single atoms as selective active species for the partial hydrogenation of butadiene by <i>operando</i> XAS. Nanoscale, 2022, 14, 7641-7649.	2.8	5
88	Effects of the substitution of iron for cobalt on the crystal and magnetic properties of PrCo4âˆ’xFexM (M=Al and Ga). Journal of Alloys and Compounds, 2003, 348, 43-51.	2.8	4
89	YMgGa as a hydrogen storage compound. Journal of Solid State Chemistry, 2009, 182, 1833-1837.	1.4	4
90	Exploring the hydrogen absorption into Pdâ€“Ir nanoalloys supported on carbon. Journal of Nanoparticle Research, 2017, 19, 1.	0.8	4

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91	Hydrogen-sorption properties of Nb4M0.9Si1.1 (MÂ=ÂCo,Ni) hydrides. International Journal of Hydrogen Energy, 2015, 40, 2692-2697.	3.8	3
92	Investigation of the local structure of nanosized rhodium hydride. Journal of Colloid and Interface Science, 2018, 524, 427-433.	5.0	3
93	Magnetism as indirect tool for carbon content assessment in nickel nanoparticles. Journal of Applied Physics, 2017, 122, 213902.	1.1	2
94	Investigation of the metamagnetic transition in Y2Co7H6. Nuclear Instruments & Methods in Physics Research B, 2005, 238, 229-232.	0.6	1
95	Effects of the Substitution of Iron for Cobalt on the Crystal and Magnetic Properties of PrCo4-xFexM (M: Al and Ga).. ChemInform, 2003, 34, no.	0.1	0
96	Photochemically-Driven Methods for the <i>In Situ</i> and Site-Specific Fabrication of Monolithic-Based Electrochromatographic Microsystems. Key Engineering Materials, 2013, 543, 227-230.	0.4	0
97	Hydrogen induced structure and property changes in Eu3Si4. Journal of Solid State Chemistry, 2019, 277, 37-45.	1.4	0