Kondo-Francois Aguey-Zinsou

List of Publications by Year
in descending order

109 papers	4,542 citations	101384 36 h-index	110170 64 g-index
115 all docs	115 docs citations	115 times ranked	4199 citing authors

#	Article	IF	Citations
1	Hydrogen in magnesium: new perspectives toward functional stores. Energy and Environmental Science, 2010, 3, 526.	15.6	349
2	Hydrogen Storage Materials for Mobile and Stationary Applications: Current State of the Art. ChemSusChem, 2015, 8, 2789-2825.	3.6	302
3	Tailoring magnesium based materials for hydrogen storage through synthesis: Current state of the art. Energy Storage Materials, 2018, 10, 168-198.	9.5	294
4	Selective Photoactivation: From a Single Unit Monomer Insertion Reaction to Controlled Polymer Architectures. Journal of the American Chemical Society, 2016, 138, 3094-3106.	6.6	250
5	Synthesis of Colloidal Magnesium: A Near Room Temperature Store for Hydrogen. Chemistry of Materials, 2008, 20, 376-378.	3.2	180
6	High Performance Auâ€“Pd Supported on 3D Hybrid Strontium-Substituted Lanthanum Manganite Perovskite Catalyst for Methane Combustion. ACS Catalysis, 2016, 6, 6935-6947.	5.5	158
7	Coreâ€“Shell Strategy Leading to High Reversible Hydrogen Storage Capacity for NaBH₄. ACS Nano, 2012, 6, 7739-7751.	7.3	147
8	Direct Electrochemistry of a Bacterial Sulfite Dehydrogenase. Journal of the American Chemical Society, 2003, 125, 530-535.	6.6	106
9	Understanding Plasmon and Band Gap Photoexcitation Effects on the Thermal-Catalytic Oxidation of Ethanol by TiO₂-Supported Gold. ACS Catalysis, 2016, 6, 1870-1879.	5.5	105
10	Single Atom and Nanoclustered Pt Catalysts for Selective CO₂ Reduction. ACS Applied Energy Materials, 2018, 1, 6781-6789.	2.5	104
11	Nanostructured materials for solid-state hydrogen storage: A review of the achievement of COST Action MP1103. International Journal of Hydrogen Energy, 2016, 41, 14404-14428.	3.8	94
12	Size effects and hydrogen storage properties of Mg nanoparticles synthesised by an electroless reduction method. Journal of Materials Chemistry A, 2014, 2, 9718.	5.2	93
13	How to Design Hydrogen Storage Materials? Fundamentals, Synthesis, and Storage Tanks. Advanced Sustainable Systems, 2019, 3, 1900043.	2.7	90
14	Unlocking the potential of the formate pathway in the photo-assisted Sabatier reaction. Nature Catalysis, 2020, 3, 1034-1043.	16.1	90
15	Synergistic ultraviolet and visible light photo-activation enables intensified low-temperature methanol synthesis over copper/zinc oxide/alumina. Nature Communications, 2020, 11, 1615.	5.8	84
16	Effects of Carbon-Supported Nickel Catalysts on MgH2Decomposition. Journal of Physical Chemistry C, 2008, 112, 5984-5992.	1.5	62
17	Nanoconfined lithium aluminium hydride (LiAlH4) and hydrogen reversibility. International Journal of Hydrogen Energy, 2017, 42, 14144-14153.	3.8	58
18	Renewable hydrogen for the chemical industry. MRS Energy & Sustainability, 2020, 7, 1.	1.3	58

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19	Superior MgH2 Kinetics with MgO Addition: A Tribological Effect. Catalysts, 2012, 2, 330-343.	1.6	57
20	Can Î³-MgH₂improve the hydrogen storage properties of magnesium?. Journal of Materials Chemistry A, 2017, 5, 8644-8652.	5.2	55
21	Reaction Paths between LiNH2 and LiH with Effects of Nitrides. Journal of Physical Chemistry B, 2007, 111, 12531-12536.	1.2	54
22	Synthesis of coreâ€"shell NaBH4@M (M = Co, Cu, Fe, Ni, Sn) nanoparticles leading to various morphologies and hydrogen storage properties. Chemical Communications, 2013, 49, 6794.	2.2	54
23	Destabilisation of complex hydrides through size effects. Nanoscale, 2010, 2, 2587.	2.8	51
24	Hydrogen Absorption/Desorption Mechanism in Potassium Alanate (KAlH₄) and Enhancement by TiCl₃ Doping. Journal of Physical Chemistry C, 2009, 113, 6845-6851.	1.5	48
25	Hydrogen storage properties of nanoconfined aluminium hydride (AlH3). Chemical Engineering Science, 2019, 194, 64-70.	1.9	46
26	Tuning the Thermodynamic Properties of MgH₂ at the Nanoscale via a Catalyst or Destabilizing Element Coating Strategy. Journal of Physical Chemistry C, 2014, 118, 27781-27792.	1.5	45
27	Room Temperature Metal Hydrides for Stationary and Heat Storage Applications: A Review. Frontiers in Energy Research, 2021, 9, .	1.2	45
28	Electrochemistry of P450cin: new insights into P450 electron transfer. Chemical Communications, 2003, , 418-419.	2.2	44
29	Titanium-iron-manganese (TiFe0.85Mn0.15) alloy for hydrogen storage: Reactivation upon oxidation. International Journal of Hydrogen Energy, 2019, 44, 16757-16764.	3.8	44
30	Planar polymer electrolyte membrane fuel cells: powering portable devices from hydrogen. Sustainable Energy and Fuels, 2020, 4, 439-468.	2.5	42
31	Direct and reversible hydrogen storage of lithium hydride (LiH) nanoconfined in high surface area graphite. International Journal of Hydrogen Energy, 2016, 41, 18088-18094.	3.8	41
32	Reduced Graphene Oxide and Nanoparticles Incorporated Durable Electroconductive Silk Fabrics. Advanced Materials Interfaces, 2020, 7, 2000814.	1.9	40
33	Hydrogen generation from a sodium borohydrideâ€"nickel core@shell structure under hydrolytic conditions. Nanoscale Advances, 2019, 1, 2707-2717.	2.2	39
34	Câ€"C Cleavage by Au/TiO₂ during Ethanol Oxidation: Understanding Bandgap Photoexcitation and Plasmonically Mediated Charge Transfer via Quantitative in Situ DRIFTS. ACS Catalysis, 2016, 6, 8021-8029.	5.5	38
35	Nanoconfinement of borohydrides in CuS hollow nanospheres: A new strategy compared to carbon nanotubes. International Journal of Hydrogen Energy, 2014, 39, 9339-9349.	3.8	37
36	An Alumina-Supported Ni-La-Based Catalyst for Producing Synthetic Natural Gas. Catalysts, 2016, 6, 170.	1.6	37

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37	MgH2 with different morphologies synthesized by thermal hydrogenolysis method for enhanced hydrogen sorption. International Journal of Hydrogen Energy, 2013, 38, 5746-5757.	3.8	36
38	Ammonia Borane Nanospheres for Hydrogen Storage. ACS Applied Nano Materials, 2019, 2, 1129-1138.	2.4	35
39	Fundamentals and electrochemical applications of [Niâ€“Fe]-uptake hydrogenases. RSC Advances, 2013, 3, 8142.	1.7	34
40	Rational Design of Nanosized Light Elements for Hydrogen Storage: Classes, Synthesis, Characterization, and Properties. Advanced Materials Technologies, 2018, 3, 1700298.	3.0	34
41	Remarkable hydrogen storage properties for nanocrystalline MgH2 synthesised by the hydrogenolysis of Grignard reagents. Physical Chemistry Chemical Physics, 2012, 14, 11386.	1.3	32
42	Thermodynamics and performance of the Mgâ€“Hâ€“F system for thermochemical energy storage applications. Physical Chemistry Chemical Physics, 2018, 20, 2274-2283.	1.3	31
43	The first non-turnover voltammetric response from a molybdenum enzyme: direct electrochemistry of dimethylsulfoxide reductase from Rhodobacter capsulatus. Journal of Biological Inorganic Chemistry, 2002, 7, 879-883.	1.1	30
44	Ni coated LiH nanoparticles for reversible hydrogen storage. International Journal of Hydrogen Energy, 2016, 41, 6376-6386.	3.8	29
45	Catalysis in Liquid Organic Hydrogen Storage: Recent Advances, Challenges, and Perspectives. Industrial & Engineering Chemistry Research, 2022, 61, 6067-6105.	1.8	28
46	Low temperature synthesis of LaNi5 nanoparticles for hydrogen storage. International Journal of Hydrogen Energy, 2016, 41, 1679-1687.	3.8	27
47	Destabilisation of Ca(BH₄)₂ and Mg(BH₄)₂via confinement in nanoporous Cu₂S hollow spheres. Sustainable Energy and Fuels, 2017, 1, 1308-1319.	2.5	26
48	Nanoconfinement of borohydrides in hollow carbon spheres: Melt infiltration versus solvent impregnation for enhanced hydrogen storage. International Journal of Hydrogen Energy, 2019, 44, 23225-23238.	3.8	26
49	Magnesium Supported on Nickel Nanobelts for Hydrogen Storage: Coupling Nanosizing and Catalysis. ACS Applied Nano Materials, 2018, 1, 1272-1279.	2.4	25
50	Complex hydrides as thermal energy storage materials: characterisation and thermal decomposition of Na2Mg2NiH6. Journal of Materials Chemistry A, 2018, 6, 9099-9108.	5.2	24
51	Controlling the growth of NaBH4 nanoparticles for hydrogen storage. International Journal of Hydrogen Energy, 2020, 45, 2054-2067.	3.8	24
52	Formation of OTS self-assembled monolayers at chemically treated titanium surfaces. Journal of Materials Science: Materials in Medicine, 2011, 22, 1813-1824.	1.7	21
53	Hydrogen storage properties of in-situ stabilised magnesium nanoparticles generated by electroless reduction with alkali metals. International Journal of Hydrogen Energy, 2015, 40, 16948-16960.	3.8	21
54	Synthesis of LiAlH4 Nanoparticles Leading to a Single Hydrogen Release Step upon Ti Coating. Inorganics, 2017, 5, 38.	1.2	20

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55	Controlling the Growth of LiBH₄ Nanoparticles for Hydrogen Storage. Energy Technology, 2019, 7, 1801159.	1.8	20
56	Functionalization of electropolished titanium surfaces with silane-based self-assembled monolayers and their application in drug delivery. Journal of Colloid and Interface Science, 2012, 385, 258-267.	5.0	19
57	Calcium Phosphate Growth at Electropolished Titanium Surfaces. Journal of Functional Biomaterials, 2012, 3, 327-348.	1.8	19
58	Stabilization of Nanosized Borohydrides for Hydrogen Storage: Suppressing the Melting with TiCl₃ Doping. ACS Applied Energy Materials, 2018, 1, 421-430.	2.5	18
59	High-temperature thermochemical energy storage using metal hydrides: Destabilisation of calcium hydride with silicon. Journal of Alloys and Compounds, 2021, 858, 158229.	2.8	18
60	Synthesis of highly dispersed nanosized LaNi5 on carbon: Revisiting particle size effects on hydrogen storage properties. International Journal of Hydrogen Energy, 2016, 41, 14429-14436.	3.8	17
61	Nanosizing Ammonia Borane with Nickel: A Path toward the Direct Hydrogen Release and Uptake of Bï£¿Nï£¿H Systems. Advanced Sustainable Systems, 2018, 2, 1700122.	2.7	17
62	Exploring halide destabilised calcium hydride as a high-temperature thermal battery. Journal of Alloys and Compounds, 2020, 819, 153340.	2.8	17
63	Switching the thermodynamics of MgH₂nanoparticles through polystyrene stabilisation and oxidation. RSC Advances, 2014, 4, 39934.	1.7	16
64	Plasmon enhanced selective electronic pathways in TiO2 supported atomically ordered bimetallic Au-Cu alloys. Journal of Catalysis, 2017, 352, 638-648.	3.1	16
65	Cooperative defect-enriched SiO2 for oxygen activation and organic dehydrogenation. Journal of Catalysis, 2019, 376, 168-179.	3.1	16
66	Nanoconfinement of Complex Borohydrides for Hydrogen Storage. ACS Applied Nano Materials, 2021, 4, 973-978.	2.4	16
67	Doping-Mediated Metalâ€“Support Interaction Promotion toward Light-Assisted Methanol Production over Cu/ZnO/Al₂O₃. ACS Catalysis, 2021, 11, 5818-5828.	5.5	16
68	Formation of aluminium hydride (AlH3) via the decomposition of organoaluminium and hydrogen storage properties. International Journal of Hydrogen Energy, 2018, 43, 16749-16757.	3.8	15
69	Properties and Applications of Metal (M) dodecahydro-closo-dodecaborates (Mn=1,2B12H12) and Their Implications for Reversible Hydrogen Storage in the Borohydrides. Inorganics, 2018, 6, 106.	1.2	14
70	â€œSurfactant-Freeâ€•Sodium Borohydride Nanoparticles with Enhanced Hydrogen Desorption Properties. ACS Applied Energy Materials, 2020, 3, 9940-9949.	2.5	14
71	Facile Selfâ€Forming Superionic Conductors Based on Complex Borohydride Surface Oxidation. Advanced Sustainable Systems, 2020, 4, 1900113.	2.7	14
72	Coreâ€“Shell NaBH₄@Na₂B₁₂H₁₂ Nanoparticles as Fast Ionic Conductors for Sodium-Ion Batteries. ACS Applied Nano Materials, 2022, 5, 373-379.	2.4	14

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73	The power of multifunctional metal hydrides: A key enabler beyond hydrogen storage. Journal of Alloys and Compounds, 2022, 920, 165936.	2.8	14
74	Investigating the Factors Affecting the Ionic Conduction in Nanoconfined NaBH4. Inorganics, 2021, 9, 2.	1.2	13
75	Synthesis and Stabilisation of MgH₂ Nanoparticles by Selfâ€Assembly. ChemPlusChem, 2012, 77, 423-426.	1.3	12
76	LiBH4 Electronic Destabilization with Nickel(II) Phthalocyanineâ€"Leading to a Reversible Hydrogen Storage System. ACS Applied Energy Materials, 2018, 1, 6824-6832.	2.5	12
77	Halide-free Grignard reagents for the synthesis of superior MgH2 nanostructures. International Journal of Hydrogen Energy, 2021, 46, 28675-28685.	3.8	12
78	Preparation of Si-PPy-Ag composites and their electrochemical performance as anode for lithium-ion batteries. Ionics, 2013, 19, 401-407.	1.2	11
79	Electrodeposited Magnesium Nanoparticles Linking Particle Size to Activation Energy. Energies, 2016, 9, 1073.	1.6	11
80	Lightâ€Activated Hydrogen Storage in Mg, LiH and NaAlH₄. ChemPlusChem, 2018, 83, 904-908.	1.3	11
81	Nanosizing ammonia borane with nickel â€" An all-solid and all-in-one approach for H2 generation by hydrolysis. International Journal of Hydrogen Energy, 2018, 43, 14498-14506.	3.8	11
82	Synthesis of Magnesium Nanofibers by Electroless Reduction and their Hydrogen Interaction Properties. Particle and Particle Systems Characterization, 2017, 34, 1600276.	1.2	10
83	Efficient hydrogen generation from water using nanocomposite flakes based on graphene and magnesium. Sustainable Energy and Fuels, 2018, 2, 2516-2525.	2.5	10
84	Tunable NaBH₄ Nanostructures Revealing Structureâ€Dependent Hydrogen Release. Advanced Energy and Sustainability Research, 2021, 2, 2100063.	2.8	10
85	Production and purification of a soluble hydrogenase from Ralstonia eutropha H16 for potential hydrogen fuel cell applications. MethodsX, 2016, 3, 242-250.	0.7	9
86	Nanosized Magnesium Electrochemically Deposited on a Carbon Nanotubes Suspension: Synthesis and Hydrogen Storage. Frontiers in Energy Research, 2017, 5, .	1.2	9
87	Destabilisation of the Liâ€"Nâ€"H hydrogen storage system with elemental Si. Physical Chemistry Chemical Physics, 2011, 13, 17683.	1.3	8
88	Three-dimensional macroporous Snâ€"Ag thin film anode prepared by electro-less reduction method: effect of micro-structure. Ionics, 2013, 19, 295-300.	1.2	8
89	Delaminated MoS 2 as a structural and functional modifier for MgH 2 â€" Better hydrogen desorption kinetics through induced worm-like morphologies. International Journal of Hydrogen Energy, 2016, 41, 3551-3560.	3.8	8
90	Electrochemical deposited Mg-PPy multilayered film to store hydrogen. International Journal of Hydrogen Energy, 2018, 43, 22385-22390.	3.8	8

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91	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
92	Multipronged Validation of Oxalate Câ€“C Bond Cleavage Driven by Au-TiO₂ Interfacial Charge Transfer Using Operando DRIFTS. ACS Catalysis, 2018, 8, 7158-7163.	5.5	8
93	Direct Synthesis of NaBH4 Nanoparticles from NaOCH3 for Hydrogen Storage. Energies, 2019, 12, 4428.	1.6	8
94	Synthesis of borohydride nanoparticles at room temperature by precipitation. International Journal of Hydrogen Energy, 2021, 46, 24286-24292.	3.8	8
95	Surfactant Induced Synthesis of LiAlH4 and NaAlH4 Nanoparticles for Hydrogen Storage. Applied Sciences (Switzerland), 2022, 12, 4742.	1.3	8
96	Photocatalytic generation of hydrogen coupled with in-situ hydrogen storage. International Journal of Hydrogen Energy, 2019, 44, 28521-28526.	3.8	7
97	Correlations between the ionic conductivity and cation size in complex borohydrides. Ionics, 2020, 26, 5287-5291.	1.2	7
98	Effect of chromium addition on the reactivation of the titanium-iron-manganese (TiFe0.85Mn0.15) alloy. Journal of Alloys and Compounds, 2022, 891, 161943.	2.8	7
99	Dual-tuning the thermodynamics and kinetics: Magnesium-naphthalocyanine nanocomposite for low temperature hydrogen cycling. International Journal of Hydrogen Energy, 2018, 43, 5089-5097.	3.8	6
100	Oneâ€Step Synthesis of Carbonâ€Protected Co₃O₄ Nanoparticles toward Longâ€Term Water Oxidation in Acidic Media. Advanced Energy and Sustainability Research, 2021, 2, 2100086.	2.8	6
101	Modulating catalytic oxygen activation over Ptâ€“TiO₂/SiO₂ catalysts by defect engineering of a TiO₂/SiO₂ support. Catalysis Science and Technology, 2022, 12, 1049-1059.	2.1	6
102	High performing platinumâ€"copper catalyst for selfâ€"breathing polymer electrolyte membrane fuel cell. Research on Chemical Intermediates, 2022, 48, 3019-3037.	1.3	6
103	Coreâ€“shell NaBH₄@Ni Nanoarchitectures: A Platform for Tunable Hydrogen Storage. ChemSusChem, 2022, 15, .	3.6	6
104	Development of self-breathing polymer electrolyte membrane fuel cell stack with cylindrical cells. International Journal of Hydrogen Energy, 2022, , .	3.8	6
105	Palladium nanoparticle functionalized graphene xerogel for catalytic dye reduction. Dalton Transactions, 2018, 47, 14573-14579.	1.6	5
106	Encapsulation of silicotungstic acid into chromium (III) terephthalate metalâ€“organic framework for high proton conductivity membranes. Research on Chemical Intermediates, 2021, 47, 61-76.	1.3	5
107	Materials, Chemistry, and Simulation for Future Energy Technology. ChemSusChem, 2015, 8, 2755-2756.	3.6	1
108	Hydrogen Storage: Rational Design of Nanosized Light Elements for Hydrogen Storage: Classes, Synthesis, Characterization, and Properties (Adv. Mater. Technol. 9/2018). Advanced Materials Technologies, 2018, 3, 1870037.	3.0	0

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109	Solid-state hydrogen storage as a future renewable energy technology. , 2021, , 263-287.		0