Colin J Webb

List of Publications by Year
in descending order

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69 papers	4,630 citations	172386 29 h-index	95218 68 g-index
70 all docs	70 docs citations	70 times ranked	3684 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	Application of hydrides in hydrogen storage and compression: Achievements, outlook and perspectives. International Journal of Hydrogen Energy, 2019, 44, 7780-7808.	3.8	486
3	Magnesium based materials for hydrogen based energy storage: Past, present and future. International Journal of Hydrogen Energy, 2019, 44, 7809-7859.	3.8	460
4	Review of magnesium hydride-based materials: development and optimisation. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	274
5	A review of catalyst-enhanced magnesium hydride as a hydrogen storage material. Journal of Physics and Chemistry of Solids, 2015, 84, 96-106.	1.9	241
6	Modelling and simulation of a proton exchange membrane (PEM) electrolyser cell. International Journal of Hydrogen Energy, 2015, 40, 13243-13257.	3.8	189
7	Concepts for improving hydrogen storage in nanoporous materials. International Journal of Hydrogen Energy, 2019, 44, 7768-7779.	3.8	160
8	Versatilein situpowder X-ray diffraction cells for solidâ€“gas investigations. Journal of Applied Crystallography, 2010, 43, 1456-1463.	1.9	150
9	Mg-based compounds for hydrogen and energy storage. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	146
10	PEM fuel cell model and simulation in Matlabâ€“Simulink based on physical parameters. Energy, 2016, 116, 1131-1144.	4.5	138
11	Outlook and challenges for hydrogen storage in nanoporous materials. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	129
12	Hydrogen storage for off-grid power supply. International Journal of Hydrogen Energy, 2011, 36, 654-663.	3.8	127
13	Review of polymers of intrinsic microporosity for hydrogen storage applications. International Journal of Hydrogen Energy, 2016, 41, 16944-16965.	3.8	116
14	A review of mathematical modelling of metal-hydride systems for hydrogen storage applications. International Journal of Hydrogen Energy, 2016, 41, 3470-3484.	3.8	110
15	Hydrogen storage in carbon nanostructures via spillover. International Journal of Hydrogen Energy, 2016, 41, 19098-19113.	3.8	98
16	Nonâ€Fluorinated Polymer Composite Proton Exchange Membranes for Fuel Cell Applications â€“ A Review. ChemPhysChem, 2019, 20, 2016-2053.	1.0	89
17	In-Situ X-ray Diffraction Study of Î³-Mg(BH₄)₂ Decomposition. Journal of Physical Chemistry C, 2012, 116, 15231-15240.	1.5	86
18	The synthesis of nanoscopic Ti based alloys and their effects on the MgH2 system compared with the MgH2Â+Â0.01Nb2O5 benchmark. International Journal of Hydrogen Energy, 2012, 37, 4227-4237.	3.8	72

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19	Modelling and simulation of an alkaline electrolyser cell. Energy, 2017, 138, 316-331.	4.5	62
20	Hydrogen in La₂MgNi₉D₁₃: The Role of Magnesium. Inorganic Chemistry, 2012, 51, 4231-4238.	1.9	60
21	Magnesium Hydride Formation within Carbon Aerogel. Journal of Physical Chemistry C, 2011, 115, 1757-1766.	1.5	55
22	Review of hydrogen storage in AB 3 alloys targeting stationary fuel cell applications. International Journal of Hydrogen Energy, 2016, 41, 3485-3507.	3.8	55
23	The effect of ball-milling gas environment on the sorption kinetics of MgH2 with/without additives for hydrogen storage. International Journal of Hydrogen Energy, 2019, 44, 2976-2980.	3.8	44
24	Pitfalls in the characterisation of the hydrogen sorption properties of materials. International Journal of Hydrogen Energy, 2017, 42, 29320-29343.	3.8	40
25	In Situ Neutron Diffraction Study of the Deuteration of Isotopic Mg¹¹B₂. Journal of Physical Chemistry C, 2011, 115, 22669-22679.	1.5	35
26	Analysis of the uncertainties in gas uptake measurements using the Sieverts method. International Journal of Hydrogen Energy, 2014, 39, 366-375.	3.8	33
27	Mg₂Si Nanoparticle Synthesis for High Pressure Hydrogenation. Journal of Physical Chemistry C, 2014, 118, 1240-1247.	1.5	32
28	The effect of C 60 additive on magnesium hydride for hydrogen storage. International Journal of Hydrogen Energy, 2015, 40, 10508-10515.	3.8	30
29	One-dimensional metal-hydride tank model and simulation in Matlabâ€“Simulink. International Journal of Hydrogen Energy, 2018, 43, 5048-5067.	3.8	29
30	Magnesium- and intermetallic alloys-based hydrides for energy storage: modelling, synthesis and properties. Progress in Energy, 2022, 4, 032007.	4.6	29
31	An improved model for metal-hydrogen storage tanks â€“ Part 1: Model development. International Journal of Hydrogen Energy, 2016, 41, 3537-3550.	3.8	27
32	Hydrogen absorption kinetics and structural features of NaAlH4 enhanced with transition-metal and Ti-based nanoparticles. International Journal of Hydrogen Energy, 2012, 37, 15175-15186.	3.8	21
33	Electron-Laser Stepwise Excitation Coincidence Experiment on the6P11State of Mercury. Physical Review Letters, 1989, 62, 411-414.	2.9	19
34	Nanoscopic Al1â^'xCex phases in the NaHÂ+ÂAlÂ+Â0.02CeCl3 system. International Journal of Hydrogen Energy, 2011, 36, 8403-8411.	3.8	19
35	Hydrogen-modified superconductors: A review. Progress in Solid State Chemistry, 2016, 44, 20-34.	3.9	19
36	Kinetic limitations in the Mgâ€“Siâ€“H system. International Journal of Hydrogen Energy, 2011, 36, 10779-10786.	3.8	18

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37	In-situ diffraction techniques for studying hydrogen storage materials under high hydrogen pressure. International Journal of Hydrogen Energy, 2012, 37, 10182-10195.	3.8	18
38	The effect of inaccurate volume calibrations on hydrogen uptake measured by the Sieverts method. International Journal of Hydrogen Energy, 2014, 39, 2168-2174.	3.8	18
39	Kinetic enhancement of the sorption properties of MgH2 with the additive titanium isopropoxide. International Journal of Hydrogen Energy, 2017, 42, 5227-5234.	3.8	18
40	Nanoscale cobalt doped carbon aerogel: microstructure and isosteric heat of hydrogen adsorption. International Journal of Hydrogen Energy, 2011, 36, 10855-10860.	3.8	17
41	An improved model for metal-hydrogen storage tanks â€“ Part 2: Model results. International Journal of Hydrogen Energy, 2016, 41, 3919-3927.	3.8	17
42	Electron and phonon band structures of palladium and palladium hydride: A review. Progress in Solid State Chemistry, 2020, 60, 100285.	3.9	16
43	Hydrogen adsorption characteristics of magnesium combustion derived graphene at 77 and 293ÂK. International Journal of Hydrogen Energy, 2014, 39, 6783-6788.	3.8	15
44	Analysis of uncertainties in gas uptake measurements using the gravimetric method. International Journal of Hydrogen Energy, 2014, 39, 7158-7164.	3.8	15
45	Improving the Gasâ€Separation Properties of PVAcâ€Zeolite 4A Mixedâ€Matrix Membranes through Nanoâ€Sizing and Silanation of the Zeolite. ChemPhysChem, 2019, 20, 1590-1606.	1.0	15
46	LaNi5-Assisted Hydrogenation of MgNi2 in the Hybrid Structures of La1.09Mg1.91Ni9D9.5 and La0.91Mg2.09Ni9D9.4. Energies, 2015, 8, 3198-3211.	1.6	14
47	Hydrogen adsorption properties of carbide-derived carbons at ambient temperature and high pressure. International Journal of Hydrogen Energy, 2021, 46, 15761-15772.	3.8	14
48	High pressure in situ diffraction studies of metalâ€“hydrogen systems. Journal of Alloys and Compounds, 2011, 509, S817-S822.	2.8	13
49	A sieverts apparatus for measuring high-pressure hydrogen isotherms on porous materials. International Journal of Hydrogen Energy, 2017, 42, 20111-20119.	3.8	13
50	A comment on the controversy over results obtained from coincidence and superelastic experiments on e--Na collisions at 22.1 to or from 20.0 eV. Journal of Physics B: Atomic, Molecular and Optical Physics, 1989, 22, L527-L531.	0.6	11
51	In-situ neutron powder diffraction study of Mgâ€“Zn alloys during hydrogen cycling. International Journal of Hydrogen Energy, 2015, 40, 8106-8109.	3.8	11
52	Experimental and theoretical study of compositional inhomogeneities in LaNi5Dx owing to temperature gradients and pressure hysteresis, investigated using spatially resolved in-situ neutron diffraction. International Journal of Hydrogen Energy, 2017, 42, 6793-6800.	3.8	11
53	The theory of stepwise electron and laser excitation of atoms. I. Weak optical excitation case. Journal of Physics B: Atomic and Molecular Physics, 1984, 17, 1675-1689.	1.6	10
54	The Effect of Thermal Treatment on the Hydrogenâ€Storage Properties of PIMâ€1. ChemPhysChem, 2019, 20, 1613-1623.	1.0	10

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55	A stepwise electron and laser excitation study of the 63P2metastable state of atomic mercury. Journal of Physics B: Atomic and Molecular Physics, 1985, 18, L259-L264.	1.6	9
56	The theory of stepwise electron and laser excitation of atoms. II. Strong optical excitation case. Journal of Physics B: Atomic and Molecular Physics, 1984, 17, 2577-2589.	1.6	8
57	A surface impedance mapping technique based on radiation from discrete lightning strokes. Geoexploration, 1988, 25, 163-172.	0.2	8
58	Nanostructured Metal Hydrides for Hydrogen Storage Studied by In Situ Synchrotron and Neutron Diffraction. Materials Research Society Symposia Proceedings, 2010, 1262, 1.	0.1	8
59	Asymmetric reversal in aged high concentration CuMn alloy. Journal of Physics Condensed Matter, 2013, 25, 086003.	0.7	8
60	Simulation of large photovoltaic arrays. Solar Energy, 2018, 161, 163-179.	2.9	8
61	Metal-hydride hydrogen compressors for laboratory use. JPhys Energy, 2020, 2, 034004.	2.3	8
62	A quantitative review of slurries for hydrogen storage â€“ Slush hydrogen, and metal and chemical hydrides in carrier liquids. Journal of Alloys and Compounds, 2022, 906, 164235.	2.8	8
63	Hydrogen uptake properties of a nanoporous PIM-1â€“polyaniline nanocomposite polymer. Journal of Materials Chemistry A, 2019, 7, 22436-22443.	5.2	7
64	Spectroscopic applications of stepwise electron and laser excitation techniques to transitions of mercury. Journal of Physics B: Atomic and Molecular Physics, 1985, 18, 1701-1709.	1.6	6
65	Misconceptions in the application of the Sieverts technique. International Journal of Hydrogen Energy, 2013, 38, 14281-14283.	3.8	5
66	Postsynthetic Modification of a Network Polymer of Intrinsic Microporosity and Its Hydrogen Adsorption Properties. Journal of Physical Chemistry C, 2019, 123, 6998-7009.	1.5	4
67	Experimental and computational modelling study of Ni substitution for Fe in Zr3Fe and its hydride. Journal of Alloys and Compounds, 2019, 781, 131-139.	2.8	3
68	Performance analysis of a Sieverts apparatus for measuring hydrogen uptake. International Journal of Hydrogen Energy, 2022, 47, 14628-14636.	3.8	3
69	Extracting adsorbate information from manometric uptake measurements of hydrogen at high pressure and ambient temperature. Adsorption, 0, , 1.	1.4	2