

# Colin J Webb

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

67  
papers

3,110  
citations

26  
h-index

55  
g-index

70  
ext. papers

3,827  
ext. citations

5.9  
avg, IF

5.69  
L-index

#	Paper	IF	Citations
67	Application of hydrides in hydrogen storage and compression: Achievements, outlook and perspectives. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 7780-7808	6.7	273
66	Magnesium based materials for hydrogen based energy storage: Past, present and future. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 7809-7859	6.7	264
65	Materials for hydrogen-based energy storage [past, recent progress and future outlook. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 827, 153548	5.7	264
64	Review of magnesium hydride-based materials: development and optimisation. <i>Applied Physics A: Materials Science and Processing</i> , <b>2016</b> , 122, 1	2.6	212
63	A review of catalyst-enhanced magnesium hydride as a hydrogen storage material. <i>Journal of Physics and Chemistry of Solids</i> , <b>2015</b> , 84, 96-106	3.9	187
62	Versatile in situ powder X-ray diffraction cells for solid-gas investigations. <i>Journal of Applied Crystallography</i> , <b>2010</b> , 43, 1456-1463	3.8	141
61	Mg-based compounds for hydrogen and energy storage. <i>Applied Physics A: Materials Science and Processing</i> , <b>2016</b> , 122, 1	2.6	121
60	Hydrogen storage for off-grid power supply. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 654-663	6.7	102
59	Modelling and simulation of a proton exchange membrane (PEM) electrolyser cell. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 13243-13257	6.7	101
58	Outlook and challenges for hydrogen storage in nanoporous materials. <i>Applied Physics A: Materials Science and Processing</i> , <b>2016</b> , 122, 1	2.6	92
57	Review of polymers of intrinsic microporosity for hydrogen storage applications. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 16944-16965	6.7	91
56	PEM fuel cell model and simulation in Matlab/Simulink based on physical parameters. <i>Energy</i> , <b>2016</b> , 116, 1131-1144	7.9	88
55	A review of mathematical modelling of metal-hydride systems for hydrogen storage applications. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 3470-3484	6.7	82
54	Concepts for improving hydrogen storage in nanoporous materials. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 7768-7779	6.7	81
53	In-Situ X-ray Diffraction Study of Mg(BH <sub>4</sub> ) <sub>2</sub> Decomposition. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 15231-15240	3.8	75
52	Hydrogen storage in carbon nanostructures via spillover. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 19098-19113	6.7	74
51	The synthesis of nanoscopic Ti based alloys and their effects on the MgH <sub>2</sub> system compared with the MgH <sub>2</sub> -0.01Nb <sub>2</sub> O <sub>5</sub> benchmark. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 4227-4237	6.7	64

50	Hydrogen in La <sub>2</sub> MgNi <sub>9</sub> D <sub>13</sub> : the role of magnesium. <i>Inorganic Chemistry</i> , <b>2012</b> , 51, 4231-8	5.1	50
49	Magnesium Hydride Formation within Carbon Aerogel. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 1757-1766	3.8	49
48	Review of hydrogen storage in AB <sub>3</sub> alloys targeting stationary fuel cell applications. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 3485-3507	6.7	48
47	Non-Fluorinated Polymer Composite Proton Exchange Membranes for Fuel Cell Applications - A Review. <i>ChemPhysChem</i> , <b>2019</b> , 20, 2016-2053	3.2	31
46	In Situ Neutron Diffraction Study of the Deuteration of Isotopic Mg <sup>11</sup> B <sub>2</sub> . <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 22669-22679	3.8	31
45	The effect of ball-milling gas environment on the sorption kinetics of MgH <sub>2</sub> with/without additives for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 2976-2980	6.7	31
44	Modelling and simulation of an alkaline electrolyser cell. <i>Energy</i> , <b>2017</b> , 138, 316-331	7.9	29
43	Pitfalls in the characterisation of the hydrogen sorption properties of materials. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 29320-29343	6.7	28
42	Mg <sub>2</sub> Si Nanoparticle Synthesis for High Pressure Hydrogenation. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 1240-1247	3.8	25
41	Analysis of the uncertainties in gas uptake measurements using the Sieverts method. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 366-375	6.7	25
40	The effect of C <sub>60</sub> additive on magnesium hydride for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 10508-10515	6.7	22
39	An improved model for metal-hydrogen storage tanks [Part 1: Model development. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 3537-3550	6.7	22
38	Nanoscale Al <sub>1-x</sub> Ce <sub>x</sub> phases in the NaH + Al + 0.02CeCl <sub>3</sub> system. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 8403-8411	6.7	19
37	One-dimensional metal-hydride tank model and simulation in Matlab/Simulink. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 5048-5067	6.7	18
36	Electron-laser stepwise excitation coincidence experiment on the 6(1)P <sub>1</sub> state of mercury. <i>Physical Review Letters</i> , <b>1989</b> , 62, 411-414	7.4	18
35	Hydrogen absorption kinetics and structural features of NaAlH <sub>4</sub> enhanced with transition-metal and Ti-based nanoparticles. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 15175-15186	6.7	17
34	Nanoscale cobalt doped carbon aerogel: microstructure and isosteric heat of hydrogen adsorption. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 10855-10860	6.7	17
33	The effect of inaccurate volume calibrations on hydrogen uptake measured by the Sieverts method. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 2168-2174	6.7	16

32	Kinetic enhancement of the sorption properties of MgH <sub>2</sub> with the additive titanium isopropoxide. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 5227-5234	6.7	15
31	Hydrogen adsorption characteristics of magnesium combustion derived graphene at 77 and 293 K. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 6783-6788	6.7	15
30	In-situ diffraction techniques for studying hydrogen storage materials under high hydrogen pressure. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 10182-10195	6.7	15
29	Kinetic limitations in the Mg-Bi system. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 10779-10786	6.7	15
28	Improving the Gas-Separation Properties of PVAc-Zeolite 4A Mixed-Matrix Membranes through Nano-Sizing and Silanation of the Zeolite. <i>ChemPhysChem</i> , <b>2019</b> , 20, 1590-1606	3.2	13
27	An improved model for metal-hydrogen storage tanks [Part 2: Model results. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 3919-3927	6.7	13
26	Hydrogen-modified superconductors: A review. <i>Progress in Solid State Chemistry</i> , <b>2016</b> , 44, 20-34	8	13
25	Analysis of uncertainties in gas uptake measurements using the gravimetric method. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 7158-7164	6.7	12
24	High pressure in situ diffraction studies of metal-hydrogen systems. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, S817-S822	5.7	11
23	A comment on the controversy over results obtained from coincidence and superelastic experiments on e <sup>-</sup> -Na collisions at 22.1 to or from 20.0 eV. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , <b>1989</b> , 22, L527-L531	1.3	11
22	LaNi <sub>5</sub> -Assisted Hydrogenation of MgNi <sub>2</sub> in the Hybrid Structures of La <sub>1.09</sub> Mg <sub>1.91</sub> Ni <sub>9</sub> D <sub>9.5</sub> and La <sub>0.91</sub> Mg <sub>2.09</sub> Ni <sub>9</sub> D <sub>9.4</sub> . <i>Energies</i> , <b>2015</b> , 8, 3198-3211	3.1	10
21	The theory of stepwise electron and laser excitation of atoms. I. Weak optical excitation case. <i>Journal of Physics B: Atomic and Molecular Physics</i> , <b>1984</b> , 17, 1675-1689		10
20	Experimental and theoretical study of compositional inhomogeneities in LaNi <sub>5</sub> D <sub>x</sub> owing to temperature gradients and pressure hysteresis, investigated using spatially resolved in-situ neutron diffraction. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 6793-6800	6.7	9
19	A sieverts apparatus for measuring high-pressure hydrogen isotherms on porous materials. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 20111-20119	6.7	9
18	In-situ neutron powder diffraction study of Mg-Zn alloys during hydrogen cycling. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 8106-8109	6.7	9
17	A stepwise electron and laser excitation study of the 6 <sup>3</sup> P <sub>2</sub> metastable state of atomic mercury. <i>Journal of Physics B: Atomic and Molecular Physics</i> , <b>1985</b> , 18, L259-L264		9
16	Asymmetric reversal in aged high concentration CuMn alloy. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 086003	1.8	8
15	The theory of stepwise electron and laser excitation of atoms. II. Strong optical excitation case. <i>Journal of Physics B: Atomic and Molecular Physics</i> , <b>1984</b> , 17, 2577-2589		8

14	Simulation of large photovoltaic arrays. <i>Solar Energy</i> , <b>2018</b> , 161, 163-179	6.8	7
13	Nanostructured Metal Hydrides for Hydrogen Storage Studied by IN Situ Synchrotron and Neutron Diffraction. <i>Materials Research Society Symposia Proceedings</i> , <b>2010</b> , 1262, 1		7
12	Spectroscopic applications of stepwise electron and laser excitation techniques to transitions of mercury. <i>Journal of Physics B: Atomic and Molecular Physics</i> , <b>1985</b> , 18, 1701-1709		6
11	Electron and phonon band structures of palladium and palladium hydride: A review. <i>Progress in Solid State Chemistry</i> , <b>2020</b> , 60, 100285	8	5
10	Postsynthetic Modification of a Network Polymer of Intrinsic Microporosity and Its Hydrogen Adsorption Properties. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 6998-7009	3.8	4
9	The Effect of Thermal Treatment on the Hydrogen-Storage Properties of PIM-1. <i>ChemPhysChem</i> , <b>2019</b> , 20, 1613-1623	3.2	4
8	Misconceptions in the application of the Sieverts technique. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 14281-14283	6.7	4
7	Metal-hydride hydrogen compressors for laboratory use. <i>JPhys Energy</i> , <b>2020</b> , 2, 034004	4.9	3
6	A surface impedance mapping technique based on radiation from discrete lightning strokes. <i>Geoexploration</i> , <b>1988</b> , 25, 163-172		3
5	Hydrogen adsorption properties of carbide-derived carbons at ambient temperature and high pressure. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 15761-15772	6.7	3
4	Hydrogen uptake properties of a nanoporous PIM-1/polyaniline nanocomposite polymer. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 22436-22443	13	2
3	Experimental and computational modelling study of Ni substitution for Fe in Zr <sub>3</sub> Fe and its hydride. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 781, 131-139	5.7	1
2	Extracting adsorbate information from manometric uptake measurements of hydrogen at high pressure and ambient temperature. <i>Adsorption</i> , 1	2.6	0
1	A quantitative review of slurries for hydrogen storage [flush hydrogen, and metal and chemical hydrides in carrier liquids. <i>Journal of Alloys and Compounds</i> , <b>2022</b> , 906, 164235	5.7	