Terry D Humphries

List of Publications by Year
in descending order

62 papers	2,489 citations	257450 24 h-index	197818 49 g-index
63 all docs	63 docs citations	63 times ranked	1869 citing authors

#	Article	IF	Citations
1	Thermodynamic destablization of SrH2 using Al for the next generation of high temperature thermal batteries. Journal of Alloys and Compounds, 2022, 894, 162404.	5.5	4
2	Metallic and complex hydride-based electrochemical storage of energy. Progress in Energy, 2022, 4, 032001.	10.9	26
3	Hydrogen storage in complex hydrides: past activities and new trends. Progress in Energy, 2022, 4, 032009.	10.9	23
4	Simultaneous preparation of sodium borohydride and ammonia gas by ball milling. International Journal of Hydrogen Energy, 2022, 47, 25347-25356.	7.1	6
5	Magnesium- and intermetallic alloys-based hydrides for energy storage: modelling, synthesis and properties. Progress in Energy, 2022, 4, 032007.	10.9	29
6	Performance analysis of a high-temperature magnesium hydride reactor tank with a helical coil heat exchanger for thermal storage. International Journal of Hydrogen Energy, 2021, 46, 1038-1055.	7.1	29
7	Hydrated alkali-B₁₁H₁₄ salts as potential solid-state electrolytes. Journal of Materials Chemistry A, 2021, 9, 15027-15037.	10.3	21
8	High-temperature thermochemical energy storage using metal hydrides: Destabilisation of calcium hydride with silicon. Journal of Alloys and Compounds, 2021, 858, 158229.	5.5	18
9	Investigation of boiling heat transfer for improved performance of metal hydride thermal energy storage. International Journal of Hydrogen Energy, 2021, 46, 28200-28213.	7.1	9
10	Thermochemical energy storage system development utilising limestone. Chemical Engineering Journal Advances, 2021, 8, 100168.	5.2	14
11	A new strontium based reactive carbonate composite for thermochemical energy storage. Journal of Materials Chemistry A, 2021, 9, 20585-20594.	10.3	6
12	An operational high temperature thermal energy storage system using magnesium iron hydride. International Journal of Hydrogen Energy, 2021, 46, 38755-38767.	7.1	10
13	An experimental high temperature thermal battery coupled to a low temperature metal hydride for solar thermal energy storage. Sustainable Energy and Fuels, 2020, 4, 285-292.	4.9	28
14	Materials for hydrogen-based energy storage â€" past, recent progress and future outlook. Journal of Alloys and Compounds, 2020, 827, 153548.	5.5	518
15	Exploring halide destabilised calcium hydride as a high-temperature thermal battery. Journal of Alloys and Compounds, 2020, 819, 153340.	5.5	17
16	Thermochemical energy storage performance of zinc destabilized calcium hydride at high-temperatures. Physical Chemistry Chemical Physics, 2020, 22, 25780-25788.	2.8	10
17	Fluorine Substitution in Magnesium Hydride as a Tool for Thermodynamic Control. Journal of Physical Chemistry C, 2020, 124, 9109-9117.	3.1	8
18	Hydroxylated <i>closo</i>-Dodecaborates M₂B₁₂(OH)₁₂ (M = Li,) Tj ETQq0 0 0 rgBT /Overlock 1 Physical Chemistry C, 2020, 124, 11340-11349.	3.1	17

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19	Physicochemical Characterization of a Naâ€“Hâ€“F Thermal Battery Material. Journal of Physical Chemistry C, 2020, 124, 5053-5060.	3.1	1
20	Thermal properties of thermochemical heat storage materials. Physical Chemistry Chemical Physics, 2020, 22, 4617-4625.	2.8	16
21	Magnesium based materials for hydrogen based energy storage: Past, present and future. International Journal of Hydrogen Energy, 2019, 44, 7809-7859.	7.1	460
22	Dolomite: a low cost thermochemical energy storage material. Journal of Materials Chemistry A, 2019, 7, 1206-1215.	10.3	50
23	Ammonium chlorideâ€“metal hydride based reaction cycle for vehicular applications. Journal of Materials Chemistry A, 2019, 7, 5031-5042.	10.3	7
24	A thermal energy storage prototype using sodium magnesium hydride. Sustainable Energy and Fuels, 2019, 3, 985-995.	4.9	29
25	Future perspectives of thermal energy storage with metal hydrides. International Journal of Hydrogen Energy, 2019, 44, 7738-7745.	7.1	112
26	Hydrogen storage properties of eutectic metal borohydrides melt-infiltrated into porous Al scaffolds. Journal of Alloys and Compounds, 2019, 775, 474-480.	5.5	17
27	Electrochemical Synthesis of Highly Ordered Porous Al Scaffolds Melt-Infiltrated with LiBH₄for Hydrogen Storage. Journal of the Electrochemical Society, 2018, 165, D37-D42.	2.9	9
28	Thermodynamics and performance of the Mgâ€“Hâ€“F system for thermochemical energy storage applications. Physical Chemistry Chemical Physics, 2018, 20, 2274-2283.	2.8	31
29	Complex hydrides as thermal energy storage materials: characterisation and thermal decomposition of Na2Mg2NiH6. Journal of Materials Chemistry A, 2018, 6, 9099-9108.	10.3	24
30	Synthesis and characterisation of a porous Al scaffold sintered from NaAlH4. Journal of Materials Science, 2018, 53, 1076-1087.	3.7	6
31	Synthesis of NaAlH4/Al composites and their applications in hydrogen storage. International Journal of Hydrogen Energy, 2018, 43, 17309-17317.	7.1	30
32	Novel synthesis of porous aluminium and its application in hydrogen storage. Journal of Alloys and Compounds, 2017, 702, 309-317.	5.5	18
33	Recent advances in the 18-electron complex transition metal hydrides of Ni, Fe, Co and Ru. Coordination Chemistry Reviews, 2017, 342, 19-33.	18.8	43
34	Regeneration of LiAlH4 at sub-ambient temperatures studied by multinuclear NMR spectroscopy. Journal of Alloys and Compounds, 2017, 723, 1150-1154.	5.5	9
35	Rare Earth Borohydridesâ€"Crystal Structures and Thermal Properties. Energies, 2017, 10, 2115.	3.1	40
36	Novel synthesis of porous Mg scaffold as a reactive containment vessel for LiBH₄. RSC Advances, 2017, 7, 36340-36350.	3.6	14

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37	Thermal optimisation of metal hydride reactors for thermal energy storage applications. Sustainable Energy and Fuels, 2017, 1, 1820-1829.	4.9	42
38	Fluoride substitution in sodium hydride for thermal energy storage applications. Journal of Materials Chemistry A, 2016, 4, 12170-12178.	10.3	33
39	The influence of LiH on the rehydrogenation behavior of halide free rare earth (RE) borohydrides (RE) Tj ETQq1 1 0.784314 rgBT /Overlo	2.8	26
40	Metal hydrides for concentrating solarÂthermal power energy storage. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	95
41	Sodium-based hydrides for thermal energy applications. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	34
42	Efficient Synthesis of an Aluminum Amidoborane Ammoniate. Energies, 2015, 8, 9107-9116.	3.1	16
43	Complex transition metal hydrides incorporating ionic hydrogen: Synthesis and characterization of Na2Mg2FeH8 and Na2Mg2RuH8. Journal of Alloys and Compounds, 2015, 645, S347-S352.	5.5	19
44	Crystal structure and in situ decomposition of Eu(BH₄)₂ and Sm(BH₄)₂. Journal of Materials Chemistry A, 2015, 3, 691-698.	10.3	42
45	Complex transition metal hydrides incorporating ionic hydrogen: thermal decomposition pathway of Na₂Mg₂FeH₈and Na₂Mg₂RuH₈. Physical Chemistry Chemical Physics, 2015, 17, 8276-8282.	2.8	13
46	What is old is new again. Materials Today, 2015, 18, 414-415.	14.2	18
47	Hydrogen cycling in Î³-Mg(BH₄)₂ with cobalt-based additives. Journal of Materials Chemistry A, 2015, 3, 6592-6602.	10.3	45
48	Complex transition metal hydrides: linear correlation of countercation electronegativity versus Tâ€"D bond lengths. Chemical Communications, 2015, 51, 11248-11251.	4.1	11
49	Enhanced tunability of thermodynamic stability of complex hydrides by the incorporation of Hâ€" anions. Applied Physics Letters, 2014, 104, .	3.3	24
50	Structural Changes Observed during the Reversible Hydrogenation of Mg(BH₄)₂ with Ni-Based Additives. Journal of Physical Chemistry C, 2014, 118, 23376-23384.	3.1	47
51	Regeneration of sodium alanate studied by powder in situ neutron and synchrotron X-ray diffraction. Journal of Materials Chemistry A, 2014, 2, 16594-16600.	10.3	16
52	In situ high pressure NMR study of the direct synthesis of LiAlH4. Journal of Materials Chemistry A, 2013, 1, 2974.	10.3	13
53	Lewis base complexes of AlH3: structural determination of monomeric and polymeric adducts by X-ray crystallography and DFT calculations. Dalton Transactions, 2013, 42, 6953.	3.3	16
54	Lewis base complexes of AlH3: prediction of preferred structure and stoichiometry. Dalton Transactions, 2013, 42, 6965.	3.3	13

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55	In situ high pressure NMR study of the direct synthesis of NaAlH4. Physical Chemistry Chemical Physics, 2013, 15, 6179.	2.8	10
56	NMR spectroscopic and thermodynamic studies of the etherate and the Î±, Î±â€², and Î³ phases of AlH3. International Journal of Hydrogen Energy, 2013, 38, 4577-4586.	7.1	27
57	Reversible Hydrogenation Studies of NaBH₄ Milled with Ni-Containing Additives. Journal of Physical Chemistry C, 2013, 117, 6060-6065.	3.1	48
58	Chloride substitution induced by mechano-chemical reactions between NaBH 4 and transition metal chlorides. Journal of Alloys and Compounds, 2012, 530, 186-192.	5.5	24
59	A structural study of bis-(trimethylamine)alane, AlH3Â·2NMe3, by variable temperature X-ray crystallography and DFT calculations. Journal of Molecular Structure, 2009, 923, 13-18.	3.6	22
60	Temporal and spatial imaging of hydrogen storage materials: watching solvent and hydrogen desorption from aluminium hydride by transmission electron microscopy. Chemical Communications, 2008, , 4448.	4.1	21
61	Induced Fit Interanion Discrimination by Binding-Induced Excimer Formation. Journal of the American Chemical Society, 2008, 130, 4105-4113.	13.7	70
62	Modular assembly of a preorganised, ditopic receptor for dicarboxylates. Chemical Communications, 2006, , 156-158.	4.1	35