# Mark Paskevicius

List of Publications by Year
in descending order



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|---|---|---|---|
| 111 papers | 5,557 citations | 109321 35 h-index | 85541 71 g-index |
| 113 all docs | 113 docs citations | 113 times ranked | 3548 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Synergetic effect of multicomponent additives on limestone when assessed as a thermochemical energy storage material. Journal of Alloys and Compounds, 2022, 891, 161954. | 5.5 | 8 |
| 2 | 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 |
| 3 | Metallic and complex hydride-based electrochemical storage of energy. Progress in Energy, 2022, 4, 032001. | 10.9 | 26 |
| 4 | Hydrogen storage in complex hydrides: past activities and new trends. Progress in Energy, 2022, 4, 032009. | 10.9 | 23 |
| 5 | Simultaneous preparation of sodium borohydride and ammonia gas by ball milling. International Journal of Hydrogen Energy, 2022, 47, 25347-25356. | 7.1 | 6 |
| 6 | Kinetic investigation and numerical modelling of CaCO3/Al2O3 reactor for high-temperature thermal energy storage application. Solar Energy, 2022, 241, 262-274. | 6.1 | 8 |
| 7 | Magnesium- and intermetallic alloys-based hydrides for energy storage: modelling, synthesis and properties. Progress in Energy, 2022, 4, 032007. | 10.9 | 29 |
| 8 | Diverse morphologies of zinc oxide nanoparticles and their electrocatalytic performance in hydrogen production. Journal of Energy Chemistry, 2021, 56, 162-170. | 12.9 | 18 |
| 9 | In situ SAXS studies of the pore development in biochar during gasification. Carbon, 2021, 172, 454-462. | 10.3 | 24 |
| 10 | 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 |
| 11 | Hydrated alkali-B<sub>11</sub>H<sub>14</sub> salts as potential solid-state electrolytes. Journal of Materials Chemistry A, 2021, 9, 15027-15037. | 10.3 | 21 |
| 12 | Molecular Dynamics in Ag<sub>2</sub>B<sub>12</sub>H<sub>12</sub> Studied by Nuclear Magnetic Resonance. Journal of Physical Chemistry C, 2021, 125, 5534-5541. | 3.1 | 9 |
| 13 | A SAXS study of the pore structure evolution in biochar during gasification in H2O, CO2 and H2O/CO2. Fuel, 2021, 292, 120384. | 6.4 | 25 |
| 14 | Synthesis and crystal structures of decahydro-closo-decaborates of the divalent cations of strontium and manganese. Journal of Solid State Chemistry, 2021, 298, 122133. | 2.9 | 5 |
| 15 | Polymorphism of Calcium Decahydrido-closo-decaborate and Characterization of Its Hydrates. Inorganic Chemistry, 2021, 60, 10943-10957. | 4.0 | 6 |
| 16 | Insights into the mechanism of tar reforming using biochar as a catalyst. Fuel, 2021, 296, 120672. | 6.4 | 24 |
| 17 | Synthesis of closo-CB11H12â€“ Salts Using Common Laboratory Reagents. Inorganic Chemistry, 2021, 60, 14744-14751. | 4.0 | 14 |
| 18 | Thermochemical energy storage system development utilising limestone. Chemical Engineering Journal Advances, 2021, 8, 100168. | 5.2 | 14 |

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|---|---|---|---|
| 19 | A new strontium based reactive carbonate composite for thermochemical energy storage. Journal of Materials Chemistry A, 2021, 9, 20585-20594. | 10.3 | 6 |
| 20 | An operational high temperature thermal energy storage system using magnesium iron hydride. International Journal of Hydrogen Energy, 2021, 46, 38755-38767. | 7.1 | 10 |
| 21 | 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 |
| 22 | Materials for hydrogen-based energy storage â€“ past, recent progress and future outlook. Journal of Alloys and Compounds, 2020, 827, 153548. | 5.5 | 518 |
| 23 | Exploring halide destabilised calcium hydride as a high-temperature thermal battery. Journal of Alloys and Compounds, 2020, 819, 153340. | 5.5 | 17 |
| 24 | Destabilized Calcium Hydride as a Promising High-Temperature Thermal Battery. Journal of Physical Chemistry C, 2020, 124, 17512-17519. | 3.1 | 10 |
| 25 | Thermochemical energy storage performance of zinc destabilized calcium hydride at high-temperatures. Physical Chemistry Chemical Physics, 2020, 22, 25780-25788. | 2.8 | 10 |
| 26 | Ammoniumâ€“Ammonia Complexes, N2H7+, in Ammonium closo-Borate Ammines: Synthesis, Structure, and Properties. Inorganic Chemistry, 2020, 59, 11449-11458. | 4.0 | 6 |
| 27 | Fluorine Substitution in Magnesium Hydride as a Tool for Thermodynamic Control. Journal of Physical Chemistry C, 2020, 124, 9109-9117. | 3.1 | 8 |
| 28 | Inexpensive thermochemical energy storage utilising additive enhanced limestone. Journal of Materials Chemistry A, 2020, 8, 9646-9653. | 10.3 | 45 |
| 29 | Hydroxylated closo-Dodecaborates M<sub>2</sub>B<sub>12</sub>(OH)<sub>12</sub> (M = Li,) Tj ETQq1 1 0.784314 rgBT O Physical Chemistry C, 2020, 124, 11340-11349. | 3.1 | 17 |
| 30 | Thermochemical energy storage properties of a barium based reactive carbonate composite. Journal of Materials Chemistry A, 2020, 8, 10935-10942. | 10.3 | 15 |
| 31 | Difference in tar reforming activities between biochar catalysts activated in H2O and CO2. Fuel, 2020, 271, 117636. | 6.4 | 26 |
| 32 | Physicochemical Characterization of a Naâ€“Hâ€“F Thermal Battery Material. Journal of Physical Chemistry C, 2020, 124, 5053-5060. | 3.1 | 1 |
| 33 | Thermal properties of thermochemical heat storage materials. Physical Chemistry Chemical Physics, 2020, 22, 4617-4625. | 2.8 | 16 |
| 34 | Magnesium based materials for hydrogen based energy storage: Past, present and future. International Journal of Hydrogen Energy, 2019, 44, 7809-7859. | 7.1 | 460 |
| 35 | Dolomite: a low cost thermochemical energy storage material. Journal of Materials Chemistry A, 2019, 7, 1206-1215. | 10.3 | 50 |
| 36 | Role of O-containing functional groups in biochar during the catalytic steam reforming of tar using the biochar as a catalyst. Fuel, 2019, 253, 441-448. | 6.4 | 104 |

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|---|---|---|---|
| 37 | Decomposition pathway of KAlH<sub>4</sub>altered by the addition of Al<sub>2</sub>S<sub>3</sub>. Dalton Transactions, 2019, 48, 5048-5057. | 3.3 | 1 |
| 38 | Comment on â€œBi-functional Li<sub>2</sub>B<sub>12</sub>H<sub>12</sub> for energy storage and conversion applications: solid-state electrolyte and luminescent down-conversion dyeâ€•by J. A. Teprovich Jr, H. ColÃ³n-Mercado, A. L. Washington II, P. A. Ward, S. Greenway, D. M. Missimer, H. Hartman, J. Velten, J. H. Christian and R. Zidan, J. Mater. Chem. A, 2015, 3, 22853. Journal of Materials Chemistry A, 2019, 7, 4185-4187. | 10.3 | 7 |
| 39 | Methods for accurate high-temperature Sieverts-type hydrogen measurements of metal hydrides. Journal of Alloys and Compounds, 2019, 787, 1225-1237. | 5.5 | 24 |
| 40 | Molten metal closo-borate solvates. Chemical Communications, 2019, 55, 3410-3413. | 4.1 | 12 |
| 41 | A thermal energy storage prototype using sodium magnesium hydride. Sustainable Energy and Fuels, 2019, 3, 985-995. | 4.9 | 29 |
| 42 | Future perspectives of thermal energy storage with metal hydrides. International Journal of Hydrogen Energy, 2019, 44, 7738-7745. | 7.1 | 112 |
| 43 | 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 |
| 44 | Structure and Hydrogenation Properties of a HfNbTiVZr High-Entropy Alloy. Inorganic Chemistry, 2018, 57, 2103-2110. | 4.0 | 121 |
| 45 | Electrochemical Synthesis of Highly Ordered Porous Al Scaffolds Melt-Infiltrated with LiBH<sub>4</sub>for Hydrogen Storage. Journal of the Electrochemical Society, 2018, 165, D37-D42. | 2.9 | 9 |
| 46 | 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 |
| 47 | 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 |
| 48 | Reorientational Motions and Ionic Conductivity in (NH4)2B10H10and (NH4)2B12H12. Journal of Physical Chemistry C, 2018, 122, 17073-17079. | 3.1 | 10 |
| 49 | From Metal Hydrides to Metal Borohydrides. Inorganic Chemistry, 2018, 57, 10768-10780. | 4.0 | 45 |
| 50 | Hydrogenation properties of lithium and sodium hydride â€“ closo-borate, [B<sub>10</sub>H<sub>10</sub>]<sup>2â^’</sup> and [B<sub>12</sub>H<sub>12</sub>]<sup>2â^’</sup>, composites. Physical Chemistry Chemical Physics, 2018, 20, 16266-16275. | 2.8 | 18 |
| 51 | Metal borohydrides and derivatives â€“ synthesis, structure and properties. Chemical Society Reviews, 2017, 46, 1565-1634. | 38.1 | 320 |
| 52 | Multifunctionality of silver closo-boranes. Nature Communications, 2017, 8, 15136. | 12.8 | 66 |
| 53 | Halogenated Sodium-closo-Dodecaboranes as Solid-State Ion Conductors. Chemistry of Materials, 2017, 29, 3423-3430. | 6.7 | 73 |
| 54 | Hydrogen Storage Stability of Nanoconfined MgH2 upon Cycling. Inorganics, 2017, 5, 57. | 2.7 | 21 |

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| 55 | Thermal optimisation of metal hydride reactors for thermal energy storage applications. Sustainable Energy and Fuels, 2017, 1, 1820-1829. | 4.9 | 42 |
| 56 | Metal borohydride formation from aluminium boride and metal hydrides. Physical Chemistry Chemical Physics, 2016, 18, 27545-27553. | 2.8 | 15 |
| 57 | Cyclic stability and structure of nanoconfined Ti-doped NaAlH 4. International Journal of Hydrogen Energy, 2016, 41, 4159-4167. | 7.1 | 16 |
| 58 | Metal boranes: Progress and applications. Coordination Chemistry Reviews, 2016, 323, 60-70. | 18.8 | 120 |
| 59 | Sulfurized metal borohydrides. Dalton Transactions, 2016, 45, 639-645. | 3.3 | 10 |
| 60 | Metal hydrides for concentrating solarÂthermal power energy storage. Applied Physics A: Materials Science and Processing, 2016, 122, 1. | 2.3 | 95 |
| 61 | Complex and liquid hydrides for energy storage. Applied Physics A: Materials Science and Processing, 2016, 122, 1. | 2.3 | 81 |
| 62 | Stabilization of volatile Ti(BH<sub>4</sub>)<sub>3</sub> by nano-confinement in a metalâ€“organic framework. Chemical Science, 2016, 7, 666-672. | 7.4 | 26 |
| 63 | Hydrogen Storage Materials for Mobile and Stationary Applications: Current State of the Art. ChemSusChem, 2015, 8, 2789-2825. | 6.8 | 302 |
| 64 | Structural and kinetic investigation of the hydride composite Ca(BH<sub>4</sub>)<sub>2</sub> + MgH<sub>2</sub> system doped with NbF<sub>5</sub> for solid-state hydrogen storage. Physical Chemistry Chemical Physics, 2015, 17, 27328-27342. | 2.8 | 25 |
| 65 | Reaction kinetic behaviour with relation to crystallite/grain size dependency in the Mgâ€“Siâ€“H system. Acta Materialia, 2015, 95, 244-253. | 7.9 | 40 |
| 66 | Metal hydride thermal heat storage prototype for concentrating solar thermal power. Energy, 2015, 88, 469-477. | 8.8 | 122 |
| 67 | In situ X-ray diffraction environments for high-pressure reactions. Journal of Applied Crystallography, 2015, 48, 1234-1241. | 4.5 | 67 |
| 68 | Thermodynamic destabilisation of MgH2 and NaMgH3 using Group IV elements Si, Ge or Sn. Journal of Alloys and Compounds, 2015, 623, 109-116. | 5.5 | 44 |
| 69 | Mg<sub>2</sub>Si Nanoparticle Synthesis for High Pressure Hydrogenation. Journal of Physical Chemistry C, 2014, 118, 1240-1247. | 3.1 | 32 |
| 70 | Novel solvates M(BH<sub>4</sub>)<sub>3</sub>S(CH<sub>3</sub>)<sub>2</sub> and properties of halide-free M(BH<sub>4</sub>)<sub>3</sub> (M = Y or Gd). Dalton Transactions, 2014, 43, 13333-13342. | 3.3 | 52 |
| 71 | Mechanochemical synthesis of amorphous silicon nanoparticles. RSC Advances, 2014, 4, 21979-21983. | 3.6 | 20 |
| 72 | Nanoconfinement degradation in NaAlH4/CMK-1. International Journal of Hydrogen Energy, 2014, 39, 11103-11109. | 7.1 | 33 |

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| 73 | Hydriding characteristics of NaMgH<sub>2</sub>F with preliminary technical and cost evaluation of magnesium-based metal hydride materials for concentrating solar power thermal storage. RSC Advances, 2014, 4, 26552-26562. | 3.6 | 77 |
| 74 | Effect of Al and Mo substitution on the structural and hydrogen storage properties of CaNi5. International Journal of Hydrogen Energy, 2013, 38, 2325-2331. | 7.1 | 21 |
| 75 | Eutectic melting in metal borohydrides. Physical Chemistry Chemical Physics, 2013, 15, 19774. | 2.8 | 113 |
| 76 | First-order phase transition in the Li2B12H12 system. Physical Chemistry Chemical Physics, 2013, 15, 15825. | 2.8 | 78 |
| 77 | New directions for hydrogen storage: sulphur destabilised sodium aluminium hydride. Journal of Materials Chemistry A, 2013, 1, 12775. | 10.3 | 18 |
| 78 | Thermal Stability of Li<sub>2</sub>B<sub>12</sub>H<sub>12</sub> and its Role in the Decomposition of LiBH<sub>4</sub>. Journal of the American Chemical Society, 2013, 135, 6930-6941. | 13.7 | 120 |
| 79 | Crystalline Al<sub>1â€‰â^'â€‰</sub><sub>x</sub>Ti<sub>x</sub>phases in the hydrogen cycled NaAlH<sub>4</sub>â€‰+â€‰0.02TiCl<sub>3</sub>system. Philosophical Magazine, 2013, 93, 1080-1094. | 1.6 | 6 |
| 80 | Research on metal hydrides revived for next-generation solutions to renewable energy storage. MRS Bulletin, 2013, 38, 1012-1013. | 3.5 | 36 |
| 81 | The synthesis of nanoscopic Ti based alloys and their effects on the MgH2 system compared with the MgH2Â+ÂO.01Nb2O5 benchmark. International Journal of Hydrogen Energy, 2012, 37, 4227-4237. | 7.1 | 72 |
| 82 | In-Situ X-ray Diffraction Study of Î³-Mg(BH<sub>4</sub>)<sub>2</sub> Decomposition. Journal of Physical Chemistry C, 2012, 116, 15231-15240. | 3.1 | 86 |
| 83 | Hydrogen Absorption Kinetics of the Transition-Metal-Chloride-Enhanced NaAlH4 System. Journal of Physical Chemistry C, 2012, 116, 14205-14217. | 3.1 | 28 |
| 84 | The location of Ti containing phases after the completion of the NaAlH4+xTiCl3 milling process. Journal of Alloys and Compounds, 2012, 513, 597-605. | 5.5 | 18 |
| 85 | Functionality of the nanoscopic crystalline Al/amorphous Al50Ti50 surface embedded composite observed in the NaAlH4+xTiCl3 system after milling. Journal of Alloys and Compounds, 2012, 514, 163-169. | 5.5 | 14 |
| 86 | Amorphous Al1â^'xTix, Al1â^'xVx, and Al1â^'xFex phases in the hydrogen cycled TiCl3, VCl3 and FeCl3 enhanced NaAlH4 systems. Journal of Alloys and Compounds, 2012, 521, 112-120. | 5.5 | 15 |
| 87 | A structural review of nanoscopic Al1â^'xTMx phase formation in the TMCln enhanced NaAlH4 system. Journal of Alloys and Compounds, 2012, 527, 16-24. | 5.5 | 12 |
| 88 | 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. | 7.1 | 21 |
| 89 | Novel methods for synthesizing halide-free alane without the formation of adducts. Applied Physics A: Materials Science and Processing, 2012, 107, 173-181. | 2.3 | 19 |
| 90 | Cycle life and hydrogen storage properties of mechanical alloyed Ca1â^'xZrxNi5â^'yCry; (xÂ=ÂO, 0.05 and) Tj ETQq0 0 0 rgBT /Overlock 1 | 7.1 | 18 |

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| 91 | Concentrating Solar Thermal Heat Storage Using Metal Hydrides. Proceedings of the IEEE, 2012, 100, 539-549. | 21.3 | 154 |
| 92 | In Situ Neutron Diffraction Study of the Deuteration of Isotopic Mg<sup>11</sup>B<sub>2</sub>. Journal of Physical Chemistry C, 2011, 115, 22669-22679. | 3.1 | 35 |
| 93 | Thermodynamics of Hydrogen Desorption from NaMgH<sub>3</sub> and Its Application As a Solar Heat Storage Medium. Chemistry of Materials, 2011, 23, 4298-4300. | 6.7 | 82 |
| 94 | Magnesium Hydride Formation within Carbon Aerogel. Journal of Physical Chemistry C, 2011, 115, 1757-1766. | 3.1 | 55 |
| 95 | Hydrogen Desorption from the NaNH<sub>2</sub>â"MgH<sub>2</sub> System. Journal of Physical Chemistry C, 2011, 115, 8407-8413. | 3.1 | 31 |
| 96 | Kinetic limitations in the Mgâ€"Siâ€"H system. International Journal of Hydrogen Energy, 2011, 36, 10779-10786. | 7.1 | 18 |
| 97 | Nanoscale cobalt doped carbon aerogel: microstructure and isosteric heat of hydrogen adsorption. International Journal of Hydrogen Energy, 2011, 36, 10855-10860. | 7.1 | 17 |
| 98 | Structure, morphology and hydrogen storage properties of a Ti0.97Zr0.019V0.439Fe0.097Cr0.045Al0.026Mn1.5 alloy. International Journal of Hydrogen Energy, 2011, 36, 7587-7593. | 7.1 | 26 |
| 99 | Nanoscopic Al1â"xCex phases in the NaHÂ+ÂAlÂ+Â0.02CeCl3 system. International Journal of Hydrogen Energy, 2011, 36, 8403-8411. | 7.1 | 19 |
| 100 | Acetic acid catalysed carbon xerogels derived from resorcinol-furfural for hydrogen storage. International Journal of Hydrogen Energy, 2011, 36, 671-679. | 7.1 | 30 |
| 101 | Carbon aerogels from acetic acid catalysed resorcinolâ€"furfural using supercritical drying for hydrogen storage. Journal of Supercritical Fluids, 2011, 55, 1115-1117. | 3.2 | 13 |
| 102 | A synthesis method for cobalt doped carbon aerogels with high surface area and their hydrogen storage properties. International Journal of Hydrogen Energy, 2010, 35, 13242-13246. | 7.1 | 35 |
| 103 | The Mechanochemical synthesis of magnesium hydride nanoparticles. Journal of Alloys and Compounds, 2010, 492, L72-L74. | 5.5 | 20 |
| 104 | Thermodynamic Changes in Mechanochemically Synthesized Magnesium Hydride Nanoparticles. Journal of the American Chemical Society, 2010, 132, 5077-5083. | 13.7 | 304 |
| 105 | Encapsulation and Sustained Release of Curcumin using Superparamagnetic Silica Reservoirs. Chemistry - A European Journal, 2009, 15, 5661-5665. | 3.3 | 52 |
| 106 | Ammonia-induced precipitation of zirconyl chloride and zirconylâ€"yttrium chloride solutions under industrially relevant conditions. Powder Technology, 2009, 188, 222-228. | 4.2 | 8 |
| 107 | Mechanochemical synthesis of aluminium nanoparticles and their deuterium sorption properties to 2kbar. Journal of Alloys and Compounds, 2009, 481, 595-599. | 5.5 | 48 |
| 108 | Characterisation of mechanochemically synthesised alane (AlH3) nanoparticles. Journal of Alloys and Compounds, 2009, 487, 370-376. | 5.5 | 42 |

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| 109 | Preparation, microstructure and hydrogen sorption properties of nanoporous carbon aerogels under ambient drying. Nanotechnology, 2008, 19, 475605. | 2.6 | 32 |
| 110 | Wormlike Micelles from a Cage Amine Metallosurfactant. Langmuir, 2007, 23, 11986-11990. | 3.5 | 31 |
| 111 | Analysis of polydisperse bubbles in the aluminiumâ€“hydrogen system using a size-dependent contrast. Journal of Applied Crystallography, 2006, 39, 676-682. | 4.5 | 5 |