James E Miller

List of Publications by Year
in descending order

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67 papers	3,743 citations	159585 30 h-index	128289 60 g-index
68 all docs	68 docs citations	68 times ranked	3828 citing authors

#	Article	IF	Citations
1	Modified Calcium Manganites for Thermochemical Energy Storage Applications. Frontiers in Energy Research, 2022, 10, .	2.3	4
2	Compositional and operational impacts on the thermochemical reduction of CO₂ to CO by iron oxide/yttria-stabilized zirconia. RSC Advances, 2021, 11, 1493-1502.	3.6	11
3	Techno-Economic Analysis of a Concentrating Solar Power Plant Using Redox-Active Metal Oxides as Heat Transfer Fluid and Storage Media. Frontiers in Energy Research, 2021, 9, .	2.3	8
4	Thermodynamic assessment of an electrically-enhanced thermochemical hydrogenÂproduction (EETHP) concept for renewable hydrogen generation. International Journal of Hydrogen Energy, 2017, 42, 14380-14389.	7.1	4
5	Born in the lab: Hydrocarbon fuels ditch their fossil origins. MRS Bulletin, 2017, 42, 630-631.	3.5	1
6	H2O splitting via a two-step solar thermoelectrolytic cycle based on non-stoichiometric ceria redox reactions: Thermodynamic analysis. International Journal of Hydrogen Energy, 2017, 42, 18785-18793.	7.1	15
7	Splitting CO2 to produce syngas and hydrocarbon fuels: PEC and STC. MRS Bulletin, 2017, 42, 878-879.	3.5	3
8	Doped calcium manganites for advanced high-temperature thermochemical energy storage. International Journal of Energy Research, 2016, 40, 280-284.	4.5	81
9	ABO3 (A = La, Ba, Sr, K; B = Co, Mn, Fe) perovskites for thermochemical energy storage. AIP Conference Proceedings, 2016, , .	0.4	20
10	Investigation of La Sr1â^'Co M1â^'O3â^' (M = Mn, Fe) perovskite materials as thermochemical energy storage media. Solar Energy, 2015, 118, 451-459.	6.1	117
11	Considerations in the Design of Materials for Solarâ€Driven Fuel Production Using Metalâ€Oxide Thermochemical Cycles. Advanced Energy Materials, 2014, 4, 1300469.	19.5	138
12	Comparative analysis of environmental impact of S2P (Sunshine to Petrol) system for transportation fuel production. Applied Energy, 2013, 111, 1089-1098.	10.1	38
13	Re-energizing CO2 to fuels with the sun: Issues of efficiency, scale, and economics. Journal of CO2 Utilization, 2013, 1, 28-36.	6.8	61
14	Factors Affecting the Efficiency of Solar Driven Metal Oxide Thermochemical Cycles. Industrial & Engineering Chemistry Research, 2013, 52, 3276-3286.	3.7	146
15	ToF-SIMS analysis of iron oxide particle oxidation by isotopic and multivariate analysis. Surface and Interface Analysis, 2013, 45, 320-323.	1.8	2
16	Using in-situ techniques to probe high-temperature reactions: thermochemical cycles for the production of synthetic fuels from CO2 and water. Powder Diffraction, 2012, 27, 117-125.	0.2	9
17	Solar thermal decoupled water electrolysis process I: Proof of concept. Chemical Engineering Science, 2012, 84, 372-380.	3.8	26
18	Coextrusion of Zirconiaâ€“Iron Oxide Honeycomb Substrates for Solar-Based Thermochemical Generation of Carbon Monoxide for Renewable Fuels. Energy & Fuels, 2012, 26, 712-721.	5.1	23

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19	Oxygen transport and isotopic exchange in iron oxide/YSZ thermochemically-active materials via splitting of C(18O)2 at high temperature studied by thermogravimetric analysis and secondary ion mass spectrometry. Journal of Materials Chemistry, 2012, 22, 6726.	6.7	39
20	Fuel production from CO2 using solar-thermal energy: system level analysis. Energy and Environmental Science, 2012, 5, 8417.	30.8	177
21	Ferrite-YSZ composites for solar thermochemical production of synthetic fuels: in operando characterization of CO2 reduction. Journal of Materials Chemistry, 2011, 21, 10767.	6.7	58
22	Morphological families of self-assembled porphyrin structures and their photosensitization of hydrogen generation. Chemical Communications, 2011, 47, 6069.	4.1	55
23	Templated growth of platinum nanowheels using the inhomogeneous reaction environment of bicelles. Physical Chemistry Chemical Physics, 2011, 13, 4846-4852.	2.8	37
24	Methanol production from CO2 using solar-thermal energy: process development and techno-economic analysis. Energy and Environmental Science, 2011, 4, 3122.	30.8	214
25	Evolution of dendritic nanosheets into durable holey sheets: a lattice gas simulation study. Journal of Porphyrins and Phthalocyanines, 2011, 15, 449-458.	0.8	4
26	Testing of a CR5 Solar Thermochemical Heat Engine Prototype. , 2010, , .		27
27	Cerium Oxide Materials for the Solar Thermochemical Decomposition of Carbon Dioxide. , 2010, , .		0
28	Synthesis and Characterization of Ferrite Materials for Thermochemical CO2Splitting Using Concentrated Solar Energy. ACS Symposium Series, 2010, , 1-13.	0.5	11
29	Reactive Structures for Two-Step Thermochemical Cycles Based on Non-Volatile Metal Oxides. , 2009, , .		3
30	Evolution of Dendritic Platinum Nanosheets into Ripening-Resistant Holey Sheets. Nano Letters, 2009, 9, 1534-1539.	9.1	37
31	Metal oxide composites and structures for ultra-high temperature solar thermochemical cycles. Journal of Materials Science, 2008, 43, 4714-4728.	3.7	213
32	Impact of copper on the performance and sulfur tolerance of barium-based NOx storage-reduction catalysts. Applied Catalysis B: Environmental, 2008, 78, 315-323.	20.2	13
33	Two-Step Water Splitting Using Mixed-Metal Ferrites: Thermodynamic Analysis and Characterization of Synthesized Materials. Energy & Fuels, 2008, 22, 4115-4124.	5.1	152
34	Silicaâˆ'Metal Coreâˆ'Shells and Metal Shells Synthesized by Porphyrin-Assisted Photocatalysis. Chemistry of Materials, 2008, 20, 7434-7439.	6.7	23
35	Synthesis of Platinum Nanowheels Using a Bicellar Template. Journal of the American Chemical Society, 2008, 130, 12602-12603.	13.7	92
36	Solar Thermochemical Water-Splitting Ferrite-Cycle Heat Engines. Journal of Solar Energy Engineering, Transactions of the ASME, 2008, 130, .	1.8	227

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37	Monodisperse porphyrin nanospheres synthesized by coordination polymerization. Nanotechnology, 2008, 19, 395604.	2.6	54
38	Zeolite-templated electrocatalysts for fuel cells. Studies in Surface Science and Catalysis, 2007, 170, 1552-1557.	1.5	0
39	The preparation and characterization of novel Pt/C electrocatalysts with controlled porosity and cluster size. Journal of Materials Chemistry, 2007, 17, 3330.	6.7	19
40	Synthesis of Platinum Nanowire Networks Using a Soft Template. Nano Letters, 2007, 7, 3650-3655.	9.1	328
41	Nanostructured Pt/C electrocatalysts with high platinum dispersions through zeolite-templating. Microporous and Mesoporous Materials, 2007, 101, 440-444.	4.4	28
42	Zeolite-templated Pt/C electrocatalysts. Microporous and Mesoporous Materials, 2007, 104, 236-247.	4.4	24
43	Platinum nanodendrites. Nanotechnology, 2006, 17, 1300-1308.	2.6	44
44	Foamlike Nanostructures Created from Dendritic Platinum Sheets on Liposomes. Chemistry of Materials, 2006, 18, 2335-2346.	6.7	88
45	Thermodynamic Analysis of Mixed-Metal Ferrites for Hydrogen Production by Two-Step Water Splitting. , 2006, , 285.		7
46	Materials Development for the CR5 Solar Thermochemical Heat Engine. , 2006, , 311.		16
47	Monolithic Supports with Unique Geometries and Enhanced Mass Transfer. Industrial & Engineering Chemistry Research, 2005, 44, 302-308.	3.7	37
48	Advanced Support Structures for Enhanced Catalytic Activity. Industrial & Engineering Chemistry Research, 2004, 43, 51-55.	3.7	109
49	Synthesis of peptide-nanotube platinum-nanoparticle composites. Chemical Communications, 2004, , 1044-1045.	4.1	208
50	Effect of surface phosphorus on the oxidative dehydrogenation of ethane: A first-principles investigation. Journal of Chemical Physics, 2002, 117, 8080-8088.	3.0	14
51	Oxidative dehydrogenation of ethane over iron phosphate catalysts. Applied Catalysis A: General, 2002, 231, 281-292.	4.3	34
52	Deposition and Characterization of Highly Oriented Mg3(VO4)2 Thin-Film Catalysts. Journal of Catalysis, 2002, 208, 6-14.	6.2	0
53	Oxidation reactions of ethane over Baâ€“Ceâ€“O based perovskites. Applied Catalysis A: General, 2000, 201, 45-54.	4.3	14
54	Batch microreactor studies of lignin and lignin model compound depolymerization by bases in alcohol solvents. Fuel, 1999, 78, 1363-1366.	6.4	234

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55	The formation of active species for oxidative dehydrogenation of propane on magnesium molybdates. Catalysis Letters, 1999, 58, 147-152.	2.6	45
56	Development and Properties of Cesium Selective Crystalline Silicotitanate (CST) Ion Exchangers for Radioactive Waste Applications. , 1998, , 269-286.		10
57	Structure-Property Relationships of BaCeO Perovskites for the Oxidative Dehydrogenation of Alkanes. Materials Research Society Symposia Proceedings, 1997, 497, 21.	0.1	2
58	Cs+ Ion Exchange Kinetics in Complex Electrolyte Solutions Using Hydrous Crystalline Silicotitanates. Industrial & Engineering Chemistry Research, 1997, 36, 5377-5383.	3.7	32
59	Modeling Multicomponent Ion Exchange Equilibrium Utilizing Hydrous Crystalline Silicotitanates by a Multiple Interactive Ion Exchange Site Model. Industrial & Engineering Chemistry Research, 1997, 36, 2427-2434.	3.7	45
60	Ion Exchange of Group I Metals by Hydrous Crystalline Silicotitanates. Industrial & Engineering Chemistry Research, 1996, 35, 4246-4256.	3.7	89
61	Highly Selective Inorganic Crystalline Ion Exchange Material for Sr2+in Acidic Solutions. Environmental Science & Technology, 1996, 30, 3630-3633.	10.0	24
62	SNL-1, a Highly Selective Inorganic Crystalline Ion Exchange Material for Sr2+ in Acidic Solutions. Materials Research Society Symposia Proceedings, 1995, 412, 659.	0.1	1
63	Chemical Beam Epitaxy and Characterization of GaAs from Bis(tert-butylarsenido)dimethylgallane Dimer and Bis(tert-butylarsenido)diethylgallane Dimer. Chemistry of Materials, 1994, 6, 343-348.	6.7	4
64	Growth of epitaxial (100) gallium arsenide films using the single-source precursor [Me2Ga(.mu.-t-Bu2As)]2. Chemistry of Materials, 1992, 4, 7-9.	6.7	22
65	Pyrolysis studies of the single-source gallium arsenide precursors [Me2Ga(.mu.-As-i-Pr2)]3, [Me2Ga(.mu.-AsMe2)]3, [Me2Ga(.mu.-As-t-Bu2)]2, and [Et2Ga(.mu.-As-t-Bu2)]2. Chemistry of Materials, 1992, 4, 447-452.	6.7	22
66	Growth and characterization of gallium arsenide using single-source precursors: OMCVD and bulk pyrolysis studies. Chemistry of Materials, 1990, 2, 589-593.	6.7	28
67	Organometallic chemical vapor deposition of III/V compound semiconductors with novel organometallic precursors. Journal of the American Chemical Society, 1988, 110, 6248-6249.	13.7	66