

Alan W Weimer

List of Publications by Year in descending order

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208
papers

10,041
citations

19657

61
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45317

90
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211
all docs

211
docs citations

211
times ranked

7695
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient Generation of H ₂ by Splitting Water with an Isothermal Redox Cycle. <i>Science</i> , 2013, 341, 540-542.	12.6	296
2	Likely near-term solar-thermal water splitting technologies. <i>International Journal of Hydrogen Energy</i> , 2004, 29, 1587-1599.	7.1	226
3	Aggregation behavior of nanoparticles in fluidized beds. <i>Powder Technology</i> , 2005, 160, 149-160.	4.2	213
4	A spinel ferrite/hercynite water-splitting redox cycle. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 3333-3340.	7.1	210
5	Solar-driven gasification of carbonaceous feedstock—a review. <i>Energy and Environmental Science</i> , 2011, 4, 73-82.	30.8	204
6	Atomic layer deposition of ultrathin and conformal Al ₂ O ₃ films on BN particles. <i>Thin Solid Films</i> , 2000, 371, 95-104.	1.8	194
7	Atomic Layer Deposition of Al ₂ O ₃ Films on Polyethylene Particles. <i>Chemistry of Materials</i> , 2004, 16, 5602-5609.	6.7	179
8	Atomic layer deposition on particles using a fluidized bed reactor with in situ mass spectrometry. <i>Surface and Coatings Technology</i> , 2007, 201, 9163-9171.	4.8	172
9	A review and perspective of efficient hydrogen generation via solar thermal water splitting. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2016, 5, 261-287.	4.1	168
10	Kinetics of carbothermal reduction synthesis of beta silicon carbide. <i>AIChE Journal</i> , 1993, 39, 493-503.	3.6	153
11	Hydrogen Production via Chemical Looping Redox Cycles Using Atomic Layer Deposition-Synthesized Iron Oxide and Cobalt Ferrites. <i>Chemistry of Materials</i> , 2011, 23, 2030-2038.	6.7	153
12	Physical descriptor for the Gibbs energy of inorganic crystalline solids and temperature-dependent materials chemistry. <i>Nature Communications</i> , 2018, 9, 4168.	12.8	152
13	Stabilizing Ni Catalysts by Molecular Layer Deposition for Harsh, Dry Reforming Conditions. <i>ACS Catalysis</i> , 2014, 4, 2714-2717.	11.2	150
14	Rapid Process for Manufacturing Aluminum Nitride Powder. <i>Journal of the American Ceramic Society</i> , 1994, 77, 3-18.	3.8	140
15	Solar-thermal dissociation of methane in a fluid-wall aerosol flow reactor. <i>International Journal of Hydrogen Energy</i> , 2004, 29, 725-736.	7.1	128
16	ALD of SiO ₂ at Room Temperature Using TEOS and H ₂ O with NH ₃ as the Catalyst. <i>Journal of the Electrochemical Society</i> , 2004, 151, G528.	2.9	126
17	Kinetics and mechanism of solar-thermochemical H ₂ production by oxidation of a cobalt ferrite-zirconia composite. <i>Energy and Environmental Science</i> , 2013, 6, 963.	30.8	123
18	Solar-thermal production of renewable hydrogen. <i>AIChE Journal</i> , 2009, 55, 286-293.	3.6	119

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19	Highly dispersed Pt nanoparticle catalyst prepared by atomic layer deposition. <i>Applied Catalysis B: Environmental</i> , 2010, 97, 220-226.	20.2	117
20	Nanocoating Individual Silica Nanoparticles by Atomic Layer Deposition in a Fluidized Bed Reactor. <i>Chemical Vapor Deposition</i> , 2005, 11, 420-425.	1.3	111
21	CoFe ₂ O ₄ on a porous Al ₂ O ₃ nanostructure for solar thermochemical CO ₂ splitting. <i>Energy and Environmental Science</i> , 2012, 5, 9438.	30.8	107
22	Solar-driven biochar gasification in a particle-flow reactor. <i>Chemical Engineering and Processing: Process Intensification</i> , 2009, 48, 1279-1287.	3.6	106
23	Stabilization of Supported Metal Nanoparticles Using an Ultrathin Porous Shell. <i>ACS Catalysis</i> , 2011, 1, 1162-1165.	11.2	106
24	Ultra-thin microporous and mesoporous metal oxide films prepared by molecular layer deposition (MLD). <i>Chemical Communications</i> , 2009, , 7140.	4.1	105
25	Nanocoating individual cohesive boron nitride particles in a fluidized bed by ALD. <i>Powder Technology</i> , 2004, 142, 59-69.	4.2	104
26	Atomic layer deposition of boron nitride using sequential exposures of BCl ₃ and NH ₃ . <i>Thin Solid Films</i> , 2002, 413, 16-25.	1.8	103
27	Atomic layer deposition of iron(III) oxide on zirconia nanoparticles in a fluidized bed reactor using ferrocene and oxygen. <i>Thin Solid Films</i> , 2009, 517, 1874-1879.	1.8	103
28	Optimal preparation of Pt/TiO ₂ photocatalysts using atomic layer deposition. <i>Applied Catalysis B: Environmental</i> , 2010, 101, 54-60.	20.2	102
29	Dry Reforming of Methane Using a Solar-Thermal Aerosol Flow Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 5489-5495.	3.7	101
30	Conformal nanocoating of zirconia nanoparticles by atomic layer deposition in a fluidized bed reactor. <i>Nanotechnology</i> , 2005, 16, S375-S381.	2.6	101
31	Novel Processing to Produce Polymer/Ceramic Nanocomposites by Atomic Layer Deposition. <i>Journal of the American Ceramic Society</i> , 2007, 90, 57-63.	3.8	99
32	A cavity-receiver containing a tubular absorber for high-temperature thermochemical processing using concentrated solar energy. <i>International Journal of Thermal Sciences</i> , 2008, 47, 1496-1503.	4.9	98
33	Thermal ZnO dissociation in a rapid aerosol reactor as part of a solar hydrogen production cycle. <i>International Journal of Hydrogen Energy</i> , 2008, 33, 499-510.	7.1	95
34	Vibro-fluidization of fine boron nitride powder at low pressure. <i>Powder Technology</i> , 2001, 121, 195-204.	4.2	94
35	Atomic layer deposition on gram quantities of multi-walled carbon nanotubes. <i>Nanotechnology</i> , 2009, 20, 255602.	2.6	94
36	Effect of Surface Deposited Pt on the Photoactivity of TiO ₂ . <i>Journal of Physical Chemistry C</i> , 2012, 116, 10138-10149.	3.1	92

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37	Enhanced dry reforming of methane on Ni and Ni-Pt catalysts synthesized by atomic layer deposition. Applied Catalysis A: General, 2015, 492, 107-116.	4.3	89
38	Atomic layer deposition of TiO ₂ films on particles in a fluidized bed reactor. Powder Technology, 2008, 183, 356-363.	4.2	85
39	Rapid High Temperature Solar Thermal Biomass Gasification in a Prototype Cavity Reactor. Journal of Solar Energy Engineering, Transactions of the ASME, 2010, 132, .	1.8	85
40	TiO ₂ atomic layer deposition on ZrO ₂ particles using alternating exposures of TiCl ₄ and H ₂ O. Applied Surface Science, 2004, 226, 393-404.	6.1	84
41	Kinetics of Carbothermal Reduction Synthesis of Boron Carbide. Journal of the American Ceramic Society, 1992, 75, 2509-2514.	3.8	82
42	Atomic Layer Deposition of UV-Absorbing ZnO Films on SiO ₂ and TiO ₂ Nanoparticles Using a Fluidized Bed Reactor. Advanced Functional Materials, 2008, 18, 607-615.	14.9	81
43	Coating Fine Nickel Particles with Al ₂ O ₃ Utilizing an Atomic Layer Deposition-Fluidized Bed Reactor (ALD-FBR). Journal of the American Ceramic Society, 2004, 87, 762-765.	3.8	80
44	Rapid solar-thermal dissociation of natural gas in an aerosol flow reactor. Energy, 2004, 29, 715-725.	8.8	80
45	First-Principles Analysis of Cation Diffusion in Mixed Metal Ferrite Spinel. Chemistry of Materials, 2016, 28, 214-226.	6.7	80
46	Particle atomic layer deposition. Journal of Nanoparticle Research, 2019, 21, 9.	1.9	77
47	Functionalization of fine particles using atomic and molecular layer deposition. Powder Technology, 2012, 221, 13-25.	4.2	76
48	Hydrogen generation by hydrolysis of zinc powder aerosol. International Journal of Hydrogen Energy, 2008, 33, 1127-1134.	7.1	72
49	SnO ₂ atomic layer deposition on ZrO ₂ and Al nanoparticles: Pathway to enhanced thermite materials. Powder Technology, 2005, 156, 154-163.	4.2	71
50	The Effect of N and B Doping on Graphene and the Adsorption and Migration Behavior of Pt Atoms. Journal of Physical Chemistry C, 2013, 117, 10523-10535.	3.1	71
51	Mechanism and Kinetics of the Carbothermal Nitridation Synthesis of β -Silicon Nitride. Journal of the American Ceramic Society, 1997, 80, 2853-2863.	3.8	69
52	Atomic Layer Deposition of SiO ₂ Films on BN Particles Using Sequential Surface Reactions. Chemistry of Materials, 2000, 12, 3472-3480.	6.7	69
53	Quantum confinement in amorphous TiO ₂ films studied via atomic layer deposition. Nanotechnology, 2008, 19, 445401.	2.6	69
54	Synthesis of supported Ni catalysts by atomic layer deposition. Journal of Catalysis, 2013, 303, 9-15.	6.2	69

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55	Predicting the solar thermochemical water splitting ability and reaction mechanism of metal oxides: a case study of the hercynite family of water splitting cycles. <i>Energy and Environmental Science</i> , 2015, 8, 3687-3699.	30.8	68
56	The Role of Surface Basal Planes of Layered Mixed Metal Oxides in Selective Transformation of Lower Alkanes: Propane Ammoxidation over Surface $\text{Mo}^{VI}\text{V}^{IV}\text{Te}^{VI}\text{Nb}^{V}\text{O}$ M1 Phase. <i>Journal of the American Chemical Society</i> , 2008, 130, 5850-5851.	13.7	67
57	System efficiency for two-step metal oxide solar thermochemical hydrogen production – Part 1: Thermodynamic model and impact of oxidation kinetics. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 19881-19893.	7.1	66
58	Tungsten atomic layer deposition on polymers. <i>Thin Solid Films</i> , 2008, 516, 6175-6185.	1.8	64
59	Rapid carbothermal reduction of boron oxide in a graphite transport reactor. <i>AIChE Journal</i> , 1991, 37, 759-768.	3.6	63
60	Nanoparticle Coating for Advanced Optical, Mechanical and Rheological Properties. <i>Advanced Functional Materials</i> , 2007, 17, 3175-3181.	14.9	63
61	Analysis of Al_2O_3 Atomic Layer Deposition on ZrO_2 Nanoparticles in a Rotary Reactor. <i>Chemical Vapor Deposition</i> , 2007, 13, 491-498.	1.3	63
62	Growth of Pt Particles on the Anatase TiO_2 (101) Surface. <i>Journal of Physical Chemistry C</i> , 2012, 116, 12114-12123.	3.1	63
63	The role of decomposition reactions in assessing first-principles predictions of solid stability. <i>Npj Computational Materials</i> , 2019, 5, .	8.7	63
64	Synthesis of a Novel Porous Polymer/Ceramic Composite Material by Low-Temperature Atomic Layer Deposition. <i>Chemistry of Materials</i> , 2007, 19, 5388-5394.	6.7	62
65	Controlling Nanoscale Properties of Supported Platinum Catalysts through Atomic Layer Deposition. <i>ACS Catalysis</i> , 2015, 5, 1344-1352.	11.2	59
66	Isothermal redox for H_2O and CO_2 splitting – A review and perspective. <i>Solar Energy</i> , 2017, 156, 21-29.	6.1	58
67	Synthesis of oxidation-resistant metal nanoparticles via atomic layer deposition. <i>Nanotechnology</i> , 2007, 18, 345603.	2.6	57
68	Investigation of novel mixed metal ferrites for pure H_2 and CO_2 production using chemical looping. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 9085-9096.	7.1	57
69	Intrinsic kinetics for rapid decomposition of methane in an aerosol flow reactor. <i>International Journal of Hydrogen Energy</i> , 2002, 27, 377-386.	7.1	55
70	Nanocoating hybrid polymer films on large quantities of cohesive nanoparticles by molecular layer deposition. <i>AIChE Journal</i> , 2009, 55, 1030-1039.	3.6	55
71	Increasing the Photocatalytic Activity of Anatase TiO_2 through B, C, and N Doping. <i>Journal of Physical Chemistry C</i> , 2014, 118, 27415-27427.	3.1	55
72	On dense phase voidage and bubble size in high pressure fluidized beds of fine powders. <i>AIChE Journal</i> , 1985, 31, 1019-1028.	3.6	51

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73	High-pressure particulate expansion and minimum bubbling of fine carbon powders. <i>AIChE Journal</i> , 1987, 33, 1698-1706.	3.6	51
74	Rapid nickel oxalate thermal decomposition for producing fine porous nickel metal powders. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 431, 1-12.	5.6	51
75	Continuous on-sun solar thermochemical hydrogen production via an isothermal redox cycle. <i>Applied Energy</i> , 2019, 249, 368-376.	10.1	49
76	Passivation of pigment-grade TiO ₂ particles by nanothick atomic layer deposited SiO ₂ films. <i>Nanotechnology</i> , 2008, 19, 255604.	2.6	48
77	System efficiency for two-step metal oxide solar thermochemical hydrogen production – Part 3: Various methods for achieving low oxygen partial pressures in the reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 19904-19914.	7.1	45
78	Modification of interparticle forces for nanoparticles using atomic layer deposition. <i>Chemical Engineering Science</i> , 2007, 62, 6199-6211.	3.8	44
79	Determination of aerosol kinetics of thermal ZnO dissociation by thermogravimetry. <i>Chemical Engineering Science</i> , 2007, 62, 5952-5962.	3.8	43
80	Barrier properties of polymer/alumina nanocomposite membranes fabricated by atomic layer deposition. <i>Journal of Membrane Science</i> , 2008, 322, 105-112.	8.2	43
81	Photoactivity passivation of TiO ₂ nanoparticles using molecular layer deposited (MLD) polymer films. <i>Journal of Nanoparticle Research</i> , 2010, 12, 135-142.	1.9	43
82	Scalable synthesis of palladium nanoparticle catalysts by atomic layer deposition. <i>Journal of Nanoparticle Research</i> , 2012, 14, 1.	1.9	43
83	Kinetics and mechanism of solar-thermochemical H ₂ and CO production by oxidation of reduced CeO ₂ . <i>Solar Energy</i> , 2018, 160, 178-185.	6.1	43
84	Solar-Thermal Processing of Methane to Produce Hydrogen and Syngas. <i>Energy & Fuels</i> , 2001, 15, 1227-1232.	5.1	42
85	Surface Modification of Titania Nanoparticles Using Ultrathin Ceramic Films. <i>Journal of the American Ceramic Society</i> , 2006, 89, 3070-3075.	3.8	42
86	Biocompatible Interface Films Deposited within Porous Polymers by Atomic Layer Deposition (ALD). <i>ACS Applied Materials & Interfaces</i> , 2009, 1, 1988-1995.	8.0	42
87	Thermochemical Production of Fuels with Concentrated Solar Energy. <i>Optics Express</i> , 2010, 18, A100.	3.4	42
88	Low-temperature atomic layer deposition of ZnO films on particles in a fluidized bed reactor. <i>Thin Solid Films</i> , 2008, 516, 8517-8523.	1.8	41
89	Alumina atomic layer deposition nanocoatings on primary diamond particles using a fluidized bed reactor. <i>Diamond and Related Materials</i> , 2008, 17, 185-189.	3.9	40
90	Reaction mechanism studies for platinum nanoparticle growth by atomic layer deposition. <i>Journal of Nanoparticle Research</i> , 2011, 13, 3781-3788.	1.9	40

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91	Modeling the formation of boron carbide particles in an aerosol flow reactor. <i>AIChE Journal</i> , 1992, 38, 1685-1692.	3.6	39
92	Ultrathin highly porous alumina films prepared by alucone ABC molecular layer deposition (MLD). <i>Microporous and Mesoporous Materials</i> , 2013, 168, 178-182.	4.4	39
93	Investigation of Zr, Gd/Zr, and Pr/Zr "doped ceria for the redox splitting of water. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 160-174.	7.1	37
94	Atomic layer deposited thin film metal oxides for fuel production in a solar cavity reactor. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 16888-16894.	7.1	36
95	System efficiency for two-step metal oxide solar thermochemical hydrogen production " Part 2: Impact of gas heat recuperation and separation temperatures. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 19894-19903.	7.1	35
96	Manganese oxide dissociation kinetics for the Mn ₂ O ₃ thermochemical water-splitting cycle. Part 1: Experimental. <i>Chemical Engineering Science</i> , 2010, 65, 3709-3717.	3.8	34
97	Thermophoretic deposition of aerosol particles in laminar tube flow with mixed convection. <i>Journal of Aerosol Science</i> , 2006, 37, 715-734.	3.8	33
98	Rapid Silica Atomic Layer Deposition on Large Quantities of Cohesive Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 2248-2253.	8.0	33
99	Improved durability and activity of Pt/C catalysts through atomic layer deposition of tungsten nitride and subsequent thermal treatment. <i>Applied Catalysis B: Environmental</i> , 2019, 254, 587-593.	20.2	33
100	Modeling a low pressure steam-oxygen fluidized bed coal gasifying reactor. <i>Chemical Engineering Science</i> , 1981, 36, 548-567.	3.8	32
101	Manganese oxide based thermochemical hydrogen production cycle. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 7028-7037.	7.1	32
102	Atomic layer deposition of solid lubricating coatings on particles. <i>Powder Technology</i> , 2012, 221, 26-35.	4.2	32
103	Model predictive control of a solar-thermal reactor. <i>Solar Energy</i> , 2014, 102, 31-44.	6.1	32
104	High temperature thermochemical processing of biomass and methane for high conversion and selectivity to H ₂ -enriched syngas. <i>Applied Energy</i> , 2015, 157, 13-24.	10.1	32
105	Pyrolysis of human feces: Gas yield analysis and kinetic modeling. <i>Waste Management</i> , 2018, 79, 214-222.	7.4	31
106	A system-size independent validation of CFD-DEM for noncohesive particles. <i>AIChE Journal</i> , 2015, 61, 4051-4058.	3.6	30
107	Pressure dependent kinetics of magnesium oxide carbothermal reduction. <i>Thermochimica Acta</i> , 2016, 636, 23-32.	2.7	30
108	Nowcasting, predictive control, and feedback control for temperature regulation in a novel hybrid solar-electric reactor for continuous solar-thermal chemical processing. <i>Solar Energy</i> , 2018, 174, 474-488.	6.1	30

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109	Processing and properties of nanophase SiC/Si ₃ N ₄ composites. Composites Part B: Engineering, 1999, 30, 647-655.	12.0	29
110	Computational modeling and on-sun model validation for a multiple tube solar reactor with specularly reflective cavity walls. Part 1: Heat transfer model. Chemical Engineering Science, 2012, 81, 298-310.	3.8	29
111	Design considerations for a multiple tube solar reactor. Solar Energy, 2013, 90, 68-83.	6.1	29
112	Mechanistic studies for depositing highly dispersed Pt nanoparticles on carbon by use of trimethyl(methylcyclopentadienyl)platinum(IV) reactions with O ₂ and H ₂ . Journal of Nanoparticle Research, 2015, 17, 1.	1.9	28
113	Particle design and oxidation kinetics of iron-manganese oxide redox materials for thermochemical energy storage. Solar Energy, 2019, 183, 17-29.	6.1	28
114	Atomic Layer Deposition on Bulk Quantities of Surfactant-Modified Single-Walled Carbon Nanotubes. Journal of the American Ceramic Society, 2008, 91, 831-835.	3.8	27
115	Computational modeling of a multiple tube solar reactor with specularly reflective cavity walls. Part 2: Steam gasification of carbon. Chemical Engineering Science, 2012, 81, 285-297.	3.8	26
116	Extracting Kinetic Information from Complex Gas-Solid Reaction Data. Industrial & Engineering Chemistry Research, 2015, 54, 4113-4122.	3.7	26
117	Low-Temperature Atomic Layer-Deposited TiO ₂ Films with Low Photoactivity. Journal of the American Ceramic Society, 2009, 92, 649-654.	3.8	25
118	An overview of highly porous oxide films with tunable thickness prepared by molecular layer deposition. Current Opinion in Solid State and Materials Science, 2015, 19, 115-125.	11.5	25
119	A novel experimental method to study metal vapor condensation/oxidation: Mg in CO and CO ₂ at reduced pressures. Solar Energy, 2016, 139, 389-397.	6.1	24
120	Atomic layer deposition of quantum-confined ZnO nanostructures. Nanotechnology, 2009, 20, 195401.	2.6	23
121	Nonuniform Growth of Sub-2 Nanometer Atomic Layer Deposited Alumina Films on Lithium Nickel Manganese Cobalt Oxide Cathode Battery Materials. ACS Applied Nano Materials, 2019, 2, 6989-6997.	5.0	23
122	A thermochemical study of iron aluminate-based materials: a preferred class for isothermal water splitting. Energy and Environmental Science, 2022, 15, 806-821.	30.8	23
123	Synthesis of Photoactive Magnetic Nanoparticles with Atomic Layer Deposition. Industrial & Engineering Chemistry Research, 2010, 49, 6964-6971.	3.7	22
124	Template-directed synthesis of porous alumina particles with precise wall thickness control via atomic layer deposition. Microporous and Mesoporous Materials, 2012, 149, 106-110.	4.4	22
125	Evaluation of finite volume solutions for radiative heat transfer in a closed cavity solar receiver for high temperature solar thermal processes. International Journal of Heat and Mass Transfer, 2013, 58, 585-596.	4.8	22
126	A novel technique for measuring the kinetics of high-temperature gasification of biomass char with steam. Fuel, 2013, 103, 749-757.	6.4	22

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127	Reduction kinetics for large spherical 2:1 iron-manganese oxide redox materials for thermochemical energy storage. <i>Chemical Engineering Science</i> , 2019, 201, 74-81.	3.8	22
128	Sensitivity analysis of the rapid decomposition of methane in an aerosol flow reactor. <i>International Journal of Hydrogen Energy</i> , 2004, 29, 57-65.	7.1	21
129	Thermochemical Cycle of a Mixed Metal Oxide for Augmentation of Thermal Energy Storage in Solid Particles. <i>Energy Procedia</i> , 2014, 49, 762-771.	1.8	21
130	Aluminum Nitride Hydrolysis Enabled by Hydroxyl-Mediated Surface Proton Hopping. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 18550-18559.	8.0	21
131	Enhancing the Rate of Magnesium Oxide Carbothermal Reduction by Catalysis, Milling, and Vacuum Operation. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 13602-13609.	3.7	21
132	High-Throughput Equilibrium Analysis of Active Materials for Solar Thermochemical Ammonia Synthesis. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 24850-24858.	8.0	21
133	Modification of nanoporous supported lyotropic liquid crystal polymer membranes by atomic layer deposition. <i>Journal of Membrane Science</i> , 2010, 349, 1-5.	8.2	20
134	<i>In situ</i> synthesis of TiO ₂ -functionalized metal nanoparticles. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 352-360.	3.7	19
135	Nanocoating zinc alkoxide (zincone) hybrid polymer films on particles using a fluidized bed reactor. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2012, 30, .	2.1	19
136	Reduction of iron-manganese oxide particles in a lab-scale packed-bed reactor for thermochemical energy storage. <i>Chemical Engineering Science</i> , 2020, 221, 115700.	3.8	19
137	Rapid Solar-thermal Decarbonization of Methane in a Fluid-wall Aerosol Flow Reactor – Fundamentals and Application. <i>International Journal of Chemical Reactor Engineering</i> , 2007, 5, .	1.1	18
138	Intrinsic Reaction and Self-Diffusion Kinetics for Silicon Carbide Synthesis by Rapid Carbothermal Reduction. <i>Journal of the American Ceramic Society</i> , 2002, 85, 2273-2280.	3.8	17
139	Solarthermal chemical processing challenges and commercial path forward. <i>Current Opinion in Chemical Engineering</i> , 2012, 1, 211-217.	7.8	17
140	Oxidation kinetics of hercynite spinels for solar thermochemical fuel production. <i>Chemical Engineering Journal</i> , 2020, 401, 126015.	12.7	17
141	Surface Modification of Graphite Particles Coated by Atomic Layer Deposition and Advances in Ceramic Composites. <i>International Journal of Applied Ceramic Technology</i> , 2013, 10, 257-265.	2.1	16
142	Atomic layer deposition of TiO ₂ for stabilization of Pt nanoparticle oxygen reduction reaction catalysts. <i>Journal of Applied Electrochemistry</i> , 2018, 48, 973-984.	2.9	16
143	Characterization of products derived from the high temperature flash pyrolysis of microalgae and rice hulls. <i>Chemical Engineering Science</i> , 2019, 196, 527-537.	3.8	15
144	Worst-case losses from a cylindrical calorimeter for solar simulator calibration. <i>Optics Express</i> , 2015, 23, A1309.	3.4	14

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145	Effective thermal conductivity of a bed packed with granular iron-manganese oxide for thermochemical energy storage. <i>Chemical Engineering Science</i> , 2019, 207, 490-494.	3.8	14
146	Ultrafast metal-insulator varistors based on tunable Al ₂ O ₃ tunnel junctions. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	13
147	Co-processing methane in high temperature steam gasification of biomass. <i>Bioresource Technology</i> , 2013, 128, 553-559.	9.6	13
148	Transient simulation of a tubular packed bed solar receiver for hydrogen generation via metal oxide thermochemical cycles. <i>Solar Energy</i> , 2014, 105, 613-631.	6.1	13
149	Experimental evidence of an observer effect in high-flux solar simulators. <i>Solar Energy</i> , 2017, 158, 889-897.	6.1	13
150	Reduction kinetics of hercynite redox materials for solar thermochemical water splitting. <i>Chemical Engineering Journal</i> , 2020, 389, 124429.	12.7	13
151	Crystal Phase Evolution in Quantum Confined ZnO Domains on Particles via Atomic Layer Deposition. <i>Crystal Growth and Design</i> , 2009, 9, 2828-2834.	3.0	12
152	Dynamics of a solar-thermal transport-tube reactor. <i>Chemical Engineering Journal</i> , 2012, 213, 272-285.	12.7	12
153	A novel brush feeder for the pneumatic delivery of dispersed small particles at steady feed rates. <i>Powder Technology</i> , 2012, 229, 45-50.	4.2	12
154	Hybrid radiation modeling for multi-phase solar-thermal reactor systems operated at high-temperature. <i>Solar Energy</i> , 2016, 140, 130-140.	6.1	12
155	Electrochemical hydrogen pumping using a platinum catalyst made in a fluidized bed via atomic layer deposition. <i>Powder Technology</i> , 2016, 296, 72-78.	4.2	12
156	Design and Fabrication of Pellets for Magnesium Production by Carbothermal Reduction. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 2209-2218.	2.1	12
157	Computational Fluid Dynamics Simulation of a Tubular Aerosol Reactor for Solar Thermal ZnO Decomposition. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2007, 129, 391-404.	1.8	11
158	Nanostructured mullite steam oxidation resistant coatings for silicon carbide deposited via atomic layer deposition. <i>Journal of the American Ceramic Society</i> , 2018, 101, 2493-2505.	3.8	11
159	Fecal sludge as a fuel: characterization, cofire limits, and evaluation of quality improvement measures. <i>Water Science and Technology</i> , 2018, 78, 2437-2448.	2.5	11
160	Modeling of char particle size/conversion distributions in a fluidized bed gasifier: non-isothermal effects. <i>Powder Technology</i> , 1980, 27, 85-103.	4.2	10
161	Spinning wheel powder feeding device " fundamentals and applications. <i>Powder Technology</i> , 2006, 170, 36-44.	4.2	10
162	Considerations for the Design of Solar-Thermal Chemical Processes. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2010, 132, .	1.8	10

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