Michael R Zachariah

List of Publications by Year
in descending order

277 papers	13,569 citations	19657 61 h-index	30922 102 g-index
279 all docs	279 docs citations	279 times ranked	12863 citing authors

#	Article	IF	Citations
1	Carbothermal shock synthesis of high-entropy-alloy nanoparticles. Science, 2018, 359, 1489-1494.	12.6	1,065
2	Uniform Nano-Sn/C Composite Anodes for Lithium Ion Batteries. Nano Letters, 2013, 13, 470-474.	9.1	531
3	Interdispersed Amorphous MnO_xâ€“Carbon Nanocomposites with Superior Electrochemical Performance as Lithiumâ€Storage Material. Advanced Functional Materials, 2012, 22, 803-811.	14.9	376
4	Adsorption and Conformation of Serum Albumin Protein on Gold Nanoparticles Investigated Using Dimensional Measurements and in Situ Spectroscopic Methods. Langmuir, 2011, 27, 2464-2477.	3.5	359
5	Extremely stable antimonyâ€“carbon composite anodes for potassium-ion batteries. Energy and Environmental Science, 2019, 12, 615-623.	30.8	358
6	High temperature shockwave stabilized single atoms. Nature Nanotechnology, 2019, 14, 851-857.	31.5	278
7	Measurement of Inherent Material Density of Nanoparticle Agglomerates. Journal of Nanoparticle Research, 2004, 6, 267-272.	1.9	263
8	Surface Passivation of Bare Aluminum Nanoparticles Using Perfluoroalkyl Carboxylic Acids. Chemistry of Materials, 2005, 17, 2987-2996.	6.7	207
9	Assembly and reactive properties of Al/CuO based nanothermite microparticles. Combustion and Flame, 2014, 161, 2203-2208.	5.2	176
10	Combustion characteristics of boron nanoparticles. Combustion and Flame, 2009, 156, 322-333.	5.2	174
11	Crumpled Nanopaper from Graphene Oxide. Nano Letters, 2012, 12, 486-489.	9.1	160
12	Mn₃O₄ hollow spheres for lithium-ion batteries with high rate and capacity. Journal of Materials Chemistry A, 2014, 2, 4627-4632.	10.3	155
13	Enhancing the Rate of Energy Release from NanoEnergetic Materials by Electrostatically Enhanced Assembly. Advanced Materials, 2004, 16, 1821-1825.	21.0	153
14	Nanothermite reactions: Is gas phase oxygen generation from the oxygen carrier an essential prerequisite to ignition?. Combustion and Flame, 2013, 160, 432-437.	5.2	149
15	Probing the Reaction Mechanism of Aluminum/Poly(vinylidene fluoride) Composites. Journal of Physical Chemistry B, 2016, 120, 5534-5542.	2.6	145
16	FeS₂ Nanoparticles Embedded in Reduced Graphene Oxide toward Robust, Highâ€Performance Electrocatalysts. Advanced Energy Materials, 2017, 7, 1700482.	19.5	144
17	Importance of Phase Change of Aluminum in Oxidation of Aluminum Nanoparticles. Journal of Physical Chemistry B, 2004, 108, 14793-14795.	2.6	138
18	Transient, in situ synthesis of ultrafine ruthenium nanoparticles for a high-rate Liâ€“CO₂ battery. Energy and Environmental Science, 2019, 12, 1100-1107.	30.8	129

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19	Comparison study of the ignition and combustion characteristics of directly-written Al/PVDF, Al/Viton and Al/THV composites. Combustion and Flame, 2019, 201, 181-186.	5.2	127
20	Superior electrochemical performance and structure evolution of mesoporous Fe2O3 anodes for lithium-ion batteries. Nano Energy, 2014, 3, 26-35.	16.0	124
21	Ultra-fast self-assembly and stabilization of reactive nanoparticles in reduced graphene oxide films. Nature Communications, 2016, 7, 12332.	12.8	123
22	Size-Selected Nanoparticle Chemistry:â€‰ Kinetics of Soot Oxidation. Journal of Physical Chemistry A, 2002, 106, 96-103.	2.5	121
23	Electrospray Deposition of Energetic Polymer Nanocomposites with High Mass Particle Loadings: A Prelude to 3D Printing of Rocket Motors. Advanced Engineering Materials, 2015, 17, 95-101.	3.5	121
24	Recent Progress on Spray Pyrolysis for High Performance Electrode Materials in Lithium and Sodium Rechargeable Batteries. Advanced Energy Materials, 2017, 7, 1601578.	19.5	120
25	Determination of protein aggregation with differential mobility analysis: Application to IgG antibody. Biotechnology and Bioengineering, 2008, 101, 1214-1222.	3.3	113
26	Do nanoenergetic particles remain nano-sized during combustion?. Combustion and Flame, 2014, 161, 1408-1416.	5.2	111
27	Diffusive vs Explosive Reaction at the Nanoscale. Journal of Physical Chemistry C, 2010, 114, 9191-9195.	3.1	109
28	Enhanced reactivity of nano-B/Al/CuO MIC's. Combustion and Flame, 2009, 156, 302-309.	5.2	108
29	Density measurement of size selected multiwalled carbon nanotubes by mobility-mass characterization. Carbon, 2009, 47, 1297-1302.	10.3	107
30	Quantitative characterization of virusâ€like particles by asymmetrical flow field flow fractionation, electrospray differential mobility analysis, and transmission electron microscopy. Biotechnology and Bioengineering, 2009, 102, 845-855.	3.3	104
31	Electrospun Nanofiber-Based Thermite Textiles and their Reactive Properties. ACS Applied Materials & Interfaces, 2012, 4, 6432-6435.	8.0	103
32	Superâ€reactive Nanoenergetic Gas Generators Based on Periodate Salts. Angewandte Chemie - International Edition, 2013, 52, 9743-9746.	13.8	103
33	Electrospray Formation of Gelled Nano-Aluminum Microspheres with Superior Reactivity. ACS Applied Materials & Interfaces, 2013, 5, 6797-6801.	8.0	101
34	Synthesis and Reactivity of a Super-Reactive Metastable Intermolecular Composite Formulation of Al/KMnO4. Advanced Materials, 2005, 17, 900-903.	21.0	92
35	Facile Aerosol Route to Hollow CuO Spheres and its Superior Performance as an Oxidizer in Nanoenergetic Gas Generators. Advanced Functional Materials, 2013, 23, 1341-1346.	14.9	90
36	Tâ€jump/timeâ€ofâ€flight mass spectrometry for timeâ€resolved analysis of energetic materials. Rapid Communications in Mass Spectrometry, 2009, 23, 194-202.	1.5	88

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37	Direct Deposit Laminate Nanocomposites with Enhanced Propellent Properties. ACS Applied Materials & Interfaces, 2015, 7, 9103-9109.	8.0	87
38	Assembly and encapsulation of aluminum NP's within AP/NC matrix and their reactive properties. Combustion and Flame, 2017, 180, 175-183.	5.2	87
39	Effect of nanoparticle clustering on the effective thermal conductivity of concentrated silica colloids. Physical Review E, 2010, 81, 011406.	2.1	85
40	Dependence of Soot Optical Properties on Particle Morphology: Measurements and Model Comparisons. Environmental Science & Technology, 2014, 48, 3169-3176.	10.0	85
41	Millisecond synthesis of CoS nanoparticles for highly efficient overall water splitting. Nano Research, 2019, 12, 2259-2267.	10.4	85
42	Ignition and Combustion Characteristics of Nanoscale Al/AgIO₃: A Potential Energetic Biocidal System. Combustion Science and Technology, 2010, 183, 285-302.	2.3	82
43	Synthesis and reactivity of nano-Ag2O as an oxidizer for energetic systems yielding antimicrobial products. Combustion and Flame, 2013, 160, 438-446.	5.2	82
44	Time-Resolved Mass Spectrometry of Nano-Al and Nano-Al/CuO Thermite under Rapid Heating: A Mechanistic Study. Journal of Physical Chemistry C, 2012, 116, 26881-26887.	3.1	81
45	Electrosprayâ€“differential mobility analysis of bionanoparticles. Trends in Biotechnology, 2012, 30, 291-300.	9.3	80
46	In Situ â€œChainmail Catalystâ€•Assembly in Lowâ€Tortuosity, Hierarchical Carbon Frameworks for Efficient and Stable Hydrogen Generation. Advanced Energy Materials, 2018, 8, 1801289.	19.5	79
47	On the role of built-in electric fields on the ignition of oxide coated nanoaluminum: Ion mobility versus Fickian diffusion. Journal of Applied Physics, 2010, 107, .	2.5	78
48	Aerosol Synthesis of High Entropy Alloy Nanoparticles. Langmuir, 2020, 36, 1985-1992.	3.5	74
49	Soot aggregate restructuring during water processing. Journal of Aerosol Science, 2013, 66, 209-219.	3.8	73
50	Quantitative laser-induced breakdown spectroscopy for aerosols via internal calibration: Application to the oxidative coating of aluminum nanoparticles. Journal of Aerosol Science, 2006, 37, 677-695.	3.8	71
51	Competitive Adsorption of Thiolated Polyethylene Glycol and Mercaptopropionic Acid on Gold Nanoparticles Measured by Physical Characterization Methods. Langmuir, 2010, 26, 10325-10333.	3.5	71
52	In Situ Oxidation Studies of High-Entropy Alloy Nanoparticles. ACS Nano, 2020, 14, 15131-15143.	14.6	71
53	Microstructural Behavior of the Alumina Shell and Aluminum Core Before and After Melting of Aluminum Nanoparticles. Journal of Physical Chemistry C, 2012, 116, 404-411.	3.1	69
54	Electrospray formation and combustion characteristics of iodine-containing Al/CuO nanothermite microparticles. Combustion and Flame, 2015, 162, 2823-2829.	5.2	68

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55	Kinetics of Diesel Nanoparticle Oxidation. Environmental Science & Technology, 2003, 37, 1949-1954.	10.0	67
56	Photoacoustic Measurements of Amplification of the Absorption Cross Section for Coated Soot Aerosols. Aerosol Science and Technology, 2011, 45, 1217-1230.	3.1	67
57	Energy release pathways in nanothermites follow through the condensed state. Combustion and Flame, 2015, 162, 258-264.	5.2	67
58	Characterization of metal-bearing diesel nanoparticles using single-particle mass spectrometry. Journal of Aerosol Science, 2006, 37, 88-110.	3.8	66
59	Encapsulation of Perchlorate Salts within Metal Oxides for Application as Nanoenergetic Oxidizers. Advanced Functional Materials, 2012, 22, 78-85.	14.9	65
60	Synthesis of Metal Oxide Nanoparticles by Rapid, Highâ€Temperature 3D Microwave Heating. Advanced Functional Materials, 2019, 29, 1904282.	14.9	65
61	Nano-structured carbon-coated CuO hollow spheres as stable and high rate anodes for lithium-ion batteries. Journal of Materials Chemistry A, 2013, 1, 15486.	10.3	64
62	In situ imaging of ultra-fast loss of nanostructure in nanoparticle aggregates. Journal of Applied Physics, 2014, 115, .	2.5	64
63	Application of Nanoâ€Aluminum/Nitrocellulose Mesoparticles in Composite Solid Rocket Propellants. Propellants, Explosives, Pyrotechnics, 2015, 40, 413-418.	1.6	63
64	Direct Writing of a 90 wt% Particle Loading Nanothermite. Advanced Materials, 2019, 31, e1806575.	21.0	63
65	Quantifying the Surface Coverage of Conjugate Molecules on Functionalized Nanoparticles. Journal of Physical Chemistry C, 2007, 111, 17155-17157.	3.1	62
66	Characterizing the coating and size-resolved oxidative stability of carbon-coated aluminum nanoparticles by single-particle mass-spectrometry. Journal of Nanoparticle Research, 2006, 8, 455-464.	1.9	60
67	In situ microscopy of rapidly heated nano-Al and nano-Al/WO3 thermites. Applied Physics Letters, 2010, 97, 133104.	3.3	59
68	High speed 2-dimensional temperature measurements of nanothermite composites: Probing thermal vs. Gas generation effects. Journal of Applied Physics, 2018, 123, .	2.5	59
69	Enhanced Performance of Alkali Metal Doped Fe₂O₃ and Fe₂O₃/Al₂O₃ Composites As Oxygen Carrier Material in Chemical Looping Combustion. Energy & Fuels, 2013, 27, 4977-4983.	5.1	58
70	Uniform, Scalable, High-Temperature Microwave Shock for Nanoparticle Synthesis through Defect Engineering. Matter, 2019, 1, 759-769.	10.0	58
71	Molecular dynamic simulation of dicarboxylic acid coated aqueous aerosol: structure and processing of water vapor. Physical Chemistry Chemical Physics, 2011, 13, 9374.	2.8	54
72	Reaction mechanism of Al-CuO nanothermites with addition of multilayer graphene. Thermochimica Acta, 2018, 666, 60-65.	2.7	54

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73	Adsorption and Destruction of the G-Series Nerve Agent Simulant Dimethyl Methylphosphonate on Zinc Oxide. ACS Catalysis, 2019, 9, 902-911.	11.2	54
74	Probing the Nucleus Model for Oligomer Formation during Insulin Amyloid Fibrillogenesis. Biophysical Journal, 2010, 99, 3979-3985.	0.5	53
75	Synergistically Chemical and Thermal Coupling between Graphene Oxide and Graphene Fluoride for Enhancing Aluminum Combustion. ACS Applied Materials & Interfaces, 2020, 12, 7451-7458.	8.0	52
76	Rapid, high-temperature microwave soldering toward a high-performance cathode/electrolyte interface. Energy Storage Materials, 2020, 30, 385-391.	18.0	51
77	Measured Wavelength-Dependent Absorption Enhancement of Internally Mixed Black Carbon with Absorbing and Nonabsorbing Materials. Environmental Science & Technology, 2016, 50, 7982-7990.	10.0	49
78	Commentary on the heat transfer mechanisms controlling propagation in nanothermites. Combustion and Flame, 2015, 162, 2959-2961.	5.2	48
79	Spectroscopic and Computational Investigation of Room-Temperature Decomposition of a Chemical Warfare Agent Simulant on Polycrystalline Cupric Oxide. Chemistry of Materials, 2017, 29, 7483-7496.	6.7	48
80	Boron ignition and combustion with doped Î´-Bi2O3: Bond energy/oxygen vacancy relationships. Combustion and Flame, 2018, 197, 127-133.	5.2	48
81	Molecular dynamics simulation of the kinetic sintering of Ni and Al nanoparticles. Molecular Simulation, 2009, 35, 804-811.	2.0	47
82	Probing the Reaction Dynamics of Thermite Nanolaminates. Journal of Physical Chemistry C, 2015, 119, 20401-20408.	3.1	47
83	In-operando high-speed microscopy and thermometry of reaction propagation and sintering in a nanocomposite. Nature Communications, 2019, 10, 3032.	12.8	47
84	Quantifying the enhanced combustion characteristics of electrospray assembled aluminum mesoparticles. Combustion and Flame, 2016, 167, 472-480.	5.2	46
85	Low Effective Activation Energies for Oxygen Release from Metal Oxides: Evidence for Massâ€Transfer Limits at High Heating Rates. ChemPhysChem, 2014, 15, 1666-1672.	2.1	44
86	Nanoaluminum/Nitrocellulose microparticle additive for burn enhancement of liquid fuels. Combustion and Flame, 2017, 176, 220-228.	5.2	43
87	Continuous 2000â€K droplet-to-particle synthesis. Materials Today, 2020, 35, 106-114.	14.2	43
88	Crystalline Phase Reduction of Cuprous Oxide (Cu₂O) Nanoparticles Accompanied by a Morphology Change during Ethanol-Assisted Spray Pyrolysis. Langmuir, 2009, 25, 7063-7071.	3.5	42
89	Passivated Iodine Pentoxide Oxidizer for Potential Biocidal Nanoenergetic Applications. ACS Applied Materials & Interfaces, 2013, 5, 8875-8880.	8.0	42
90	Time-Resolved Nanosecond Imaging of Nanoscale Condensed Phase Reaction. Journal of Physical Chemistry C, 2015, 119, 2792-2797.	3.1	42

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91	Persulfate salt as an oxidizer for biocidal energetic nano-thermites. Journal of Materials Chemistry A, 2015, 3, 11838-11846.	10.3	42
92	Understanding ion-mobility and transport properties of aerosol nanowires. Journal of Aerosol Science, 2007, 38, 823-842.	3.8	41
93	Tumor necrosis factor interaction with gold nanoparticles. Nanoscale, 2012, 4, 3208.	5.6	41
94	Controlling the energetic characteristics of micro energy storage device by in situ deposition Al/MoO3 nanolaminates with varying internal structure. Chemical Engineering Journal, 2019, 373, 345-354.	12.7	41
95	Length Distribution of Singleâ€Walled Carbon Nanotubes in Aqueous Suspension Measured by Electrospray Differential Mobility Analysis. Small, 2009, 5, 2894-2901.	10.0	40
96	Sticking Coefficient and Processing of Water Vapor on Organic-Coated Nanoaerosols. Journal of Physical Chemistry A, 2008, 112, 966-972.	2.5	39
97	Method for Determining the Absolute Number Concentration of Nanoparticles from Electrospray Sources. Langmuir, 2011, 27, 14732-14739.	3.5	39
98	Packing density of rigid aggregates is independent of scale. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9037-9041.	7.1	39
99	Ignition and combustion analysis of direct write fabricated aluminum/metal oxide/PVDF films. Combustion and Flame, 2020, 211, 260-269.	5.2	39
100	Hierarchical Polyelemental Nanoparticles as Bifunctional Catalysts for Oxygen Evolution and Reduction Reactions. Advanced Energy Materials, 2020, 10, 2001119.	19.5	39
101	Combustion of 3D printed 90Âwt% loading reinforced nanothermite. Combustion and Flame, 2020, 215, 86-92.	5.2	39
102	Initiation and Reaction in Al/Bi₂O₃Nanothermites: Evidence for the Predominance of Condensed Phase Chemistry. Combustion Science and Technology, 2014, 186, 1209-1224.	2.3	38
103	Packing and Size Determination of Colloidal Nanoclusters. Langmuir, 2010, 26, 11384-11390.	3.5	37
104	Titanium enhanced ignition and combustion of Al/I2O5 mesoparticle composites. Combustion and Flame, 2020, 212, 245-251.	5.2	37
105	Ion-Mobility Spectrometry of Nickel Nanoparticle Oxidation Kinetics: Application to Energetic Materials. Journal of Physical Chemistry C, 2008, 112, 16209-16218.	3.1	36
106	Controlled Formation and Characterization of Dithiothreitol-Conjugated Gold Nanoparticle Clusters. Langmuir, 2014, 30, 3397-3405.	3.5	36
107	Architecture Can Significantly Alter the Energy Release Rate from Nanocomposite Energetics. ACS Applied Polymer Materials, 2019, 1, 982-989.	4.4	36
108	Stabilized microparticle aggregates of oxygen-containing nanoparticles in kerosene for enhanced droplet combustion. Combustion and Flame, 2018, 187, 77-86.	5.2	35

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109	Pre-stressing aluminum nanoparticles as a strategy to enhance reactivity of nanothermite composites. Combustion and Flame, 2019, 205, 33-40.	5.2	35
110	Ignition Behavior of Î±-AlH₃. Combustion Science and Technology, 2010, 182, 1341-1359.	2.3	34
111	Quantification and Compensation of Nonspecific Analyte Aggregation in Electrospray Sampling. Aerosol Science and Technology, 2011, 45, 849-860.	3.1	34
112	In Situ High Temperature Synthesis of Single-Component Metallic Nanoparticles. ACS Central Science, 2017, 3, 294-301.	11.3	34
113	Doped Î´-bismuth oxides to investigate oxygen ion transport as a metric for condensed phase thermite ignition. Physical Chemistry Chemical Physics, 2017, 19, 12749-12758.	2.8	34
114	Mesoporous Silica Spheres Incorporated Aluminum/Poly (Vinylidene Fluoride) for Enhanced Burning Propellants. Advanced Engineering Materials, 2018, 20, 1700547.	3.5	34
115	Three-dimensional off-lattice Monte Carlo simulations on a direct relation between experimental process parameters and fractal dimension of colloidal aggregates. Journal of Colloid and Interface Science, 2010, 344, 353-361.	9.4	33
116	High Heating Rate Reaction Dynamics of Al/CuO Nanolaminates by Nanocalorimetry-Coupled Time-of-Flight Mass Spectrometry. Journal of Physical Chemistry C, 2017, 121, 2771-2777.	3.1	32
117	Incomplete reactions in nanothermite composites. Journal of Applied Physics, 2017, 121, .	2.5	32
118	Measured in-situ mass absorption spectra for nine forms of highly-absorbing carbonaceous aerosol. Carbon, 2018, 136, 85-93.	10.3	32
119	Probing the Reaction Zone of Nanolaminates at â^¼Î¼s Time and â^¼Î¼m Spatial Resolution. Journal of Physical Chemistry C, 2020, 124, 13679-13687.	3.1	32
120	Online Nanoparticle Mass Measurement by Combined Aerosol Particle Mass Analyzer and Differential Mobility Analyzer: Comparison of Theory and Measurements. Aerosol Science and Technology, 2009, 43, 1075-1083.	3.1	31
121	The Effect of Orientation on the Mobility and Dynamic Shape Factor of Charged Axially Symmetric Particles in an Electric Field. Aerosol Science and Technology, 2012, 46, 1035-1044.	3.1	31
122	Ignition and Combustion Characterization of Nano-Al-AP and Nano-Al-CuO-AP Micro-sized Composites Produced by Electrospray Technique. Energy Procedia, 2015, 66, 109-112.	1.8	30
123	Electrospray-Differential Mobility Hyphenated with Single Particle Inductively Coupled Plasma Mass Spectrometry for Characterization of Nanoparticles and Their Aggregates. Analytical Chemistry, 2016, 88, 8548-8555.	6.5	30
124	Reaction mechanisms of potassium oxysalts based energetic composites. Combustion and Flame, 2017, 177, 1-9.	5.2	30
125	Implementation of a discrete nodal model to probe the effect of size-dependent surface tension on nanoparticle formation and growth. Journal of Aerosol Science, 2006, 37, 1388-1399.	3.8	29
126	Size-resolved kinetics of Zn nanocrystal hydrolysis for hydrogen generation. International Journal of Hydrogen Energy, 2010, 35, 2268-2277.	7.1	29

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127	Restructuring of Graphene Oxide Sheets into Monodisperse Nanospheres. Chemistry of Materials, 2012, 24, 2554-2557.	6.7	29
128	Ignition and Combustion Characteristics of Nanoaluminum with Copper Oxide Nanoparticles of Differing Oxidation State. Journal of Physical Chemistry C, 2016, 120, 29023-29029.	3.1	29
129	Ignition of Nanoscale Titanium/Potassium Perchlorate Pyrotechnic Powder: Reaction Mechanism Study. Journal of Physical Chemistry C, 2018, 122, 10792-10800.	3.1	29
130	Connecting agglomeration and burn rate in a thermite reaction: Role of oxidizer morphology. Combustion and Flame, 2021, 231, 111492.	5.2	29
131	Reduction of Suspended Graphene Oxide Single Sheet Nanopaper: The Effect of Crumpling. Journal of Physical Chemistry C, 2013, 117, 3185-3191.	3.1	28
132	Direct Measurements of Mass-Specific Optical Cross Sections of Single-Component Aerosol Mixtures. Analytical Chemistry, 2013, 85, 8319-8325.	6.5	28
133	Aerosol Synthesis and Reactivity of Thin Oxide Shell Aluminum Nanoparticles via Fluorocarboxylic Acid Functional Coating. Particle and Particle Systems Characterization, 2013, 30, 881-887.	2.3	28
134	Size Resolved High Temperature Oxidation Kinetics of Nano-Sized Titanium and Zirconium Particles. Journal of Physical Chemistry A, 2015, 119, 6171-6178.	2.5	28
135	Molecular Aluminum Additive for Burn Enhancement of Hydrocarbon Fuels. Journal of Physical Chemistry A, 2015, 119, 11084-11093.	2.5	28
136	Influence of transition metal electronegativity on the oxygen storage capacity of perovskite oxides. Chemical Communications, 2016, 52, 10369-10372.	4.1	28
137	Aerosol synthesis of phase pure iodine/iodic biocide microparticles. Journal of Materials Research, 2017, 32, 890-896.	2.6	28
138	Performance of iodine oxides/iodic acids as oxidizers in thermite systems. Combustion and Flame, 2018, 191, 335-342.	5.2	28
139	Ultrafast, Controllable Synthesis of Sub-Nano Metallic Clusters through Defect Engineering. ACS Applied Materials & Interfaces, 2019, 11, 29773-29779.	8.0	28
140	High-Temperature Pulse Method for Nanoparticle Redispersion. Journal of the American Chemical Society, 2020, 142, 17364-17371.	13.7	28
141	In Situ, Fast, Highâ€Temperature Synthesis of Nickel Nanoparticles in Reduced Graphene Oxide Matrix. Advanced Energy Materials, 2017, 7, 1601783.	19.5	27
142	Surface Modification of Cisplatin-Complexed Gold Nanoparticles and Its Influence on Colloidal Stability, Drug Loading, and Drug Release. Langmuir, 2018, 34, 154-163.	3.5	27
143	Vapor-Phase Strategy to Pillaring of Two-Dimensional Zeolite. Journal of the American Chemical Society, 2019, 141, 8712-8716.	13.7	27
144	Development of a phenomenological scaling law for fractal aggregate sintering from molecular dynamics simulation. Journal of Aerosol Science, 2007, 38, 793-806.	3.8	26

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145	â€œEffectiveâ€•Negative Surface Tension:Â A Property of Coated Nanoaerosols Relevant to the Atmosphere. Journal of Physical Chemistry A, 2007, 111, 5459-5464.	2.5	26
146	Aerosol-Based Self-Assembly of Nanoparticles into Solid or Hollow Mesospheres. Langmuir, 2010, 26, 4327-4330.	3.5	26
147	Physical Characterization of Icosahedral Virus Ultra Structure, Stability, and Integrity Using Electrospray Differential Mobility Analysis. Analytical Chemistry, 2011, 83, 1753-1759.	6.5	26
148	Quantifying Ligand Adsorption to Nanoparticles Using Tandem Differential Mobility Mass Analysis. Analytical Chemistry, 2012, 84, 6308-6311.	6.5	26
149	Dimethyl Methylphosphonate Adsorption Capacities and Desorption Energies on Ordered Mesoporous Carbons. ACS Applied Materials & Interfaces, 2017, 9, 40638-40644.	8.0	26
150	Preparation and combustion of laminated iodine containing aluminum/polyvinylidene fluoride composites. Combustion and Flame, 2018, 197, 120-126.	5.2	26
151	Revealing High-Temperature Reduction Dynamics of High-Entropy Alloy Nanoparticles via In Situ Transmission Electron Microscopy. Nano Letters, 2021, 21, 1742-1748.	9.1	26
152	Synthesis, Characterization, and Application of Antibody Functionalized Fluorescent Silica Nanoparticles. Advanced Functional Materials, 2013, 23, 3335-3343.	14.9	25
153	Evaluating the Mobility of Nanorods in Electric Fields. Aerosol Science and Technology, 2013, 47, 1101-1107.	3.1	24
154	Oxidation Anisotropy and Size-Dependent Reaction Kinetics of Zinc Nanocrystals. Journal of Physical Chemistry C, 2009, 113, 14644-14650.	3.1	23
155	Decomposition of Aminotetrazole Based Energetic Materials under High Heating Rate Conditions. Journal of Physical Chemistry A, 2012, 116, 1519-1526.	2.5	23
156	High heating rate decomposition dynamics of copper oxide by nanocalorimetry-coupled time-of-flight mass spectrometry. Chemical Physics Letters, 2017, 689, 26-29.	2.6	23
157	Experimental observation of the heat transfer mechanisms that drive propagation in additively manufactured energetic materials. Combustion and Flame, 2020, 215, 417-424.	5.2	23
158	Tuning the reactivity and energy release rate of I2O5 based ternary thermite systems. Combustion and Flame, 2021, 228, 210-217.	5.2	23
159	Evidence for the Predominance of Condensed Phase Reaction in Chemical Looping Reactions between Carbon and Oxygen Carriers. Journal of Physical Chemistry C, 2012, 116, 24496-24502.	3.1	22
160	Temperature-Programmed Electrosprayâ€“Differential Mobility Analysis for Characterization of Ligated Nanoparticles in Complex Media. Langmuir, 2013, 29, 11267-11274.	3.5	22
161	On the promotion of high temperature AP decomposition with silica mesoparticles. Combustion and Flame, 2019, 200, 296-302.	5.2	22
162	Evaluation of electrospray differential mobility analysis for virus particle analysis: Potential applications for biomanufacturing. Journal of Virological Methods, 2011, 178, 201-208.	2.1	21

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163	Nanocalorimetry-Coupled Time-of-Flight Mass Spectrometry: Identifying Evolved Species during High-Rate Thermal Measurements. Analytical Chemistry, 2015, 87, 9740-9744.	6.5	21
164	Evaluating free vs bound oxygen on ignition of nano-aluminum based energetics leads to a critical reaction rate criterion. Journal of Applied Physics, 2015, 118, .	2.5	21
165	Doped Perovskites To Evaluate the Relationship between Fuelâ€“Oxidizer Thermite Ignition and Bond Energy, Electronegativity, and Oxygen Vacancy. Journal of Physical Chemistry C, 2017, 121, 147-152.	3.1	21
166	Silicon Nanoparticles for the Reactivity and Energetic Density Enhancement of Energetic-Biocidal Mesoparticle Composites. ACS Applied Materials & Interfaces, 2021, 13, 458-467.	8.0	21
167	Gas-phase growth of diameter-controlled carbon nanotubes. Materials Letters, 2007, 61, 2079-2083.	2.6	19
168	Rapid-heating of energetic materials using a micro-differential scanning calorimeter. Thermochimica Acta, 2011, 521, 125-129.	2.7	19
169	Thermal desorption of dimethyl methylphosphonate from MoO₃. Journal of Lithic Studies, 2017, 3, 112-118.	0.5	19
170	Direct Deposit of Highly Reactive Bi(IO₃)₃â€•Polyvinylidene Fluoride Biocidal Energetic Composite and its Reactive Properties. Advanced Engineering Materials, 2017, 19, 1500532.	3.5	19
171	Carbon addition lowers initiation and iodine release temperatures from iodine oxide-based biocidal energetic materials. Carbon, 2018, 130, 410-415.	10.3	19
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