R Lee Penn

List of Publications by Year
in descending order

100 papers	10,270 citations	57758 44 h-index	34986 98 g-index
102 all docs	102 docs citations	102 times ranked	12691 citing authors

#	Article	IF	Citations
1	Anisotropic oxidative growth of goethite-coated sand particles in column reactors during 4-chloronitrobenzene reduction by Fe(<scp>ii</scp>)/goethite. Environmental Science: Nano, 2022, 9, 275-288.	4.3	3
2	Organic Matter Inhibits Redox Activity and Impacts Heterogeneous Growth of Iron (Oxyhydr)oxides on Nano-Hematite. ACS Earth and Space Chemistry, 2022, 6, 847-860.	2.7	2
3	Towards data-driven next-generation transmission electron microscopy. Nature Materials, 2021, 20, 274-279.	27.5	130
4	Using Microemulsion Phase Behavior as a Predictive Model for Lecithinâ€“Tween 80 Marine Oil Dispersant Effectiveness. Langmuir, 2021, 37, 8115-8128.	3.5	2
5	3D Periodic and Interpenetrating Tungstenâ€“Silicon Oxycarbide Nanocomposites Designed for Mechanical Robustness. ACS Applied Materials & Interfaces, 2021, 13, 32126-32135.	8.0	4
6	The Synthesis Science of Targeted Vapor-Phase Metalâ€“Organic Framework Postmodification. Journal of the American Chemical Society, 2020, 142, 242-250.	13.7	32
7	Effects of Phase Purity and Pore Reinforcement on Mechanical Behavior of NU-1000 and Silica-Infiltrated NU-1000 Metalâ€“Organic Frameworks. ACS Applied Materials & Interfaces, 2020, 12, 49971-49981.	8.0	10
8	Simulation of Natural Iron Oxide Alteration in Soil: Conversion of Synthetic Ferrihydrite to Hematite Without Artificial Dopants, Observed With Magnetic Methods. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC009037.	2.5	16
9	Facile Synthesis of Monodispersed Ag NPs in Ethylene Glycol Using Mixed Capping Agents. ACS Omega, 2020, 5, 6069-6073.	3.5	21
10	Temperature-dependent mechanical behavior of three-dimensionally ordered macroporous tungsten. Journal of Materials Research, 2020, 35, 2556-2566.	2.6	8
11	Size Control of the MOF NU-1000 through Manipulation of the Modulator/Linker Competition. Crystal Growth and Design, 2020, 20, 2965-2972.	3.0	31
12	Quantitative Dissolution of Environmentally Accessible Iron Residing in Iron-Rich Minerals: A Review. ACS Earth and Space Chemistry, 2019, 3, 1371-1392.	2.7	25
13	Controlled Growth of Silver Nanoparticle Seeds Using Green Solvents. Crystal Growth and Design, 2019, 19, 4332-4339.	3.0	5
14	Selective Methane Oxidation to Methanol on Cu-Oxo Dimers Stabilized by Zirconia Nodes of an NU-1000 Metalâ€“Organic Framework. Journal of the American Chemical Society, 2019, 141, 9292-9304.	13.7	131
15	Using Polyvinylpyrrolidone and Citrate Ions To Modify the Stability of Ag NPs in Ethylene Glycol. Journal of Physical Chemistry C, 2019, 123, 12444-12450.	3.1	9
16	Application and Limitations of Nanocasting in Metalâ€“Organic Frameworks. Inorganic Chemistry, 2018, 57, 2782-2790.	4.0	21
17	Extending the Compositional Range of Nanocasting in the Oxozirconium Cluster-Based Metalâ€“Organic Framework NU-1000â€”A Comparative Structural Analysis. Chemistry of Materials, 2018, 30, 1301-1315.	6.7	10
18	Synthesis of Cu₂(Zn_{1âˆ’x}Co_x)SnS₄ nanocrystals and formation of polycrystalline thin films from their aqueous dispersions. Journal of Materials Chemistry A, 2018, 6, 999-1008.	10.3	36

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19	Elucidating the Role of AgCl in the Nucleation and Growth of Silver Nanoparticles in Ethylene Glycol. Crystal Growth and Design, 2018, 18, 324-330.	3.0	20
20	Sinterâ€Resistant Platinum Catalyst Supported by Metalâ€“Organic Framework. Angewandte Chemie - International Edition, 2018, 57, 909-913.	13.8	88
21	Redox-induced nucleation and growth of goethite on synthetic hematite nanoparticles. American Mineralogist, 2018, 103, 1021-1029.	1.9	13
22	Well-Defined Rhodiumâ€“Gallium Catalytic Sites in a Metalâ€“Organic Framework: Promoter-Controlled Selectivity in Alkyne Semihydrogenation to <i>E</i>-Alkenes. Journal of the American Chemical Society, 2018, 140, 15309-15318.	13.7	88
23	Sinterâ€Resistant Platinum Catalyst Supported by Metalâ€“Organic Framework. Angewandte Chemie, 2018, 130, 921-925.	2.0	3
24	Effect of nonreactive kaolinite on 4-chloronitrobenzene reduction by Fe(<scp>ii</scp>) in goethiteâ€“kaolinite heterogeneous suspensions. Environmental Science: Nano, 2017, 4, 325-334.	4.3	13
25	Quantifying Protein Concentrations Using Smartphone Colorimetry: A New Method for an Established Test. Journal of Chemical Education, 2017, 94, 941-945.	2.3	43
26	Electron Mobility and Trapping in Ferrihydrite Nanoparticles. ACS Earth and Space Chemistry, 2017, 1, 216-226.	2.7	21
27	Assembly of dicobalt and cobaltâ€“aluminum oxide clusters on metalâ€“organic framework and nanocast silica supports. Faraday Discussions, 2017, 201, 287-302.	3.2	21
28	Role of a Modulator in the Synthesis of Phase-Pure NU-1000. ACS Applied Materials & Interfaces, 2017, 9, 39342-39346.	8.0	62
29	Controlling Cu₂ZnSnS₄ (CZTS) phase in microwave solvothermal synthesis. Journal of Materials Chemistry A, 2017, 5, 23179-23189.	10.3	21
30	Accessible reactive surface area and abiotic redox reactivity of iron oxyhydroxides in acidic brines. Geochimica Et Cosmochimica Acta, 2017, 197, 345-355.	3.9	11
31	A Perspective on the Particle-Based Crystal Growth of Ferric Oxides, Oxyhydroxides, and Hydrous Oxides. , 2017, , 257-273.		10
32	Cation-Dependent Hierarchical Assembly of U60 Nanoclusters into Blackberries Imaged via Cryogenic Transmission Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 1468-1469.	0.4	1
33	A kinetic model for two-step phase transformation of hydrothermally treated nanocrystalline anatase. CrystEngComm, 2016, 18, 3033-3039.	2.6	1
34	Organic matter and iron oxide nanoparticles: aggregation, interactions, and reactivity. Environmental Science: Nano, 2016, 3, 494-505.	4.3	111
35	Installing Heterobimetallic Cobaltâ€“Aluminum Single Sites on a Metal Organic Framework Support. Chemistry of Materials, 2016, 28, 6753-6762.	6.7	56
36	Selective removal of Cu_{2âˆ’x}(S,Se) phases from Cu₂ZnSn(S,Se)₄ thin films. Green Chemistry, 2016, 18, 5814-5821.	9.0	27

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37	Facet-Dependent Oxidative Goethite Growth As a Function of Aqueous Solution Conditions. Environmental Science & Technology, 2016, 50, 10406-10412.	10.0	30
38	Nucleation of FAU and LTA Zeolites from Heterogeneous Aluminosilicate Precursors. Chemistry of Materials, 2016, 28, 4906-4916.	6.7	90
39	Character of Humic Substances as a Predictor for Goethite Nanoparticle Reactivity and Aggregation. Environmental Science & Technology, 2016, 50, 1200-1208.	10.0	52
40	Phase Transformation and Particle-Mediated Growth in the Formation of Hematite from 2-Line Ferrihydrite. Crystal Growth and Design, 2016, 16, 922-932.	3.0	48
41	Thermal Stabilization of Metalâ€"Organic Framework-Derived Single-Site Catalytic Clusters through Nanocasting. Journal of the American Chemical Society, 2016, 138, 2739-2748.	13.7	83
42	Quantifying Gold Nanoparticle Concentration in a Dietary Supplement Using Smartphone Colorimetry and Google Applications. Journal of Chemical Education, 2016, 93, 318-321.	2.3	38
43	Cation-Dependent Hierarchical Assembly of U60 Nanoclusters into Macro-Ion Assemblies Imaged via Cryogenic Transmission Electron Microscopy. Journal of the American Chemical Society, 2016, 138, 191-198.	13.7	35
44	Sustainability: GEOCâ€™s Perspective. ACS Symposium Series, 2015, , 105-117.	0.5	0
45	Synthesis of Nanoporous Rutile Nanocrystals under Mild Conditions. Materials Research Society Symposia Proceedings, 2015, 1721, 13.	0.1	1
46	Impact of Pahokee Peat humic acid and buffer identity on goethite aggregation and reactivity. Environmental Science: Nano, 2015, 2, 509-517.	4.3	11
47	Interface-mediated phase transformation in nanocrystalline particles: the case of the TiO₂allotropes. CrystEngComm, 2015, 17, 2062-2069.	2.6	5
48	Crystallization by particle attachment in synthetic, biogenic, and geologic environments. Science, 2015, 349, aaa6760.	12.6	1,467
49	A Fresh Look at the Crystal Violet Lab with Handheld Camera Colorimetry. Journal of Chemical Education, 2015, 92, 1692-1695.	2.3	45
50	Potentiometric <i>in Situ</i> Monitoring of Anions in the Synthesis of Copper and Silver Nanoparticles Using the Polyol Process. ACS Nano, 2015, 9, 12104-12114.	14.6	17
51	Nanocrystal growth via oriented attachment. CrystEngComm, 2014, 16, 1407.	2.6	22
52	Crystal growth by oriented attachment: kinetic models and control factors. CrystEngComm, 2014, 16, 1419.	2.6	162
53	Characterizing crystal growth by oriented aggregation. CrystEngComm, 2014, 16, 1409.	2.6	104
54	Crystalline nanoparticle aggregation in non-aqueous solvents. CrystEngComm, 2014, 16, 1472-1481.	2.6	28

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55	Goethite nanoparticle aggregation: effects of buffers, metal ions, and 4-chloronitrobenzene reduction. Environmental Science: Nano, 2014, 1, 478-487.	4.3	42
56	Two-step phase transformation of anatase to rutile in aqueous suspension. CrystEngComm, 2014, 16, 1488-1495.	2.6	23
57	Synthesis of Cu2ZnSnS4 thin films directly onto conductive substrates via selective thermolysis using microwave energy. Chemical Communications, 2014, 50, 5902.	4.1	14
58	Introducing Colorimetric Analysis with Camera Phones and Digital Cameras: An Activity for High School or General Chemistry. Journal of Chemical Education, 2013, 90, 1191-1195.	2.3	88
59	A disordered nanoparticle model for 6-line ferrihydrite. American Mineralogist, 2013, 98, 1465-1476.	1.9	43
60	Effect of pH on the Kinetics of Crystal Growth by Oriented Aggregation. Crystal Growth and Design, 2013, 13, 3396-3403.	3.0	78
61	Size-Dependent Anatase to Rutile Phase Transformation and Particle Growth. Chemistry of Materials, 2013, 25, 1408-1415.	6.7	78
62	Xâ€ray magnetic circular dichroÃ¯sm provides strong evidence for tetrahedral iron in ferrihydrite. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	36
63	Aggregation of ferrihydrite nanoparticles in aqueous systems. Faraday Discussions, 2012, 159, 235.	3.2	49
64	Effect of Ionic Strength on the Kinetics of Crystal Growth by Oriented Aggregation. Crystal Growth and Design, 2012, 12, 4787-4797.	3.0	89
65	Size-Dependent Bandgap of Nanogoethite. Journal of Physical Chemistry C, 2011, 115, 17704-17710.	3.1	66
66	Controlling heterogenite particle morphology and microstructure by varying synthetic conditions. Materials Research Bulletin, 2011, 46, 649-657.	5.2	14
67	On the nucleation and crystallization of silicalite-1 from a dilute clear sol. Microporous and Mesoporous Materials, 2011, 144, 74-81.	4.4	35
68	Zero-Valent Iron: Impact of Anions Present during Synthesis on Subsequent Nanoparticle Reactivity. Journal of Environmental Engineering, ASCE, 2011, 137, 889-896.	1.4	18
69	Reductive dissolution of arsenic-bearing ferrihydrite. Geochimica Et Cosmochimica Acta, 2010, 74, 3382-3395.	3.9	90
70	Oriented Aggregation: Formation and Transformation of Mesocrystal Intermediates Revealed. Journal of the American Chemical Society, 2010, 132, 2163-2165.	13.7	286
71	Zinc oxide nanoparticle growth from homogenous solution: Influence of Zn:OH, water concentration, and surfactant additives. Materials Research Bulletin, 2009, 44, 993-998.	5.2	20
72	Effects of magnetic interactions in antiferromagnetic ferrihydrite particles. Journal of Physics Condensed Matter, 2009, 21, 176005.	1.8	36

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73	Controlling oriented aggregation using increasing reagent concentrations and trihalo acetic acid surfactants. Journal of Solid State Chemistry, 2008, 181, 1600-1608.	2.9	9
74	Hierarchical nanofabricationÂofÂmicroporous crystals with ordered mesoporosity. Nature Materials, 2008, 7, 984-991.	27.5	553
75	Titanium Dioxide Nanoparticles:â€‰ Effect of Solâˆ'Gel pH on Phase Composition, Particle Size, and Particle Growth Mechanism. Journal of Physical Chemistry C, 2008, 112, 4469-4474.	3.1	65
76	A Structural Resolution Cryo-TEM Study of the Early Stages of MFI Growth. Journal of the American Chemical Society, 2008, 130, 17284-17286.	13.7	110
77	Nanominerals, Mineral Nanoparticles, and Earth Systems. Science, 2008, 319, 1631-1635.	12.6	768
78	Influence of Size on Reductive Dissolution of Six-Line Ferrihydrite. Journal of Physical Chemistry C, 2008, 112, 12127-12133.	3.1	64
79	CHEMISTRY: Resolving an Elusive Structure. Science, 2007, 316, 1704-1705.	12.6	14
80	The Adsorption of Perfluorooctane Sulfonate onto Sand, Clay, and Iron Oxide Surfaces. Journal of Chemical & Engineering Data, 2007, 52, 1165-1170.	1.9	290
81	Evolving Surface Reactivity of Cobalt Oxyhydroxide Nanoparticles. Journal of Physical Chemistry C, 2007, 111, 10597-10602.	3.1	12
82	Controlling Nanosized ZnO Growth Kinetics Using Various Zn:OH Concentration Ratios. Journal of Physical Chemistry C, 2007, 111, 14098-14104.	3.1	27
83	Aggregative Growth of Silicalite-1. Journal of Physical Chemistry B, 2007, 111, 3398-3403.	2.6	87
84	High crystallinity Si-ferrihydrite: An insight into its NÃ©el temperature and size dependence of magnetic properties. Journal of Geophysical Research, 2007, 112, .	3.3	56
85	Building a Successful Middle School Outreach Effort: Microscopy Camp. Journal of Chemical Education, 2007, 84, 955.	2.3	17
86	Size dependent kinetics of oriented aggregation. Journal of Crystal Growth, 2007, 309, 97-102.	1.5	68
87	Two-Step Growth of Goethite from Ferrihydrite. Langmuir, 2006, 22, 402-409.	3.5	189
88	Influence of Aluminum Doping on Ferrihydrite Nanoparticle Reactivity. Journal of Physical Chemistry B, 2006, 110, 11746-11750.	2.6	45
89	Kinetic and Microscopic Studies of Reductive Transformations of Organic Contaminants on Goethite. Environmental Science & Technology, 2006, 40, 3299-3304.	10.0	76
90	Magnetic properties of synthetic six-line ferrihydrite nanoparticles. Physics of the Earth and Planetary Interiors, 2006, 154, 222-233.	1.9	98

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91	Mechanistic principles of nanoparticle evolution to zeolite crystals. Nature Materials, 2006, 5, 400-408.	27.5	416
92	Controlled growth of alpha-FeOOH nanorods by exploiting-oriented aggregation. Journal of Crystal Growth, 2006, 293, 1-4.	1.5	95
93	Reduction of crystalline iron(III) oxyhydroxides using hydroquinone: Influence of phase and particle size. Geochemical Transactions, 2005, 6, 1.	0.7	99
94	Kinetics of Oriented Aggregation. Journal of Physical Chemistry B, 2004, 108, 12707-12712.	2.6	445
95	From Nanodots to Nanorods: Oriented aggregation and magnetic evolution of nanocrystalline goethite. Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	108
96	The Influence of Anion on the Coarsening Kinetics of ZnO Nanoparticles. Journal of Physical Chemistry B, 2003, 107, 3124-3130.	2.6	135
97	Defects and Disorder:Â Probing the Surface Chemistry of Heterogenite (CoOOH) by Dissolution Using Hydroquinone and Iminodiacetic Acid. Journal of Physical Chemistry B, 2001, 105, 4690-4697.	2.6	63
98	Aggregation-Based Crystal Growth and Microstructure Development in Natural Iron Oxyhydroxide Biomineralization Products. Science, 2000, 289, 751-754.	12.6	1,650
99	Enhanced Adsorption of Molecules on Surfaces of Nanocrystalline Particles. Journal of Physical Chemistry B, 1999, 103, 4656-4662.	2.6	238
100	TEM investigation of Lewiston, Idaho, fibrolite; microstructure and grain boundary energetics. American Mineralogist, 1999, 84, 152-159.	1.9	13