Brian G Trewyn

List of Publications by Year in descending order

78 papers	12,812 citations	87401 40 h-index	90395 73 g-index
84 all docs	84 docs citations	84 times ranked	16352 citing authors

#	Article	IF	Citations
1	A Mesoporous Silica Nanosphere-Based Carrier System with Chemically Removable CdS Nanoparticle Caps for Stimuli-Responsive Controlled Release of Neurotransmitters and Drug Molecules. Journal of the American Chemical Society, 2003, 125, 4451-4459.	6.6	1,618
2	Mesoporous silica nanoparticles deliver DNA and chemicals into plants. Nature Nanotechnology, 2007, 2, 295-300.	15.6	1,242
3	Synthesis and Functionalization of a Mesoporous Silica Nanoparticle Based on the Solâ€“Gel Process and Applications in Controlled Release. Accounts of Chemical Research, 2007, 40, 846-853.	7.6	1,027
4	Stimuli-Responsive Controlled-Release Delivery System Based on Mesoporous Silica Nanorods Capped with Magnetic Nanoparticles. Angewandte Chemie - International Edition, 2005, 44, 5038-5044.	7.2	938
5	Mesoporous Silica Nanoparticles for Intracellular Controlled Drug Delivery. Small, 2010, 6, 1952-1967.	5.2	907
6	Effect of Surface Functionalization of MCM-41-Type Mesoporous Silica Nanoparticles on the Endocytosis by Human Cancer Cells. Journal of the American Chemical Society, 2006, 128, 14792-14793.	6.6	779
7	Mesoporous Silica Nanoparticles for Intracellular Delivery of Membrane-Impermeable Proteins. Journal of the American Chemical Society, 2007, 129, 8845-8849.	6.6	734
8	Mesoporous Silica Nanoparticle-Based Double Drug Delivery System for Glucose-Responsive Controlled Release of Insulin and Cyclic AMP. Journal of the American Chemical Society, 2009, 131, 8398-8400.	6.6	707
9	Mesoporous silica nanoparticle based controlled release, drug delivery, and biosensor systems. Chemical Communications, 2007, , 3236.	2.2	532
10	Interaction of Mesoporous Silica Nanoparticles with Human Red Blood Cell Membranes: Size and Surface Effects. ACS Nano, 2011, 5, 1366-1375.	7.3	493
11	Morphological Control of Room-Temperature Ionic Liquid Templated Mesoporous Silica Nanoparticles for Controlled Release of Antibacterial Agents. Nano Letters, 2004, 4, 2139-2143.	4.5	413
12	Mesoporous silica nanoparticles: structural design and applications. Journal of Materials Chemistry, 2010, 20, 7924.	6.7	363
13	Aerobic oxidation of amines to imines catalyzed by bulk gold powder and by alumina-supported gold. Journal of Catalysis, 2008, 260, 1-6.	3.1	200
14	Mesoporous Silica Nanoparticle-Mediated Intracellular Cre Protein Delivery for Maize Genome Editing via loxP Site Excision[,]. Plant Physiology, 2014, 164, 537-547.	2.3	190
15	Capped mesoporous silica nanoparticles as stimuli-responsive controlled release systems for intracellular drug/gene delivery. Expert Opinion on Drug Delivery, 2010, 7, 1013-1029.	2.4	157
16	Mesoporous silica nanomaterial-based biotechnological and biomedical delivery systems. Nanomedicine, 2007, 2, 99-111.	1.7	146
17	Gold Functionalized Mesoporous Silica Nanoparticle Mediated Protein and DNA Codelivery to Plant Cells Via the Biolistic Method. Advanced Functional Materials, 2012, 22, 3576-3582.	7.8	137
18	Lightâ€•and pHâ€Responsive Release of Doxorubicin from a Mesoporous Silicaâ€Based Nanocarrier. Chemistry - A European Journal, 2011, 17, 3338-3342.	1.7	118

#	Article	IF	Citations
19	Encapsulation, stabilization, and release of BSA-FITC from polyanhydride microspheres. Journal of Controlled Release, 2004, 100, 97-109.	4.8	114
20	Hybrid Mesoporous Silica/Noble-Metal Nanoparticle Materialsâ€"Synthesis and Catalytic Applications. ACS Applied Nano Materials, 2018, 1, 4386-4400.	2.4	103
21	Polymerâ€based stimuliâ€responsive nanosystems for biomedical applications. Biotechnology Journal, 2013, 8, 931-945.	1.8	88
22	Luciferase and Luciferin Co-immobilized Mesoporous Silica Nanoparticle Materials for Intracellular Biocatalysis. Journal of the American Chemical Society, 2011, 133, 18554-18557.	6.6	86
23	Exocytosis of Mesoporous Silica Nanoparticles from Mammalian Cells: From Asymmetric Cellâ€toâ€Cell Transfer to Protein Harvesting. Small, 2011, 7, 1526-1532.	5.2	84
24	Catalytic Reactions of Carbene Precursors on Bulk Gold Metal. Journal of the American Chemical Society, 2009, 131, 11734-11743.	6.6	83
25	Controlled release and intracellular protein delivery from mesoporous silica nanoparticles. Biotechnology Journal, 2017, 12, 1600408.	1.8	81
26	Substrate inhibition in the heterogeneous catalyzed aldol condensation: A mechanistic study of supported organocatalysts. Journal of Catalysis, 2012, 291, 63-68.	3.1	76
27	Endocytosis of a single mesoporous silica nanoparticle into a human lung cancer cell observed by differential interference contrast microscopy. Analytical and Bioanalytical Chemistry, 2008, 391, 2119-2125.	1.9	75
28	Surfactant-assisted controlled release of hydrophobic drugs using anionic surfactant templated mesoporous silica nanoparticles. Biomaterials, 2011, 32, 6234-6244.	5.7	74
29	Parameters Affecting the Efficient Delivery of Mesoporous Silica Nanoparticle Materials and Gold Nanorods into Plant Tissues by the Biolistic Method. Small, 2012, 8, 413-422.	5.2	64
30	One-pot reaction cascades catalyzed by base- and acid-functionalized mesoporous silica nanoparticles. New Journal of Chemistry, 2008, 32, 1311.	1.4	62
31	Solvent-Induced Reversal of Activities between Two Closely Related Heterogeneous Catalysts in the Aldol Reaction. ACS Catalysis, 2013, 3, 265-271.	5.5	54
32	Chemically Reducible Lipid Bilayer Coated Mesoporous Silica Nanoparticles Demonstrating Controlled Release and HeLa and Normal Mouse Liver Cell Biocompatibility and Cellular Internalization. Molecular Pharmaceutics, 2012, 9, 2770-2777.	2.3	52
33	Review of the harvesting and extraction program within the National Alliance for Advanced Biofuels and Bioproducts. Algal Research, 2018, 33, 470-485.	2.4	50
34	Ligand Conformation Dictates Membrane and Endosomal Trafficking of Arginineâ€Glycineâ€Aspartate (RGD)â€Functionalized Mesoporous Silica Nanoparticles. Chemistry - A European Journal, 2012, 18, 7787-7792.	1.7	48
35	Urea and Thiourea-Functionalized Mesoporous Silica Nanoparticle Catalysts with Enhanced Catalytic Activity for Dielsâ€"Alder Reaction. Topics in Catalysis, 2010, 53, 187-191.	1.3	47
36	Interaction effects of mesoporous silica nanoparticles with different morphologies on human red blood cells. RSC Advances, 2013, 3, 2454.	1.7	45

#	Article	IF	Citations
37	Molybdenum incorporated mesoporous silica catalyst for production of biofuels and value-added chemicals via catalytic fast pyrolysis. Green Chemistry, 2015, 17, 3035-3046.	4.6	45
38	Deactivation of Multilayered MFI Nanosheet Zeolite during Upgrading of Biomass Pyrolysis Vapors. ACS Sustainable Chemistry and Engineering, 2017, 5, 5477-5484.	3.2	44
39	Solid-State 13C NMR Characterization of Carbon-Modified TiO2. Chemistry of Materials, 2009, 21, 1187-1197.	3.2	42
40	Application of Mesoporous Silica Nanoparticles in Intracellular Delivery of Molecules and Proteins. Methods in Enzymology, 2012, 508, 41-59.	0.4	42
41	Poly(lactic acid)-coated mesoporous silica nanosphere for controlled release of venlafaxine. Journal of Colloid and Interface Science, 2011, 360, 488-496.	5.0	41
42	Functional Mesoporous Silica Nanoparticles for the Selective Sequestration of Free Fatty Acids from Microalgal Oil. ACS Applied Materials & Interfaces, 2012, 4, 1003-1009.	4.0	36
43	Organometallic Complexes Anchored to Conductive Carbon for Electrocatalytic Oxidation of Methane at Low Temperature. Journal of the American Chemical Society, 2016, 138, 116-125.	6.6	34
44	Mimicking Red Blood Cell Lipid Membrane To Enhance the Hemocompatibility of Large-Pore Mesoporous Silica. ACS Applied Materials & Interfaces, 2014, 6, 1675-1681.	4.0	30
45	Mesoporous Silica Nanoparticleâ€Stabilized and Manganeseâ€Modified Rhodium Nanoparticles as Catalysts for Highly Selective Synthesis of Ethanol and Acetaldehyde from Syngas. ChemCatChem, 2012, 4, 674-680.	1.8	28
46	Aerobic Epoxidation of Olefin by Platinum Catalysts Supported on Mesoporous Silica Nanoparticles. ACS Catalysis, 2016, 6, 4584-4593.	5.5	28
47	Mesoporous Silica-Supported Uranyl:Â Synthesis and Photoreactivity. Inorganic Chemistry, 2005, 44, 5641-5648.	1.9	24
48	Aerobic oxidative esterification of primary alcohols over Pd-Au bimetallic catalysts supported on mesoporous silica nanoparticles. Catalysis Today, 2018, 306, 81-88.	2.2	24
49	Palladium Intercalated into the Walls of Mesoporous Silica as Robust and Regenerable Catalysts for Hydrodeoxygenation of Phenolic Compounds. ACS Omega, 2018, 3, 7681-7691.	1.6	23
50	Elucidating Zeolite Deactivation Mechanisms During Biomass Catalytic Fast Pyrolysis from Model Reactions and Zeolite Syntheses. Topics in Catalysis, 2016, 59, 73-85.	1.3	19
51	Direct synthesis of silver nanoparticles modified spherical mesoporous silica as efficient antibacterial materials. Microporous and Mesoporous Materials, 2021, 313, 110824.	2.2	19
52	Tandem Catalytic Systems Integrating Biocatalysts and Inorganic Catalysts Using Functionalized Porous Materials. ACS Catalysis, 2021, 11, 110-122.	5.5	19
53	Inâ€…Situ Formation of Metal Carbide Catalysts. ChemCatChem, 2017, 9, 3090-3101.	1.8	18
54	Microcolumn lanthanide separation using bis-(2-ethylhexyl) phosphoric acid functionalized ordered mesoporous carbon materials. Journal of Chromatography A, 2019, 1595, 248-256.	1.8	17

#	Article	IF	Citations
55	Mesoporous Aluminum Silicate Catalyst with Single-Type Active Sites:â€‰ Characterization by Solid-State NMR and Studies of Reactivity for Claisen Rearrangement Reactions. Journal of Physical Chemistry C, 2007, 111, 1480-1486.	1.5	16
56	MESOPOROUS SILICA NANOPARTICLES: SYNTHESIS AND APPLICATIONS. Annual Review of Nano Research, 2009, , 191-231.	0.2	16
57	Universal and Versatile Route for Selective Covalent Tethering of Single-Site Catalysts and Functional Groups on the Surface of Ordered Mesoporous Carbons. Chemistry of Materials, 2014, 26, 2873-2882.	3.2	16
58	High-Throughput Analysis of Algal Crude Oils Using High Resolution Mass Spectrometry. Lipids, 2013, 48, 297-305.	0.7	13
59	Breaking the fibrinolytic speed limit with microwheel coâ€delivery of tissue plasminogen activator and plasminogen. Journal of Thrombosis and Haemostasis, 2022, 20, 486-497.	1.9	13
60	Enhanced metal loading in SBA-15-type catalysts facilitated by salt addition: Synthesis, characterization and catalytic epoxide alcoholysis activity of molybdenum incorporated porous silica. Applied Catalysis A: General, 2014, 475, 469-476.	2.2	12
61	Electrochemical reduction of europium(<scp>iii</scp>) using tetra-n-octyl diglycolamide functionalized ordered mesoporous carbon microelectrodes. Journal of Materials Chemistry C, 2020, 8, 6689-6700.	2.7	11
62	Direct synthesis of Fe rich SBA-15â€at low pH by in-situ formation of iron phosphate phase. Microporous and Mesoporous Materials, 2019, 276, 270-279.	2.2	10
63	Synthesis of nanotubes via cationic polymerization of styrene and divinylbenzene. Polymer Chemistry, 2010, 1, 1427.	1.9	9
64	Decarboxylation of stearic acid over Ni/MOR catalysts. Journal of Chemical Technology and Biotechnology, 2020, 95, 102-110.	1.6	9
65	Best Practices in the Characterization of MOF@MSN Composites. Inorganic Chemistry, 2022, 61, 4219-4234.	1.9	7
66	Monitoring the Stimulated Uncapping Process of Gold-Capped Mesoporous Silica Nanoparticles. Analytical Chemistry, 2018, 90, 3183-3188.	3.2	6
67	Conserved Activity of Reassociated Homotetrameric Protein Subunits Released from Mesoporous Silica Nanoparticles. Langmuir, 2018, 34, 228-233.	1.6	6
68	Vacancy Healing as a Desorption Tool: Oxygen Triggered Removal of Stored Ammonia from NiO_{1â€“x}/MOR Validated by Experiments and Simulations. ACS Applied Energy Materials, 2020, 3, 8233-8239.	2.5	6
69	Nanoparticle-Mediated Recombinase Delivery into Maize. Methods in Molecular Biology, 2017, 1642, 169-180.	0.4	5
70	Strategies for post-synthetic functionalization of mesoporous carbon nanomaterial surfaces. Microporous and Mesoporous Materials, 2022, 329, 111453.	2.2	5
71	Multiscale investigations of europium(<scp>iii</scp>) complexation with tetra-n-octyl diglycolamide confined in porous solid supports. CrystEngComm, 2020, 22, 6886-6899.	1.3	3
72	Surface-Functionalized Nanoporous Catalysts for Renewable Chemistry. , 0, , 15-47.		2

#	Article	IF	Citations
73	Surface-Functionalized Nanoporous Catalysts towards Biofuel Applications. , 0, , 319-357.		1
74	MgO(111) Nanocatalyst for Biomass Conversion: A Study of Carbon Coating Effects on Catalyst Faceting and Performance. Catalysis Letters, 0, , 1.	1.4	1
75	Drug Delivery: Exocytosis of Mesoporous Silica Nanoparticles from Mammalian Cells: From Asymmetric Cell-to-Cell Transfer to Protein Harvesting (Small 11/2011). Small, 2011, 7, 1498-1498.	5.2	0
76	Chemistry in Confined Pore Domains. World Scientific Series in Nanoscience and Nanotechnology, 2015, , 435-456.	0.1	0
77	Electroreduction as a facile method for one-pot synthesis of CuZSM-5 nanostructures. Nano Structures Nano Objects, 2018, 16, 354-362.	1.9	0
78	Targeted Catalyst Design to Combat Deactivation in the Liquid Phase. ACS Symposium Series, 2020, , 267-293.	0.5	0