

Sharon J Mitchell

List of Publications by Year in descending order

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117
papers

8,988
citations

50170

46
h-index

42291

92
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134
all docs

134
docs citations

134
times ranked

9015
citing authors

#	ARTICLE	IF	CITATIONS
1	Hierarchical Zeolites Overcome all Obstacles: Next Stop Industrial Implementation. <i>Chimia</i> , 2022, 67, 327.	0.3	29
2	Scalable two-step annealing method for preparing ultra-high-density single-atom catalyst libraries. <i>Nature Nanotechnology</i> , 2022, 17, 174-181.	15.6	279
3	Redispersion strategy for high-loading carbon-supported metal catalysts with controlled nuclearity. <i>Journal of Materials Chemistry A</i> , 2022, 10, 5953-5961.	5.2	16
4	Natural Wood-Based Catalytic Membrane Microreactors for Continuous Hydrogen Generation. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 8417-8426.	4.0	16
5	Automated Image Analysis for Single-Atom Detection in Catalytic Materials by Transmission Electron Microscopy. <i>Journal of the American Chemical Society</i> , 2022, 144, 8018-8029.	6.6	33
6	Single-atom heterogeneous catalysts for sustainable organic synthesis. <i>Trends in Chemistry</i> , 2022, 4, 264-276.	4.4	27
7	Elucidation of Metal Local Environments in Single-Atom Catalysts Based on Carbon Nitrides. <i>Small</i> , 2022, 18, .	5.2	15
8	Assessing the environmental benefit of palladium-based single-atom heterogeneous catalysts for Sonogashira coupling. <i>Green Chemistry</i> , 2022, 24, 6879-6888.	4.6	10
9	Elucidation of radical- and oxygenate-driven paths in zeolite-catalysed conversion of methanol and methyl chloride to hydrocarbons. <i>Nature Catalysis</i> , 2022, 5, 605-614.	16.1	32
10	Design of Local Atomic Environments in Single-Atom Electrocatalysts for Renewable Energy Conversions. <i>Advanced Materials</i> , 2021, 33, e2003075.	11.1	187
11	Nanoscale engineering of catalytic materials for sustainable technologies. <i>Nature Nanotechnology</i> , 2021, 16, 129-139.	15.6	210
12	Impact of Heteroatom Speciation on the Activity and Stability of Carbon-Based Catalysts for Propane Dehydrogenation. <i>ChemCatChem</i> , 2021, 13, 2599-2608.	1.8	11
13	Precursor Nuclearity and Ligand Effects in Atomically Dispersed Heterogeneous Iron Catalysts for Alkyne Semi-Hydrogenation. <i>ChemCatChem</i> , 2021, 13, 3247-3256.	1.8	11
14	Atomically precise control in the design of low-nuclearity supported metal catalysts. <i>Nature Reviews Materials</i> , 2021, 6, 969-985.	23.3	78
15	Dual catalyst system for selective vinyl chloride production via ethene oxychlorination. <i>Catalysis Science and Technology</i> , 2020, 10, 560-575.	2.1	4
16	Nitrogen-Doped Carbons with Hierarchical Porosity via Chemical Blowing Towards Long-Lived Metal-Free Catalysts for Acetylene Hydrochlorination. <i>ChemCatChem</i> , 2020, 12, 1922-1925.	1.8	10
17	Aluminum Redistribution in ZSM-5 Zeolite upon Interaction with Gaseous Halogens and Hydrogen Halides and Implications in Catalysis. <i>Journal of Physical Chemistry C</i> , 2020, 124, 722-733.	1.5	8
18	Epitaxially Directed Iridium Nanostructures on Titanium Dioxide for the Selective Hydrodechlorination of Dichloromethane. <i>ACS Catalysis</i> , 2020, 10, 528-542.	5.5	24

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19	Single-Atom Catalysts across the Periodic Table. <i>Chemical Reviews</i> , 2020, 120, 11703-11809.	23.0	690
20	Carrier-Induced Modification of Palladium Nanoparticles on Porous Boron Nitride for Alkyne Semi-Hydrogenation. <i>Angewandte Chemie</i> , 2020, 132, 19807-19812.	1.6	11
21	Single atom catalysis: a decade of stunning progress and the promise for a bright future. <i>Nature Communications</i> , 2020, 11, 4302.	5.8	179
22	Activation of Copper Species on Carbon Nitride for Enhanced Activity in the Arylation of Amines. <i>ACS Catalysis</i> , 2020, 10, 11069-11080.	5.5	29
23	Substrate substitution effects in the Fries rearrangement of aryl esters over zeolite catalysts. <i>Catalysis Science and Technology</i> , 2020, 10, 4282-4292.	2.1	5
24	Carrier-Induced Modification of Palladium Nanoparticles on Porous Boron Nitride for Alkyne Semi-Hydrogenation. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 19639-19644.	7.2	36
25	Structure Sensitivity and Evolution of Nickel-Bearing Nitrogen-Doped Carbons in the Electrochemical Reduction of CO ₂ . <i>ACS Catalysis</i> , 2020, 10, 3444-3454.	5.5	20
26	Tunability and Scalability of Single-Atom Catalysts Based on Carbon Nitride. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 5223-5230.	3.2	31
27	Controlling the speciation and reactivity of carbon-supported gold nanostructures for catalysed acetylene hydrochlorination. <i>Chemical Science</i> , 2019, 10, 359-369.	3.7	76
28	Atom-by-Atom Resolution of Structure-Function Relations over Low-Nuclearity Metal Catalysts. <i>Angewandte Chemie</i> , 2019, 131, 8816-8821.	1.6	21
29	Tailoring Nitrogen-Doped Carbons as Hosts for Single-Atom Catalysts. <i>ChemCatChem</i> , 2019, 11, 2812-2820.	1.8	40
30	Atom-by-Atom Resolution of Structure-Function Relations over Low-Nuclearity Metal Catalysts. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 8724-8729.	7.2	108
31	Impact of carrier acidity on the conversion of syngas to higher alcohols over zeolite-supported copper-iron catalysts. <i>Journal of Catalysis</i> , 2019, 371, 116-125.	3.1	20
32	Ensemble Design in Nickel Phosphide Catalysts for Alkyne Semi-Hydrogenation. <i>ChemCatChem</i> , 2019, 11, 457-464.	1.8	25
33	Single-atom heterogeneous catalysts based on distinct carbon nitride scaffolds. <i>National Science Review</i> , 2018, 5, 642-652.	4.6	132
34	Acidity Effects in Positron Annihilation Lifetime Spectroscopy of Zeolites. <i>Journal of Physical Chemistry C</i> , 2018, 122, 3443-3453.	1.5	6
35	An Activated Ti-SiC Composite for Natural Gas Upgrading via Catalytic Oxyhalogenation. <i>ChemCatChem</i> , 2018, 10, 1282-1290.	1.8	11
36	Elucidating the Distribution and Speciation of Boron and Cesium in BCsX Zeolite Catalysts for Styrene Production. <i>ChemPhysChem</i> , 2018, 19, 437-445.	1.0	12

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37	Selective Methane Oxybromination over Nanostructured Ceria Catalysts. <i>ACS Catalysis</i> , 2018, 8, 291-303.	5.5	17
38	Die facettenreiche Reaktivität heterogener Einzelatomkatalysatoren. <i>Angewandte Chemie</i> , 2018, 130, 15538-15552.	1.6	36
39	Positron Annihilation Spectroscopy: Shedding New Light on Nanostructured Catalysts with Positron Annihilation Spectroscopy (Small Methods 12/2018). <i>Small Methods</i> , 2018, 2, 1800060.	4.6	1
40	Hydrotalcite-Derived Mixed Oxides for the Synthesis of a Key Vitamin A Intermediate Reducing Waste. <i>ACS Omega</i> , 2018, 3, 15293-15301.	1.6	4
41	Shedding New Light on Nanostructured Catalysts with Positron Annihilation Spectroscopy. <i>Small Methods</i> , 2018, 2, 1800268.	4.6	13
42	The Multifaceted Reactivity of Single-Atom Heterogeneous Catalysts. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 15316-15329.	7.2	261
43	Role of Carbonaceous Supports and Potassium Promoter on Higher Alcohols Synthesis over Copper-Iron Catalysts. <i>ACS Catalysis</i> , 2018, 8, 9604-9618.	5.5	58
44	Structure-performance descriptors and the role of Lewis acidity in the methanol-to-propylene process. <i>Nature Chemistry</i> , 2018, 10, 804-812.	6.6	221
45	A heterogeneous single-atom palladium catalyst surpassing homogeneous systems for Suzuki coupling. <i>Nature Nanotechnology</i> , 2018, 13, 702-707.	15.6	471
46	Selective ensembles in supported palladium sulfide nanoparticles for alkyne semi-hydrogenation. <i>Nature Communications</i> , 2018, 9, 2634.	5.8	180
47	Stabilization of Single Metal Atoms on Graphitic Carbon Nitride. <i>Advanced Functional Materials</i> , 2017, 27, 1605785.	7.8	249
48	Catalysts: Stabilization of Single Metal Atoms on Graphitic Carbon Nitride (<i>Adv. Funct. Mater.</i> 8/2017). <i>Advanced Functional Materials</i> , 2017, 27, .	7.8	2
49	Pore Topology Effects in Positron Annihilation Spectroscopy of Zeolites. <i>ChemPhysChem</i> , 2017, 18, 428-428.	1.0	0
50	Design of a technical Mg-Al mixed oxide catalyst for the continuous manufacture of glycerol carbonate. <i>Journal of Materials Chemistry A</i> , 2017, 5, 16200-16211.	5.2	46
51	Europium Oxybromide Catalysts for Efficient Bromine Looping in Natural Gas Valorization. <i>Angewandte Chemie</i> , 2017, 129, 9923-9927.	1.6	10
52	Europium Oxybromide Catalysts for Efficient Bromine Looping in Natural Gas Valorization. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 9791-9795.	7.2	27
53	Visualising compositional heterogeneity during the scale up of multicomponent zeolite bodies. <i>Materials Horizons</i> , 2017, 4, 857-861.	6.4	18
54	Tailoring the framework composition of carbon nitride to improve the catalytic efficiency of the stabilised palladium atoms. <i>Journal of Materials Chemistry A</i> , 2017, 5, 16393-16403.	5.2	83

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55	Mapping the Birth and Evolution of Pores upon Thermal Activation of Layered Hydroxides. <i>Chemistry of Materials</i> , 2017, 29, 4052-4062.	3.2	18
56	Pore Topology Effects in Positron Annihilation Spectroscopy of Zeolites. <i>ChemPhysChem</i> , 2017, 18, 470-479.	1.0	9
57	Single atom catalysis. <i>Catalysis Science and Technology</i> , 2017, 7, 4248-4249.	2.1	34
58	Semihydrogenation of Acetylene on Indium Oxide: Proposed Singleâ€Ensemble Catalysis. <i>Angewandte Chemie</i> , 2017, 129, 10895-10900.	1.6	17
59	Semihydrogenation of Acetylene on Indium Oxide: Proposed Singleâ€Ensemble Catalysis. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 10755-10760.	7.2	82
60	Engineering of ZSM-5 zeolite crystals for enhanced lifetime in the production of light olefins via 2-methyl-2-butene cracking. <i>Catalysis Science and Technology</i> , 2017, 7, 64-74.	2.1	40
61	Interfacial acidity in ligand-modified ruthenium nanoparticles boosts the hydrogenation of levulinic acid to gamma-valerolactone. <i>Green Chemistry</i> , 2017, 19, 2361-2370.	4.6	58
62	Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO ₂ Hydrogenation. <i>Angewandte Chemie</i> , 2016, 128, 6369-6373.	1.6	78
63	Titelbild: Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO ₂ Hydrogenation (<i>Angew. Chem.</i> 21/2016). <i>Angewandte Chemie</i> , 2016, 128, 6215-6215.	1.6	0
64	Quantifying the Complex Pore Architecture of Hierarchical Faujasite Zeolites and the Impact on Diffusion. <i>Advanced Functional Materials</i> , 2016, 26, 5621-5630.	7.8	61
65	Structural analysis of IPC zeolites and related materials using positron annihilation spectroscopy and high-resolution argon adsorption. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 15269-15277.	1.3	21
66	The assessment of pore connectivity in hierarchical zeolites using positron annihilation lifetime spectroscopy: instrumental and morphological aspects. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 9211-9219.	1.3	26
67	Enhanced Reduction of CO ₂ to CO over Cuâ€In Electro catalysts: Catalyst Evolution Is the Key. <i>ACS Catalysis</i> , 2016, 6, 6265-6274.	5.5	170
68	Mechanochemically Activated, Calcium Oxideâ€Based, Magnesium Oxideâ€Stabilized Carbon Dioxide Sorbents. <i>ChemSusChem</i> , 2016, 9, 2380-2390.	3.6	40
69	Structuring hybrid palladium nanoparticles in metallic monolithic reactors for continuous-flow three-phase alkyne hydrogenation. <i>Reaction Chemistry and Engineering</i> , 2016, 1, 454-462.	1.9	18
70	Hierarchical Structures: Quantifying the Complex Pore Architecture of Hierarchical Faujasite Zeolites and the Impact on Diffusion (<i>Adv. Funct. Mater.</i> 31/2016). <i>Advanced Functional Materials</i> , 2016, 26, 5768-5768.	7.8	0
71	Lanthanide compounds as catalysts for the one-step synthesis of vinyl chloride from ethylene. <i>Journal of Catalysis</i> , 2016, 344, 524-534.	3.1	38
72	Insights into the Mechanism of Zeolite Detemplation by Positron Annihilation Lifetime Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2016, 120, 25451-25461.	1.5	16

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73	Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO ₂ Hydrogenation. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 6261-6265.	7.2	769
74	Synergistic effects in silver–indium electrocatalysts for carbon dioxide reduction. <i>Journal of Catalysis</i> , 2016, 343, 266-277.	3.1	73
75	Ligand ordering determines the catalytic response of hybrid palladium nanoparticles in hydrogenation. <i>Catalysis Science and Technology</i> , 2016, 6, 1621-1631.	2.1	45
76	Deoxygenation of bio-oil over solid base catalysts: From model to realistic feeds. <i>Applied Catalysis B: Environmental</i> , 2016, 184, 77-86.	10.8	59
77	Deactivation mechanisms of tin-zeolites in biomass conversions. <i>Green Chemistry</i> , 2016, 18, 1249-1260.	4.6	80
78	Impact of Pore Connectivity on the Design of Long-Lived Zeolite Catalysts (<i>Angew. Chem.</i>)	1.6	0
79	Hierarchically Structured MnO ₂ @Co/C Nanocomposites: Highly Efficient and Magnetically Recyclable Catalysts for the Aerobic Oxidation of Alcohols. <i>ChemCatChem</i> , 2015, 7, 2585-2589.	1.8	5
80	Aluminum Redistribution during the Preparation of Hierarchical Zeolites by Desilication. <i>Chemistry - A European Journal</i> , 2015, 21, 14156-14164.	1.7	44
81	Porosity–Acidity Interplay in Hierarchical ZSM-5 Zeolites for Pyrolysis Oil Valorization to Aromatics. <i>ChemSusChem</i> , 2015, 8, 3283-3293.	3.6	105
82	Structure analysis of a BEC-type germanosilicate zeolite including the location of the flexible organic cations in the channels. <i>CrystEngComm</i> , 2015, 17, 4865-4870.	1.3	8
83	Structuring zeolite bodies for enhanced heat-transfer properties. <i>Microporous and Mesoporous Materials</i> , 2015, 208, 196-202.	2.2	16
84	Unified Method for the Total Pore Volume and Pore Size Distribution of Hierarchical Zeolites from Argon Adsorption and Mercury Intrusion. <i>Langmuir</i> , 2015, 31, 1242-1247.	1.6	41
85	Design of Base Zeolite Catalysts by Alkali-Metal Grafting in Alcoholic Media. <i>ACS Catalysis</i> , 2015, 5, 5388-5396.	5.5	40
86	Structural analysis of hierarchically organized zeolites. <i>Nature Communications</i> , 2015, 6, 8633.	5.8	206
87	Impact of Pore Connectivity on the Design of Long-Lived Zeolite Catalysts. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 1591-1594.	7.2	84
88	From the Lindlar Catalyst to Supported Ligand-Modified Palladium Nanoparticles: Selectivity Patterns and Accessibility Constraints in the Continuous-Flow Three-Phase Hydrogenation of Acetylenic Compounds. <i>Chemistry - A European Journal</i> , 2014, 20, 5849-5849.	1.7	4
89	Bifunctional Cu/H-ZSM-5 zeolite with hierarchical porosity for hydrocarbon abatement under cold-start conditions. <i>Applied Catalysis B: Environmental</i> , 2014, 154-155, 161-170.	10.8	54
90	Rediscovering zeolite mechanochemistry – A pathway beyond current synthesis and modification boundaries. <i>Microporous and Mesoporous Materials</i> , 2014, 194, 106-114.	2.2	45

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91	Prospectives for bio-oil upgrading via esterification over zeolite catalysts. <i>Catalysis Today</i> , 2014, 235, 176-183.	2.2	83
92	From the Lindlar Catalyst to Supported Ligand-Modified Palladium Nanoparticles: Selectivity Patterns and Accessibility Constraints in the Continuous-Flow Three-Phase Hydrogenation of Acetylenic Compounds. <i>Chemistry - A European Journal</i> , 2014, 20, 5926-5937.	1.7	141
93	Zeolites: Superior Mass Transfer Properties of Technical Zeolite Bodies with Hierarchical Porosity (<i>Adv. Funct. Mater.</i> 2/2014). <i>Advanced Functional Materials</i> , 2014, 24, 174-174.	7.8	0
94	Mesopore quality determines the lifetime of hierarchically structured zeolite catalysts. <i>Nature Communications</i> , 2014, 5, .	5.8	270
95	Design of hydrothermally-stable dawsonite-based sorbents in technical form for CO ₂ capture. <i>Energy and Environmental Science</i> , 2014, 7, 3640-3650.	15.6	3
96	Hydroxyapatite, an exceptional catalyst for the gas-phase deoxygenation of bio-oil by aldol condensation. <i>Green Chemistry</i> , 2014, 16, 4870-4874.	4.6	47
97	Effects of Binders on the Performance of Shaped Hierarchical MFI Zeolites in Methanol-to-Hydrocarbons. <i>ACS Catalysis</i> , 2014, 4, 2409-2417.	5.5	163
98	Superior Mass Transfer Properties of Technical Zeolite Bodies with Hierarchical Porosity. <i>Advanced Functional Materials</i> , 2014, 24, 209-219.	7.8	108
99	Hierarchical Zeolites by Desilication: Occurrence and Catalytic Impact of Recrystallization and Restructuring. <i>Crystal Growth and Design</i> , 2013, 13, 5025-5035.	1.4	74
100	Interdependence between porosity, acidity, and catalytic performance in hierarchical ZSM-5 zeolites prepared by post-synthetic modification. <i>Journal of Catalysis</i> , 2013, 308, 398-407.	3.1	99
101	Hierarchical FAU- and LTA-Type Zeolites by Post-Synthetic Design: A New Generation of Highly Efficient Base Catalysts. <i>Advanced Functional Materials</i> , 2013, 23, 1923-1934.	7.8	125
102	From powder to technical body: the undervalued science of catalyst scale up. <i>Chemical Society Reviews</i> , 2013, 42, 6094.	18.7	244
103	Advanced visualization strategies bridge the multidimensional complexity of technical catalysts. <i>Current Opinion in Chemical Engineering</i> , 2013, 2, 304-311.	3.8	20
104	Visualization of hierarchically structured zeolite bodies from macro to nano length scales. <i>Nature Chemistry</i> , 2012, 4, 825-831.	6.6	234
105	Decoupling porosity and compositional effects on desilicated ZSM-5 zeolites for optimal alkylation performance. <i>Catalysis Science and Technology</i> , 2012, 2, 759.	2.1	64
106	Surface and Pore Structure Assessment of Hierarchical MFI Zeolites by Advanced Water and Argon Sorption Studies. <i>Journal of Physical Chemistry C</i> , 2012, 116, 18816-18823.	1.5	94
107	Hierarchically Structured Zeolite Bodies: Assembling Micro-, Meso-, and Macroporosity Levels in Complex Materials with Enhanced Properties. <i>Advanced Functional Materials</i> , 2012, 22, 2509-2518.	7.8	38
108	Towards more efficient monodimensional zeolite catalysts: n-alkane hydro-isomerisation on hierarchical ZSM-22. <i>Catalysis Science and Technology</i> , 2011, 1, 1331.	2.1	72

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109	Full Compositional Flexibility in the Preparation of Mesoporous MFI Zeolites by Desilication. <i>Journal of Physical Chemistry C</i> , 2011, 115, 14193-14203.	1.5	230
110	Preparation of organic-functionalized mesoporous ZSM-5 zeolites by consecutive desilication and silanization. <i>Materials Chemistry and Physics</i> , 2011, 127, 278-284.	2.0	25
111	Expanding the Horizons of Hierarchical Zeolites: Beyond Laboratory Curiosity towards Industrial Realization. <i>ChemCatChem</i> , 2011, 3, 1731-1734.	1.8	84
112	Mesoporous zeolites as enzyme carriers: Synthesis, characterization, and application in biocatalysis. <i>Catalysis Today</i> , 2011, 168, 28-37.	2.2	84
113	Comparative study of the synthesis of layered transition metal molybdates. <i>Journal of Solid State Chemistry</i> , 2010, 183, 198-207.	1.4	19
114	Perturbing the properties of layered double hydroxides by continuous coprecipitation with short residence time. <i>Journal of Materials Chemistry</i> , 2010, 20, 5878.	6.7	23
115	The application of focused microwave irradiation coupled with freeze drying to investigate the reaction of MgO and Al ₂ O ₃ slurries in the formation of layered double hydroxides. <i>Green Chemistry</i> , 2008, 10, 629.	4.6	8
116	A synchrotron radiation study of the hydrothermal synthesis of layered double hydroxides from MgO and Al ₂ O ₃ slurries. <i>Green Chemistry</i> , 2007, 9, 373.	4.6	35
117	Carbon-Supported Bimetallic Ruthenium-Crystalline Catalysts for Selective and Stable Hydrodebromination of Dibromomethane. <i>ChemCatChem</i> , 0, , .	1.8	5