Sharon J Mitchell

List of Publications by Citations

114 papers	5,841 citations	42 h-index	74 g-index
134 ext. papers	7,318 ext. citations	11.5 avg, IF	6.31 L-index

#	Paper	IF	Citations
114	Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO2 Hydrogenation. *Angewandte Chemie - International Edition*, **2016**, 55, 6261-5	16.4	486
113	A heterogeneous single-atom palladium catalyst surpassing homogeneous systems for Suzuki coupling. *Nature Nanotechnology*, **2018**, 13, 702-707	28.7	316
112	Single-Atom Catalysts across the Periodic Table. *Chemical Reviews*, **2020**, 120, 11703-11809	68.1	237
111	Mesopore quality determines the lifetime of hierarchically structured zeolite catalysts. *Nature Communications*, **2014**, 5,	17.4	221
110	Visualization of hierarchically structured zeolite bodies from macro to nano length scales. *Nature Chemistry*, **2012**, 4, 825-31	17.6	200
109	Full Compositional Flexibility in the Preparation of Mesoporous MFI Zeolites by Desilication. *Journal of Physical Chemistry C*, **2011**, 115, 14193-14203	3.8	189
108	The Multifaceted Reactivity of Single-Atom Heterogeneous Catalysts. *Angewandte Chemie - International Edition*, **2018**, 57, 15316-15329	16.4	179
107	Stabilization of Single Metal Atoms on Graphitic Carbon Nitride. *Advanced Functional Materials*, **2017**, 27, 1605785	15.6	172
106	From powder to technical body: the undervalued science of catalyst scale up. *Chemical Society Reviews*, **2013**, 42, 6094-112	58.5	170
105	Structural analysis of hierarchically organized zeolites. *Nature Communications*, **2015**, 6, 8633	17.4	168
104	Structure-performance descriptors and the role of Lewis acidity in the methanol-to-propylene process. *Nature Chemistry*, **2018**, 10, 804-812	17.6	145
103	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. *Chemistry - A European Journal*, **2014**, 20, 5926-37	4.8	120
102	Effects of Binders on the Performance of Shaped Hierarchical MFI Zeolites in Methanol-to-Hydrocarbons. *ACS Catalysis*, **2014**, 4, 2409-2417	13.1	118
101	Enhanced Reduction of CO2 to CO over Cu□h Electrocatalysts: Catalyst Evolution Is the Key. *ACS Catalysis*, **2016**, 6, 6265-6274	13.1	114
100	Selective ensembles in supported palladium sulfide nanoparticles for alkyne semi-hydrogenation. *Nature Communications*, **2018**, 9, 2634	17.4	110
99	Hierarchical FAU- and LTA-Type Zeolites by Post-Synthetic Design: A New Generation of Highly Efficient Base Catalysts. *Advanced Functional Materials*, **2013**, 23, 1923-1934	15.6	101
98	Superior Mass Transfer Properties of Technical Zeolite Bodies with Hierarchical Porosity. *Advanced Functional Materials*, **2014**, 24, 209-219	15.6	91

97	Porosity-Acidity Interplay in Hierarchical ZSM-5 Zeolites for Pyrolysis Oil Valorization to Aromatics. *ChemSusChem*, **2015**, 8, 3283-93	8.3	86
96	Single-atom heterogeneous catalysts based on distinct carbon nitride scaffolds. *National Science Review*, **2018**, 5, 642-652	10.8	82
95	Interdependence between porosity, acidity, and catalytic performance in hierarchical ZSM-5 zeolites prepared by post-synthetic modification. *Journal of Catalysis*, **2013**, 308, 398-407	7.3	82
94	Surface and Pore Structure Assessment of Hierarchical MFI Zeolites by Advanced Water and Argon Sorption Studies. *Journal of Physical Chemistry C*, **2012**, 116, 18816-18823	3.8	80
93	Expanding the Horizons of Hierarchical Zeolites: Beyond Laboratory Curiosity towards Industrial Realization. *ChemCatChem*, **2011**, 3, 1731-1734	5.2	78
92	Impact of pore connectivity on the design of long-lived zeolite catalysts. *Angewandte Chemie - International Edition*, **2015**, 54, 1591-4	16.4	76
91	Mesoporous zeolites as enzyme carriers: Synthesis, characterization, and application in biocatalysis. *Catalysis Today*, **2011**, 168, 28-37	5.3	74
90	Prospectives for bio-oil upgrading via esterification over zeolite catalysts. *Catalysis Today*, **2014**, 235, 176-183	5.3	73
89	Design of Local Atomic Environments in Single-Atom Electrocatalysts for Renewable Energy Conversions. *Advanced Materials*, **2021**, 33, e2003075	24	73
88	Deactivation mechanisms of tin-zeolites in biomass conversions. *Green Chemistry*, **2016**, 18, 1249-1260	10	72
87	Single atom catalysis: a decade of stunning progress and the promise for a bright future. *Nature Communications*, **2020**, 11, 4302	17.4	67
86	Atom-by-Atom Resolution of Structure-Function Relations over Low-Nuclearity Metal Catalysts. *Angewandte Chemie - International Edition*, **2019**, 58, 8724-8729	16.4	64
85	Hierarchical Zeolites by Desilication: Occurrence and Catalytic Impact of Recrystallization and Restructuring. *Crystal Growth and Design*, **2013**, 13, 5025-5035	3.5	64
84	Nanoscale engineering of catalytic materials for sustainable technologies. *Nature Nanotechnology*, **2021**, 16, 129-139	28.7	62
83	Towards more efficient monodimensional zeolite catalysts: n-alkane hydro-isomerisation on hierarchical ZSM-22. *Catalysis Science and Technology*, **2011**, 1, 1331	5.5	61
82	Semihydrogenation of Acetylene on Indium Oxide: Proposed Single-Ensemble Catalysis. *Angewandte Chemie - International Edition*, **2017**, 56, 10755-10760	16.4	58
81	Tailoring the framework composition of carbon nitride to improve the catalytic efficiency of the stabilised palladium atoms. *Journal of Materials Chemistry A*, **2017**, 5, 16393-16403	13	57
80	Decoupling porosity and compositional effects on desilicated ZSM-5 zeolites for optimal alkylation performance. *Catalysis Science and Technology*, **2012**, 2, 759	5.5	55

79	Synergistic effects in silver–indium electrocatalysts for carbon dioxide reduction. *Journal of Catalysis*, **2016**, 343, 266-277	7.3	54
78	Deoxygenation of bio-oil over solid base catalysts: From model to realistic feeds. *Applied Catalysis B: Environmental*, **2016**, 184, 77-86	21.8	51
77	Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO2 Hydrogenation. *Angewandte Chemie*, **2016**, 128, 6369-6373	3.6	50
76	Bifunctional Cu/H-ZSM-5 zeolite with hierarchical porosity for hydrocarbon abatement under cold-start conditions. *Applied Catalysis B: Environmental*, **2014**, 154-155, 161-170	21.8	49
75	Controlling the speciation and reactivity of carbon-supported gold nanostructures for catalysed acetylene hydrochlorination. *Chemical Science*, **2019**, 10, 359-369	9.4	48
74	Interfacial acidity in ligand-modified ruthenium nanoparticles boosts the hydrogenation of levulinic acid to gamma-valerolactone. *Green Chemistry*, **2017**, 19, 2361-2370	10	48
73	Quantifying the Complex Pore Architecture of Hierarchical Faujasite Zeolites and the Impact on Diffusion. *Advanced Functional Materials*, **2016**, 26, 5621-5630	15.6	44
72	Ligand ordering determines the catalytic response of hybrid palladium nanoparticles in hydrogenation. *Catalysis Science and Technology*, **2016**, 6, 1621-1631	5.5	41
71	Hydroxyapatite, an exceptional catalyst for the gas-phase deoxygenation of bio-oil by aldol condensation. *Green Chemistry*, **2014**, 16, 4870-4874	10	40
70	Scalable two-step annealing method for preparing ultra-high-density single-atom catalyst libraries. *Nature Nanotechnology*, **2021**,	28.7	40
69	Role of Carbonaceous Supports and Potassium Promoter on Higher Alcohols Synthesis over Copper–Iron Catalysts. *ACS Catalysis*, **2018**, 8, 9604-9618	13.1	40
68	Aluminum Redistribution during the Preparation of Hierarchical Zeolites by Desilication. *Chemistry - A European Journal*, **2015**, 21, 14156-64	4.8	37
67	Engineering of ZSM-5 zeolite crystals for enhanced lifetime in the production of light olefins via 2-methyl-2-butene cracking. *Catalysis Science and Technology*, **2017**, 7, 64-74	5.5	36
66	Unified method for the total pore volume and pore size distribution of hierarchical zeolites from argon adsorption and mercury intrusion. *Langmuir*, **2015**, 31, 1242-7	4	35
65	Design of a technical Mg–Al mixed oxide catalyst for the continuous manufacture of glycerol carbonate. *Journal of Materials Chemistry A*, **2017**, 5, 16200-16211	13	33
64	Design of Base Zeolite Catalysts by Alkali-Metal Grafting in Alcoholic Media. *ACS Catalysis*, **2015**, 5, 5388-5396	13.1	33
63	Rediscovering zeolite mechanochemistry – A pathway beyond current synthesis and modification boundaries. *Microporous and Mesoporous Materials*, **2014**, 194, 106-114	5.3	33
62	Hierarchically Structured Zeolite Bodies: Assembling Micro-, Meso-, and Macroporosity Levels in Complex Materials with Enhanced Properties. *Advanced Functional Materials*, **2012**, 22, 2509-2518	15.6	33

61	A synchrotron radiation study of the hydrothermal synthesis of layered double hydroxides from MgO and Al2O3 slurries. *Green Chemistry*, **2007**, 9, 373	10	29
60	Die facettenreiche Reaktivität heterogener Einzelatom-Katalysatoren. *Angewandte Chemie*, **2018**, 130, 15538-15552	3.6	29
59	Lanthanide compounds as catalysts for the one-step synthesis of vinyl chloride from ethylene. *Journal of Catalysis*, **2016**, 344, 524-534	7.3	28
58	Mechanochemically Activated, Calcium Oxide-Based, Magnesium Oxide-Stabilized Carbon Dioxide Sorbents. *ChemSusChem*, **2016**, 9, 2380-90	8.3	27
57	Tailoring Nitrogen-Doped Carbons as Hosts for Single-Atom Catalysts. *ChemCatChem*, **2019**, 11, 2812-2820	5.2	26
56	Europium Oxybromide Catalysts for Efficient Bromine Looping in Natural Gas Valorization. *Angewandte Chemie - International Edition*, **2017**, 56, 9791-9795	16.4	23
55	Hierarchical zeolites overcome all obstacles: next stop industrial implementation. *Chimia*, **2013**, 67, 327-32	1.3	23
54	Preparation of organic-functionalized mesoporous ZSM-5 zeolites by consecutive desilication and silanization. *Materials Chemistry and Physics*, **2011**, 127, 278-284	4.4	21
53	The assessment of pore connectivity in hierarchical zeolites using positron annihilation lifetime spectroscopy: instrumental and morphological aspects. *Physical Chemistry Chemical Physics*, **2016**, 18, 9211-9	3.6	21
52	Perturbing the properties of layered double hydroxides by continuous coprecipitation with short residence time. *Journal of Materials Chemistry*, **2010**, 20, 5878		20
51	Mapping the Birth and Evolution of Pores upon Thermal Activation of Layered Hydroxides. *Chemistry of Materials*, **2017**, 29, 4052-4062	9.6	18
50	Tunability and Scalability of Single-Atom Catalysts Based on Carbon Nitride. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 5223-5230	8.3	17
49	Carrier-Induced Modification of Palladium Nanoparticles on Porous Boron Nitride for Alkyne Semi-Hydrogenation. *Angewandte Chemie - International Edition*, **2020**, 59, 19639-19644	16.4	17
48	Advanced visualization strategies bridge the multidimensional complexity of technical catalysts. *Current Opinion in Chemical Engineering*, **2013**, 2, 304-311	5.4	17
47	Structural analysis of IPC zeolites and related materials using positron annihilation spectroscopy and high-resolution argon adsorption. *Physical Chemistry Chemical Physics*, **2016**, 18, 15269-77	3.6	17
46	Atomically precise control in the design of low-nuclearity supported metal catalysts. *Nature Reviews Materials*,	73.3	17
45	Ensemble Design in Nickel Phosphide Catalysts for Alkyne Semi-Hydrogenation. *ChemCatChem*, **2019**, 11, 457-464	5.2	16
44	Selective Methane Oxybromination over Nanostructured Ceria Catalysts. *ACS Catalysis*, **2018**, 8, 291-303	13.1	16

43	Epitaxially Directed Iridium Nanostructures on Titanium Dioxide for the Selective Hydrodechlorination of Dichloromethane. *ACS Catalysis*, **2020**, 10, 528-542	13.1	15
42	Structure Sensitivity and Evolution of Nickel-Bearing Nitrogen-Doped Carbons in the Electrochemical Reduction of CO2. *ACS Catalysis*, **2020**, 10, 3444-3454	13.1	14
41	Structuring hybrid palladium nanoparticles in metallic monolithic reactors for continuous-flow three-phase alkyne hydrogenation. *Reaction Chemistry and Engineering*, **2016**, 1, 454-462	4.9	14
40	Insights into the Mechanism of Zeolite Detemplation by Positron Annihilation Lifetime Spectroscopy. *Journal of Physical Chemistry C*, **2016**, 120, 25451-25461	3.8	14
39	Structuring zeolite bodies for enhanced heat-transfer properties. *Microporous and Mesoporous Materials*, **2015**, 208, 196-202	5.3	14
38	Semihydrogenation of Acetylene on Indium Oxide: Proposed Single-Ensemble Catalysis. *Angewandte Chemie*, **2017**, 129, 10895-10900	3.6	13
37	Impact of Pore Connectivity on the Design of Long-Lived Zeolite Catalysts. *Angewandte Chemie*, **2015**, 127, 1611-1614	3.6	13
36	Comparative study of the synthesis of layered transition metal molybdates. *Journal of Solid State Chemistry*, **2010**, 183, 198-207	3.3	13
35	Visualising compositional heterogeneity during the scale up of multicomponent zeolite bodies. *Materials Horizons*, **2017**, 4, 857-861	14.4	12
34	Activation of Copper Species on Carbon Nitride for Enhanced Activity in the Arylation of Amines. *ACS Catalysis*, **2020**, 10, 11069-11080	13.1	12
33	Atom-by-Atom Resolution of Structure–Function Relations over Low-Nuclearity Metal Catalysts. *Angewandte Chemie*, **2019**, 131, 8816-8821	3.6	11
32	Impact of carrier acidity on the conversion of syngas to higher alcohols over zeolite-supported copper-iron catalysts. *Journal of Catalysis*, **2019**, 371, 116-125	7.3	11
31	Elucidating the Distribution and Speciation of Boron and Cesium in BCsX Zeolite Catalysts for Styrene Production. *ChemPhysChem*, **2018**, 19, 437-445	3.2	10
30	An Activated TiC–SiC Composite for Natural Gas Upgrading via Catalytic Oxyhalogenation. *ChemCatChem*, **2018**, 10, 1282-1290	5.2	9
29	Europium Oxybromide Catalysts for Efficient Bromine Looping in Natural Gas Valorization. *Angewandte Chemie*, **2017**, 129, 9923-9927	3.6	7
28	Pore Topology Effects in Positron Annihilation Spectroscopy of Zeolites. *ChemPhysChem*, **2017**, 18, 470-479	3.3	7
27	Structure analysis of a BEC-type germanosilicate zeolite including the location of the flexible organic cations in the channels. *CrystEngComm*, **2015**, 17, 4865-4870	3.3	7
26	The application of focused microwave irradiation coupled with freeze drying to investigate the reaction of MgO and Al2O3 slurries in the formation of layered double hydroxides. *Green Chemistry*, **2008**, 10, 629	10	7

25	Carrier-Induced Modification of Palladium Nanoparticles on Porous Boron Nitride for Alkyne Semi-Hydrogenation. *Angewandte Chemie*, **2020**, 132, 19807-19812	3.6	7
24	Precursor Nuclearity and Ligand Effects in Atomically-Dispersed Heterogeneous Iron Catalysts for Alkyne Semi-Hydrogenation. *ChemCatChem*, **2021**, 13, 3247-3256	5.2	7
23	Nitrogen-Doped Carbons with Hierarchical Porosity via Chemical Blowing Towards Long-Lived Metal-Free Catalysts for Acetylene Hydrochlorination. *ChemCatChem*, **2020**, 12, 1922-1925	5.2	6
22	Shedding New Light on Nanostructured Catalysts with Positron Annihilation Spectroscopy. *Small Methods*, **2018**, 2, 1800268	12.8	5
21	Acidity Effects in Positron Annihilation Lifetime Spectroscopy of Zeolites. *Journal of Physical Chemistry C*, **2018**, 122, 3443-3453	3.8	4
20	Hierarchically Structured MnO2-Co/C Nanocomposites: Highly Efficient and Magnetically Recyclable Catalysts for the Aerobic Oxidation of Alcohols. *ChemCatChem*, **2015**, 7, 2585-2589	5.2	4
19	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. *Chemistry - A European Journal*, **2014**, 20, 5849-5849	4.8	4
18	Impact of Heteroatom Speciation on the Activity and Stability of Carbon-Based Catalysts for Propane Dehydrogenation. *ChemCatChem*, **2021**, 13, 2599-2608	5.2	4
17	Automated Image Analysis for Single-Atom Detection in Catalytic Materials by Transmission Electron Microscopy.. *Journal of the American Chemical Society*, **2022**,	16.4	4
16	Design of hydrothermally-stable dawsonite-based sorbents in technical form for CO2 capture. *Energy and Environmental Science*, **2014**, 7, 3640-3650	35.4	3
15	Dual catalyst system for selective vinyl chloride production via ethene oxychlorination. *Catalysis Science and Technology*, **2020**, 10, 560-575	5.5	3
14	Catalysts: Stabilization of Single Metal Atoms on Graphitic Carbon Nitride (Adv. Funct. Mater. 8/2017). *Advanced Functional Materials*, **2017**, 27,	15.6	2
13	Substrate substitution effects in the Fries rearrangement of aryl esters over zeolite catalysts. *Catalysis Science and Technology*, **2020**, 10, 4282-4292	5.5	2
12	Natural Wood-Based Catalytic Membrane Microreactors for Continuous Hydrogen Generation.. *ACS Applied Materials & Interfaces*, **2022**,	9.5	2
11	Aluminum Redistribution in ZSM-5 Zeolite upon Interaction with Gaseous Halogens and Hydrogen Halides and Implications in Catalysis. *Journal of Physical Chemistry C*, **2020**, 124, 722-733	3.8	2
10	Hydrotalcite-Derived Mixed Oxides for the Synthesis of a Key Vitamin A Intermediate Reducing Waste. *ACS Omega*, **2018**, 3, 15293-15301	3.9	2
9	Redispersion strategy for high-loading carbon-supported metal catalysts with controlled nuclearity.. *Journal of Materials Chemistry A*, **2022**, 10, 5953-5961	13	1
8	Carbon-Supported Bimetallic Ruthenium-Iridium Catalysts for Selective and Stable Hydrodebromination of Dibromomethane. *ChemCatChem*,	5.2	1

7	Positron Annihilation Spectroscopy: Shedding New Light on Nanostructured Catalysts with Positron Annihilation Spectroscopy (Small Methods 12/2018). *Small Methods*, **2018**, 2, 1800060	12.8	1
6	Single-atom heterogeneous catalysts for sustainable organic synthesis. *Trends in Chemistry*, **2022**, 4, 264-278	14.8	1
5	Pore Topology Effects in Positron Annihilation Spectroscopy of Zeolites. *ChemPhysChem*, **2017**, 18, 428-428	3.2	
4	Hierarchical Structures: Quantifying the Complex Pore Architecture of Hierarchical Faujasite Zeolites and the Impact on Diffusion (Adv. Funct. Mater. 31/2016). *Advanced Functional Materials*, **2016**, 26, 5768-5768	15.6	
3	Zeolites: Superior Mass Transfer Properties of Technical Zeolite Bodies with Hierarchical Porosity (Adv. Funct. Mater. 2/2014). *Advanced Functional Materials*, **2014**, 24, 174-174	15.6	
2	R□ktitelbild: Impact of Pore Connectivity on the Design of Long-Lived Zeolite Catalysts (Angew. Chem. 5/2015). *Angewandte Chemie*, **2015**, 127, 1698-1698	3.6	
1	Titelbild: Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO2 Hydrogenation (Angew. Chem. 21/2016). *Angewandte Chemie*, **2016**, 128, 6215-6215	3.6	