Thomas Chamberlain

List of Publications by Year
in descending order

84 papers	2,637 citations	172457 29 h-index	206112 48 g-index
89 all docs	89 docs citations	89 times ranked	3561 citing authors

#	Article	IF	Citations
1	Self-assembly of a sulphur-terminated graphene nanoribbon within a single-walled carbon nanotube. Nature Materials, 2011, 10, 687-692.	27.5	253
2	Size, Structure, and Helical Twist of Graphene Nanoribbons Controlled by Confinement in Carbon Nanotubes. ACS Nano, 2012, 6, 3943-3953.	14.6	134
3	Harnessing the Synergistic and Complementary Properties of Fullerene and Transition-Metal Compounds for Nanomaterial Applications. Chemical Reviews, 2015, 115, 11301-11351.	47.7	118
4	Automated self-optimisation of multi-step reaction and separation processes using machine learning. Chemical Engineering Journal, 2020, 384, 123340.	12.7	97
5	Algorithms for the self-optimisation of chemical reactions. Reaction Chemistry and Engineering, 2019, 4, 1545-1554.	3.7	92
6	Reactions of the inner surface of carbon nanotubes and nanoprotrusion processes imaged at the atomic scale. Nature Chemistry, 2011, 3, 732-737.	13.6	83
7	Interactions and Reactions of Transition Metal Clusters with the Interior of Single-Walled Carbon Nanotubes Imaged at the Atomic Scale. Journal of the American Chemical Society, 2012, 134, 3073-3079.	13.7	83
8	Assembly, Growth, and Catalytic Activity of Gold Nanoparticles in Hollow Carbon Nanofibers. ACS Nano, 2012, 6, 2000-2007.	14.6	83
9	Chemical Reactions of Molecules Promoted and Simultaneously Imaged by the Electron Beam in Transmission Electron Microscopy. Accounts of Chemical Research, 2017, 50, 1797-1807.	15.6	79
10	Highly Selective and Solvent-Dependent Reduction of Nitrobenzene to <i>N</i>-Phenylhydroxylamine, Azoxybenzene, and Aniline Catalyzed by Phosphino-Modified Polymer Immobilized Ionic Liquid-Stabilized AuNPs. ACS Catalysis, 2019, 9, 4777-4791.	11.2	77
11	Carbon Nanotubes as Electrically Active Nanoreactors for Multi-Step Inorganic Synthesis: Sequential Transformations of Molecules to Nanoclusters and Nanoclusters to Nanoribbons. Journal of the American Chemical Society, 2016, 138, 8175-8183.	13.7	68
12	Highly efficient aqueous phase reduction of nitroarenes catalyzed by phosphine-decorated polymer immobilized ionic liquid stabilized PdNPs. Catalysis Science and Technology, 2018, 8, 1454-1467.	4.1	63
13	All-Fullerene-Based Cells for Nonaqueous Redox Flow Batteries. Journal of the American Chemical Society, 2018, 140, 401-405.	13.7	62
14	Atomic mechanism of metal crystal nucleus formation in a single-walled carbon nanotube. Nature Chemistry, 2020, 12, 921-928.	13.6	58
15	Toward Controlled Spacing in One-Dimensional Molecular Chains:Â Alkyl-Chain-Functionalized Fullerenes in Carbon Nanotubes. Journal of the American Chemical Society, 2007, 129, 8609-8614.	13.7	51
16	Formation of uncapped nanometre-sized metal particles by decomposition of metal carbonyls in carbon nanotubes. Chemical Science, 2012, 3, 1919.	7.4	49
17	Azafullerenes Encapsulated within Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2008, 130, 6062-6063.	13.7	47
18	Stop-Frame Filming and Discovery of Reactions at the Single-Molecule Level by Transmission Electron Microscopy. ACS Nano, 2017, 11, 2509-2520.	14.6	46

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19	Functionalized Fullerenes in Self-Assembled Monolayers. Langmuir, 2011, 27, 10977-10985.	3.5	45
20	Isotope Substitution Extends the Lifetime of Organic Molecules in Transmission Electron Microscopy. Small, 2015, 11, 622-629.	10.0	39
21	Highly efficient aqueous phase chemoselective hydrogenation of Î±,Î²-unsaturated aldehydes catalysed by phosphine-decorated polymer immobilized IL-stabilized PdNPs. Green Chemistry, 2017, 19, 1635-1641.	9.0	39
22	Alternating polarity for enhanced electrochemical synthesis. Reaction Chemistry and Engineering, 2021, 6, 147-151.	3.7	37
23	Multiâ€Electronâ€Acceptor Dyad and Triad Systems Based on Perylene Bisimides and Fullerenes. Chemistry - A European Journal, 2011, 17, 3759-3767.	3.3	36
24	Comparison of atomic scale dynamics for the middle and late transition metal nanocatalysts. Nature Communications, 2018, 9, 3382.	12.8	35
25	The Role of Molecular Clusters in the Filling of Carbon Nanotubes. ACS Nano, 2010, 4, 5203-5210.	14.6	34
26	A Piggyback Ride for Transition Metals: Encapsulation of Exohedral Metallofullerenes in Carbon Nanotubes. Chemistry - A European Journal, 2011, 17, 668-674.	3.3	34
27	Interactions and Chemical Transformations of Coronene Inside and Outside Carbon Nanotubes. Small, 2014, 10, 1369-1378.	10.0	33
28	Heteroatom Donorâ€Decorated Polymerâ€Immobilized Ionic Liquid Stabilized Palladium Nanoparticles: Efficient Catalysts for Roomâ€Temperature Suzukiâ€Miyaura Crossâ€Coupling in Aqueous Media. Advanced Synthesis and Catalysis, 2018, 360, 3716-3731.	4.3	32
29	Flow chemistry for process optimisation using design of experiments. Journal of Flow Chemistry, 2021, 11, 75-86.	1.9	32
30	Catalytic nanoreactors in continuous flow: hydrogenation inside single-walled carbon nanotubes using supercritical CO₂. Chemical Communications, 2014, 50, 5200-5202.	4.1	27
31	Investigation of the Interactions and Bonding between Carbon and Group VIII Metals at the Atomic Scale. Small, 2016, 12, 1649-1657.	10.0	27
32	Encapsulation of transition metal atoms into carbon nanotubes: a supramolecular approach. Chemical Communications, 2011, 47, 5696.	4.1	24
33	Supercritical CO2Mediated Incorporation of Pd onto Templated Carbons: A Route to Optimizing the Pd Particle Size and Hydrogen Uptake Density. ACS Applied Materials & Interfaces, 2013, 5, 5639-5647.	8.0	24
34	Formation of Nickel Clusters Wrapped in Carbon Cages: Toward New Endohedral Metallofullerene Synthesis. Nano Letters, 2017, 17, 1082-1089.	9.1	24
35	New Pathway for Heterogenization of Molecular Catalysts by Non-covalent Interactions with Carbon Nanoreactors. Chemistry of Materials, 2014, 26, 6461-6466.	6.7	23
36	A one-pot-one-reactant synthesis of platinum compounds at the nanoscale. Nanoscale, 2017, 9, 14385-14394.	5.6	22

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37	Polyareneâ€Functionalized Fullerenes in Carbon Nanotubes: Towards Controlled Geometry of Molecular Chains. Small, 2008, 4, 2262-2270.	10.0	21
38	Automated multi-objective reaction optimisation: which algorithm should I use?. Reaction Chemistry and Engineering, 2022, 7, 987-993.	3.7	21
39	Atomic charges of sulfur in ionic liquids: experiments and calculations. Faraday Discussions, 2017, 206, 183-201.	3.2	20
40	Synthesis of super bright indium phosphide colloidal quantum dots through thermal diffusion. Communications Chemistry, 2019, 2, .	4.5	20
41	Self-optimising reactive extractions: towards the efficient development of multi-step continuous flow processes. Journal of Flow Chemistry, 2020, 10, 199-206.	1.9	20
42	The atomistic mechanism of carbon nanotube cutting catalyzed by nickel under an electron beam. Nanoscale, 2014, 6, 14877-14890.	5.6	19
43	Activation and Deactivation of a Robust Immobilized Cp*Ir-Transfer Hydrogenation Catalyst: A Multielement <i>in Situ</i> X-ray Absorption Spectroscopy Study. Journal of the American Chemical Society, 2015, 137, 4151-4157.	13.7	19
44	Direct Measurement of Electron Transfer in Nanoscale Hostâ€"Guest Systems: Metallocenes in Carbon Nanotubes. Chemistry - A European Journal, 2016, 22, 13540-13549.	3.3	18
45	Zinc 1s Valence-to-Core X-ray Emission Spectroscopy of Halozincate Complexes. Journal of Physical Chemistry A, 2019, 123, 9552-9559.	2.5	18
46	The effect of carbon nanotubes on chiral chemical reactions. Chemical Physics Letters, 2013, 557, 10-14.	2.6	17
47	Comparison of alkene hydrogenation in carbon nanoreactors of different diameters: probing the effects of nanoscale confinement on ruthenium nanoparticle catalysis. Journal of Materials Chemistry A, 2017, 5, 21467-21477.	10.3	17
48	Magnetically Recyclable Catalytic Carbon Nanoreactors. Advanced Functional Materials, 2018, 28, 1802869.	14.9	17
49	NEXAFS spectroscopy of ionic liquids: experiments <i>versus</i> calculations. Physical Chemistry Chemical Physics, 2017, 19, 31156-31167.	2.8	16
50	Autonomous optimisation of a nanoparticle catalysed reduction reaction in continuous flow. Chemical Communications, 2021, 57, 4926-4929.	4.1	16
51	An automated computational approach to kinetic model discrimination and parameter estimation. Reaction Chemistry and Engineering, 2021, 6, 1404-1411.	3.7	16
52	MVMOO: Mixed variable multi-objective optimisation. Journal of Global Optimization, 2021, 80, 865-886.	1.8	16
53	Modern advancements in continuous-flow aided kinetic analysis. Reaction Chemistry and Engineering, 2022, 7, 1037-1046.	3.7	16
54	Transition Metal Complexes of a Salenâ€"Fullerene Diad: Redox and Catalytically Active Nanostructures for Delivery of Metals in Nanotubes. Chemistry - A European Journal, 2013, 19, 11999-12008.	3.3	15

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55	Single-walled carbon nanotubes as nano-electrode and nano-reactor to control the pathways of a redox reaction. Chemical Communications, 2014, 50, 14338-14340.	4.1	15
56	Stabilising the lowest energy charge-separated state in a {metal chromophore â€" fullerene} assembly: a tuneable panchromatic absorbing donorâ€"acceptor triad. Chemical Science, 2016, 7, 5908-5921.	7.4	15
57	Direct Correlation of Carbon Nanotube Nucleation and Growth with the Atomic Structure of Rhenium Nanocatalysts Stimulated and Imaged by the Electron Beam. Nano Letters, 2018, 18, 6334-6339.	9.1	14
58	A Hybridised Optimisation of an Automated Photochemical Continuous Flow Reactor. Chimia, 2019, 73, 817.	0.6	11
59	Efficient Hydrolytic Hydrogen Evolution from Sodium Borohydride Catalyzed by Polymer Immobilized Ionic Liquidâ€Stabilized Platinum Nanoparticles. ChemCatChem, 2022, 14, .	3.7	11
60	Direct Synthesis of Multiplexed Metalâ€Nanowireâ€Based Devices by Using Carbon Nanotubes as Vector Templates. Angewandte Chemie - International Edition, 2019, 58, 9928-9932.	13.8	10
61	Fullerene-driven encapsulation of a luminescent Eu(iii) complex in carbon nanotubes. Nanoscale, 2014, 6, 2887.	5.6	9
62	Electronic Property Modification of Singleâ€Walled Carbon Nanotubes by Encapsulation of Sulfurâ€Terminated Graphene Nanoribbons. Small, 2014, 10, 5077-5086.	10.0	9
63	Engineering of Microcage Carbon Nanotube Architectures with Decoupled Multimodal Porosity and Amplified Catalytic Performance. Advanced Materials, 2021, 33, e2008307.	21.0	9
64	Tuning the interactions between electron spins in fullerene-based triad systems. Beilstein Journal of Organic Chemistry, 2014, 10, 332-343.	2.2	8
65	Creating and testing carbon interfaces â€" integrating oligomeric phthalocyanines onto single walled carbon nanotubes. Faraday Discussions, 2014, 172, 61-79.	3.2	7
66	Chemical reactions at the graphitic step-edge: changes in product distribution of catalytic reactions as a tool to explore the environment within carbon nanoreactors. Nanoscale, 2016, 8, 11727-11737.	5.6	7
67	Oxygen, sulfur and selenium terminated single-walled heterocyclic carbon nanobelts (SWHNBs) as potential 3D organic semiconductors. Nanoscale, 2018, 10, 7639-7648.	5.6	7
68	Furfural Adsorption and Hydrogenation at the Oxideâ€Metal Interface: Evidence of the Support Influence on the Selectivity of Iridiumâ€Based Catalysts. ChemCatChem, 2022, 14, .	3.7	7
69	Engineering molecular chains in carbon nanotubes. Nanoscale, 2012, 4, 7540.	5.6	6
70	Palladium Nanoparticles Hardwired in Carbon Nanoreactors Enable Continually Increasing Electrocatalytic Activity During the Hydrogen Evolution Reaction. ChemSusChem, 2021, 14, 4973-4984.	6.8	6
71	Highly efficient and selective aqueous phase hydrogenation of aryl ketones, aldehydes, furfural and levulinic acid and its ethyl ester catalyzed by phosphine oxide-decorated polymer immobilized ionic liquid-stabilized ruthenium nanoparticles. Catalysis Science and Technology, 0, , .	4.1	6
72	An efficient route to the synthesis of symmetric and asymmetric diastereomerically pure fullerene triads. Tetrahedron, 2012, 68, 4976-4985.	1.9	5

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73	Switching intermolecular interactions by confinement in carbon nanotubes. Chemical Communications, 2015, 51, 648-651.	4.1	5
74	A Fullereneâ€"Platinum Complex for Direct Functional Patterning of Single Metal Atom-Embedded Carbon Nanostructures. Journal of Physical Chemistry Letters, 2022, 13, 1578-1586.	4.6	5
75	Transmission Electron Microscopy: Isotope Substitution Extends the Lifetime of Organic Molecules in Transmission Electron Microscopy (Small 5/2015). Small, 2015, 11, 510-510.	10.0	4
76	Direct Synthesis of Multiplexed Metalâ€Nanowireâ€Based Devices by Using Carbon Nanotubes as Vector Templates. Angewandte Chemie, 2019, 131, 10033-10037.	2.0	4
77	Wallâ€•and Hybridisationâ€Selective Synthesis of Nitrogenâ€Doped Doubleâ€Walled Carbon Nanotubes. Angewandte Chemie - International Edition, 2019, 58, 10276-10280.	13.8	4
78	Decoupling the relative rate of hydrogen uptake via convection and mass transfer by a single catalytic pellet in a scaled down trickle bed reactor. Chemical Engineering Journal, 2020, 394, 124290.	12.7	4
79	Selective separation of amines from continuous processes using automated pH controlled extraction. Reaction Chemistry and Engineering, 2021, 6, 1806-1810.	3.7	4
80	Piecing Together Large Polycyclic Aromatic Hydrocarbons and Fullerenes: A Combined ChemTEM Imaging and MALDI-ToF Mass Spectrometry Approach. Frontiers in Chemistry, 2021, 9, 700562.	3.6	4
81	Development of a multistep, electrochemical flow platform for automated catalyst screening. Catalysis Science and Technology, 2022, 12, 4266-4272.	4.1	3
82	Wallâ€•and Hybridisationâ€Selective Synthesis of Nitrogenâ€Doped Doubleâ€Walled Carbon Nanotubes. Angewandte Chemie, 2019, 131, 10382-10386.	2.0	2
83	Palladium Nanoparticles Hardwired in Carbon Nanoreactors Enable Continually Increasing Electrocatalytic Activity During the Hydrogen Evolution Reaction. ChemSusChem, 2021, 14, 4849.	6.8	1
84	Heteroatom modified polymer immobilized ionic liquid stabilized ruthenium nanoparticles: Efficient catalysts for the hydrolytic evolution of hydrogen from sodium borohydride. Molecular Catalysis, 2022, 528, 112476.	2.0	1