

# Clifford R Bowers

## List of Publications by Year in descending order

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51  
papers

2,355  
citations

304368

22  
h-index

205818

48  
g-index

57  
all docs

57  
docs citations

57  
times ranked

2144  
citing authors

#	ARTICLE	IF	CITATIONS
1	Parahydrogen and synthesis allow dramatically enhanced nuclear alignment. <i>Journal of the American Chemical Society</i> , 1987, 109, 5541-5542.	6.6	859
2	Comparison of Structural and Chemical Properties of Black and Red Human Hair Melanosomes. <i>Photochemistry and Photobiology</i> , 2005, 81, 135.	1.3	160
3	High capacity production of >65% spin polarized xenon-129 for NMR spectroscopy and imaging. <i>Journal of Magnetic Resonance</i> , 2002, 159, 175-182.	1.2	107
4	Strong Metal-Support Interactions Enhance the Pairwise Selectivity of Parahydrogen Addition over Ir/TiO <sub>2</sub> . <i>ACS Catalysis</i> , 2016, 6, 974-978.	5.5	80
5	Comparisons of the Structural and Chemical Properties of Melanosomes Isolated from Retinal Pigment Epithelium, Iris and Choroid of Newborn and Mature Bovine Eyes. <i>Photochemistry and Photobiology</i> , 2005, 81, 510.	1.3	79
6	Silica-Encapsulated Pt-Sn Intermetallic Nanoparticles: A Robust Catalytic Platform for Parahydrogen-Induced Polarization of Gases and Liquids. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 3925-3929.	7.2	73
7	Shaped Ceria Nanocrystals Catalyze Efficient and Selective Parahydrogen-Enhanced Polarization. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 14270-14275.	7.2	70
8	Solid-state cross-polarization magic angle spinning <sup>13</sup> C and <sup>15</sup> N NMR characterization of Sepia melanin, Sepia melanin free acid and Human hair melanin in comparison with several model compounds. <i>Magnetic Resonance in Chemistry</i> , 2003, 41, 466-474.	1.1	68
9	Observation of a node in the quantum oscillations induced by microwave radiation. <i>Solid State Communications</i> , 2004, 130, 379-381.	0.9	62
10	Parahydrogen-Induced Polarization by Pairwise Replacement Catalysis on Pt and Ir Nanoparticles. <i>Journal of the American Chemical Society</i> , 2015, 137, 1938-1946.	6.6	56
11	Cyclic polyacetylene. <i>Nature Chemistry</i> , 2021, 13, 792-799.	6.6	51
12	Local and Collective Motions in Precise Polyolefins with Alkyl Branches: A Combination of <sup>2</sup> H and <sup>13</sup> C Solid-State NMR Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 4617-4620.	7.2	46
13	Direct Observation of Atoms Entering and Exiting l-Alanyl-l-valine Nanotubes by Hyperpolarized Xenon-129 NMR. <i>Journal of the American Chemical Society</i> , 2007, 129, 13997-14002.	6.6	38
14	Molecular Wheels as Nanoporous Materials: Differing Modes of Gas Diffusion through Ga <sub>10</sub> and Ga <sub>18</sub> Wheels Probed by Hyperpolarized <sup>129</sup> Xe NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2010, 132, 5387-5393.	6.6	38
15	Silica-Encapsulated Pt-Sn Intermetallic Nanoparticles: A Robust Catalytic Platform for Parahydrogen-Induced Polarization of Gases and Liquids. <i>Angewandte Chemie</i> , 2017, 129, 3983-3987.	1.6	37
16	Observation of Single-File Diffusion in Dipeptide Nanotubes by Continuous-Flow Hyperpolarized Xenon-129 NMR Spectroscopy. <i>ChemPhysChem</i> , 2007, 8, 2077-2081.	1.0	35
17	Ultra-Low Loading Pt/CeO <sub>2</sub> Catalysts: Ceria Facet Effect Affords Improved Pairwise Selectivity for Parahydrogen Enhanced NMR Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 4038-4042.	7.2	32
18	Surface-Mediated Hyperpolarization of Liquid Water from Parahydrogen. <i>Chem</i> , 2018, 4, 1387-1403.	5.8	31

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19	Parahydrogen enhanced NMR reveals correlations in selective hydrogenation of triple bonds over supported Pt catalyst. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 26121-26129.	1.3	29
20	Porosity of Pillared Clays Studied by Hyperpolarized <sup>129</sup> Xe NMR Spectroscopy and Xe Adsorption Isotherms. <i>Langmuir</i> , 2013, 29, 643-652.	1.6	27
21	Semihydrogenation of Propyne over Cerium Oxide Nanorods, Nanocubes, and Nano-octahedra: Facet-dependent Parahydrogen-induced Polarization. <i>ChemCatChem</i> , 2016, 8, 2197-2201.	1.8	26
22	Guest Inclusion Modulates Concentration and Persistence of Photogenerated Radicals in Assembled Triphenylamine Macrocycles. <i>Journal of the American Chemical Society</i> , 2020, 142, 502-511.	6.6	23
23	Xenon in <i>l</i> -Alanyl- <i>l</i> -Valine Nanochannels: A Highly Ideal Molecular Single-File System. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 3263-3267.	2.1	22
24	Single-crystal-to-single-crystal guest exchange in columnar assembled brominated triphenylamine bis-urea macrocycles. <i>Chemical Communications</i> , 2019, 55, 5619-5622.	2.2	21
25	Comparison of Structural and Chemical Properties of Black and Red Human Hair Melanosomes. <i>Photochemistry and Photobiology</i> , 2005, 81, 135-144.	1.3	20
26	Crystalline Bis-urea Nanochannel Architectures Tailored for Single-File Diffusion Studies. <i>ACS Nano</i> , 2015, 9, 6343-6353.	7.3	20
27	Single-File Nanochannel Persistence Lengths from NMR. <i>Analytical Chemistry</i> , 2014, 86, 2200-2204.	3.2	17
28	Toward Continuous-Flow Hyperpolarisation of Metabolites via Heterogeneous Catalysis, Side-arm Hydrogenation, and Membrane Dissolution of Parahydrogen. <i>ChemPhysChem</i> , 2021, 22, 822-827.	1.0	15
29	Cyclopropane Hydrogenation vs Isomerization over Pt and Pt-Sn Intermetallic Nanoparticle Catalysts: A Parahydrogen Spin-Labeling Study. <i>Journal of Physical Chemistry C</i> , 2020, 124, 8304-8309.	1.5	14
30	Implementation of Protocols To Enable Doctoral Training in Physical and Computational Chemistry of a Blind Graduate Student. <i>Journal of Chemical Education</i> , 2015, 92, 1280-1283.	1.1	13
31	An inexpensive apparatus for up to 97% continuous-flow parahydrogen enrichment using liquid helium. <i>Journal of Magnetic Resonance</i> , 2020, 321, 106869.	1.2	13
32	Pairwise semi-hydrogenation of alkyne to <i>cis</i> -alkene on platinum-tin intermetallic compounds. <i>Nanoscale</i> , 2020, 12, 8519-8524.	2.8	12
33	Comparisons of the Structural and Chemical Properties of Melanosomes Isolated from Retinal Pigment Epithelium, Iris and Choroid of Newborn and Mature Bovine Eyes. <i>Photochemistry and Photobiology</i> , 2005, 81, 510-516.	1.3	11
34	Molecular dynamics in precision deuteriomethyl branched polyethylene from solid-state deuterium NMR. <i>Polymer</i> , 2012, 53, 2633-2642.	1.8	11
35	Persistent Radicals of Self-assembled Benzophenone <i>bis</i> -urea Macrocycles: Characterization and Application as a Polarizing Agent for Solid-state DNP MAS Spectroscopy. <i>Chemistry - A European Journal</i> , 2017, 23, 8315-8319.	1.7	11
36	Two-dimensional nuclear magnetic resonance spectroscopy in optically pumped semiconductors. <i>Chemical Physics Letters</i> , 2004, 397, 96-100.	1.2	9

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37	Single-File Diffusion of Gas Mixtures in Nanochannels of the Dipeptide $\alpha$ -Ala- $\beta$ -Val: High-Field Diffusion NMR Study. <i>Journal of Physical Chemistry C</i> , 2016, 120, 9914-9919.	1.5	9
38	Atomic-Scale Structure of Mesoporous Silica-Encapsulated Pt and PtSn Nanoparticles Revealed by Dynamic Nuclear Polarization-Enhanced $^{29}\text{Si}$ MAS NMR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2019, 123, 7299-7307.	1.5	9
39	Dramatic Enhancement of Hyperpolarized Xenon-129 2D-NMR Exchange Cross-Peak Signals in Nanotubes by Interruption of the Gas Flow. <i>Journal of the American Chemical Society</i> , 2008, 130, 2390-2391.	6.6	8
40	Silica-Encapsulated Intermetallic Nanoparticles for Highly Active and Selective Heterogeneous Catalysis. <i>Accounts of Materials Research</i> , 2021, 2, 1190-1202.	5.9	8
41	Signatures of normal and anomalous diffusion in nanotube systems by NMR. <i>Microporous and Mesoporous Materials</i> , 2013, 178, 119-122.	2.2	7
42	Molecular Motion of the Junction Points in Model Networks Prepared by Acyclic Triene Metathesis. <i>Macromolecular Rapid Communications</i> , 2016, 37, 527-531.	2.0	6
43	Dynamic nuclear polarization and nuclear magnetic resonance in the vicinity of edge states of a 2DES in GaAs quantum wells. <i>Solid State Nuclear Magnetic Resonance</i> , 2006, 29, 52-65.	1.5	5
44	Branch-Induced Heterogeneous Chain Motion in Precision Polyolefins. <i>Macromolecules</i> , 2015, 48, 8858-8866.	2.2	5
45	Ultra-Low Loading Pt/CeO <sub>2</sub> Catalysts: Ceria Facet Effect Affords Improved Pairwise Selectivity for Parahydrogen Enhanced NMR Spectroscopy. <i>Angewandte Chemie</i> , 2021, 133, 4084-4088.	1.6	5
46	Low-Temperature $^{23}\text{Na}$ MAS NMR Reveals Dynamic Effects and Compositions for the Large and Small Channels in the Zeolite-Like Ge-Framework of $\text{Na}_x\text{Ge}_3\text{Z}$ . <i>Materials. Journal of Physical Chemistry C</i> , 2014, 118, 28890-28897.	1.5	4
47	Squeezing xenon into phenylether bis-urea nanochannels. <i>Canadian Journal of Chemistry</i> , 2015, 93, 1031-1034.	0.6	4
48	Mesoporous Silica Encapsulated Platinum-Tin Intermetallic Nanoparticles Catalyze Hydrogenation with an Unprecedented 20% Pairwise Selectivity for Parahydrogen Enhanced Nuclear Magnetic Resonance. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 4125-4132.	2.1	4
49	Characterization of elastic interactions in GaAs/Si composites by optically pumped nuclear magnetic resonance. <i>Journal of Applied Physics</i> , 2016, 120, 085104.	1.1	2
50	Editorial: The Fourteenth International Bologna Conference on Magnetic Resonance in Porous Media (MRPM14). <i>Magnetic Resonance Imaging</i> , 2019, 56, 1-2.	1.0	1
51	Frontispiece: Shaped Ceria Nanocrystals Catalyze Efficient and Selective Parahydrogen-Enhanced Polarization. <i>Angewandte Chemie - International Edition</i> , 2015, 54, .	7.2	0