

Brett A Helms

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

92 papers	5,296 citations	39 h-index	72 g-index
105 ext. papers	6,145 ext. citations	12.8 avg, IF	5.92 L-index

#	Paper	IF	Citations
92	Dendronized linear polymers via "click chemistry". <i>Journal of the American Chemical Society</i> , 2004 , 126, 15020-1	16.4	545
91	Tunable infrared absorption and visible transparency of colloidal aluminum-doped zinc oxide nanocrystals. <i>Nano Letters</i> , 2011 , 11, 4706-10	11.5	396
90	One-pot reaction cascades using star polymers with core-confined catalysts. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 6384-7	16.4	251
89	Exceptionally mild reactive stripping of native ligands from nanocrystal surfaces by using Meerwein's salt. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 684-9	16.4	211
88	Closed-loop recycling of plastics enabled by dynamic covalent diketoenamine bonds. <i>Nature Chemistry</i> , 2019 , 11, 442-448	17.6	208
87	Reconfigurable ferromagnetic liquid droplets. <i>Science</i> , 2019 , 365, 264-267	33.3	188
86	Chemistry. Dendrimers at work. <i>Science</i> , 2006 , 313, 929-30	33.3	188
85	Dual-emitting quantum dot/quantum rod-based nanothermometers with enhanced response and sensitivity in live cells. <i>Journal of the American Chemical Society</i> , 2012 , 134, 9565-8	16.4	154
84	A versatile new monomer family: functionalized 4-vinyl-1,2,3-triazoles via click chemistry. <i>Journal of the American Chemical Society</i> , 2006 , 128, 12084-5	16.4	149
83	Nanocomposite Architecture for Rapid, Spectrally-Selective Electrochromic Modulation of Solar Transmittance. <i>Nano Letters</i> , 2015 , 15, 5574-9	11.5	143
82	The effect of macromolecular architecture in nanomaterials: a comparison of site isolation in porphyrin core dendrimers and their isomeric linear analogues. <i>Journal of the American Chemical Society</i> , 2002 , 124, 3926-38	16.4	133
81	Processable cyclic peptide nanotubes with tunable interiors. <i>Journal of the American Chemical Society</i> , 2011 , 133, 15296-9	16.4	111
80	Sub-10 nm nanofabrication via nanoimprint directed self-assembly of block copolymers. <i>ACS Nano</i> , 2011 , 5, 8523-31	16.7	109
79	Molecular understanding of polyelectrolyte binders that actively regulate ion transport in sulfur cathodes. <i>Nature Communications</i> , 2017 , 8, 2277	17.4	100
78	Subnanometer porous thin films by the co-assembly of nanotube subunits and block copolymers. <i>ACS Nano</i> , 2011 , 5, 1376-84	16.7	95
77	Bicontinuous structured liquids with sub-micrometre domains using nanoparticle surfactants. <i>Nature Nanotechnology</i> , 2017 , 12, 1060-1063	28.7	94
76	Macromolecular Design Strategies for Preventing Active-Material Crossover in Non-Aqueous All-Organic Redox-Flow Batteries. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 1595-1599	16.4	84

75	Effects of Polymer Architecture and Nanoenvironment in Acylation Reactions Employing Dendritic (Dialkylamino)pyridine Catalysts. <i>Macromolecules</i> , 2005 , 38, 5411-5415	5.5	83
74	High-Performance Oligomeric Catholytes for Effective Macromolecular Separation in Nonaqueous Redox Flow Batteries. <i>ACS Central Science</i> , 2018 , 4, 189-196	16.8	82
73	Assembly of ligand-stripped nanocrystals into precisely controlled mesoporous architectures. <i>Nano Letters</i> , 2012 , 12, 3872-7	11.5	81
72	Poly(oxime-ester) Vitrimers with Catalyst-Free Bond Exchange. <i>Journal of the American Chemical Society</i> , 2019 , 141, 13753-13757	16.4	80
71	Engineered Transport in Microporous Materials and Membranes for Clean Energy Technologies. <i>Advanced Materials</i> , 2018 , 30, 1704953	24	67
70	Iron complexes of dendrimer-appended carboxylates for activating dioxygen and oxidizing hydrocarbons. <i>Journal of the American Chemical Society</i> , 2008 , 130, 4352-63	16.4	66
69	High-affinity peptide-based collagen targeting using synthetic phage mimics: from phage display to dendrimer display. <i>Journal of the American Chemical Society</i> , 2009 , 131, 11683-5	16.4	65
68	Polyoxometalates and colloidal nanocrystals as building blocks for metal oxide nanocomposite films. <i>Journal of Materials Chemistry</i> , 2011 , 21, 11631		63
67	Universal chemomechanical design rules for solid-ion conductors to prevent dendrite formation in lithium metal batteries. <i>Nature Materials</i> , 2020 , 19, 758-766	27	62
66	Structured Liquids with pH-Triggered Reconfigurability. <i>Advanced Materials</i> , 2016 , 28, 6612-8	24	61
65	Toward polymer upcycling-adding value and tackling circularity. <i>Science</i> , 2021 , 373, 66-69	33.3	61
64	Rapid cytosolic delivery of luminescent nanocrystals in live cells with endosome-disrupting polymer colloids. <i>Nano Letters</i> , 2010 , 10, 4086-92	11.5	57
63	Harnessing liquid-in-liquid printing and micropatterned substrates to fabricate 3-dimensional all-liquid fluidic devices. <i>Nature Communications</i> , 2019 , 10, 1095	17.4	55
62	Mechanistic insight into the formation of cationic naked nanocrystals generated under equilibrium control. <i>Journal of the American Chemical Society</i> , 2014 , 136, 15702-10	16.4	46
61	Constructing functional mesostructured materials from colloidal nanocrystal building blocks. <i>Accounts of Chemical Research</i> , 2014 , 47, 236-46	24.3	46
60	NIR-Selective electrochromic heteromaterial frameworks: a platform to understand mesoscale transport phenomena in solid-state electrochemical devices. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 3328	7.1	45
59	Efficient and chemoselective surface immobilization of proteins by using aniline-catalyzed oxime chemistry. <i>ChemBioChem</i> , 2009 , 10, 658-62	3.8	45
58	Nanoporous Polymer Films with a High Cation Transference Number Stabilize Lithium Metal Anodes in Light-Weight Batteries for Electrified Transportation. <i>Nano Letters</i> , 2019 , 19, 1387-1394	11.5	42

57	Reconfigurable Microfluidic Droplets Stabilized by Nanoparticle Surfactants. <i>ACS Nano</i> , 2018 , 12, 2365-2372	16.7	40
56	Interface segregating fluoralkyl-modified polymers for high-fidelity block copolymer nanoimprint lithography. <i>Journal of the American Chemical Society</i> , 2011 , 133, 2812-5	16.4	40
55	U.S. energy savings potential from dynamic daylighting control glazings. <i>Energy and Buildings</i> , 2013 , 66, 415-423	7	39
54	Site-specific protein and peptide immobilization on a biosensor surface by pulsed native chemical ligation. <i>ChemBioChem</i> , 2007 , 8, 1790-4	3.8	39
53	Materials Genomics Screens for Adaptive Ion Transport Behavior by Redox-Switchable Microporous Polymer Membranes in Lithium-Sulfur Batteries. <i>ACS Central Science</i> , 2017 , 3, 399-406	16.8	38
52	Self-Regulated Nanoparticle Assembly at Liquid/Liquid Interfaces: A Route to Adaptive Structuring of Liquids. <i>Langmuir</i> , 2017 , 33, 7994-8001	4	38
51	Understanding and controlling the chemical evolution and polysulfide-blocking ability of lithium-sulfur battery membranes cast from polymers of intrinsic microporosity. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 16946-16952	13	36
50	Effect of Nanoparticle Surfactants on the Breakup of Free-Falling Water Jets during Continuous Processing of Reconfigurable Structured Liquid Droplets. <i>Nano Letters</i> , 2017 , 17, 3119-3125	11.5	33
49	Aqueous-Processable Redox-Active Supramolecular Polymer Binders for Advanced Lithium/Sulfur Cells. <i>Chemistry of Materials</i> , 2018 , 30, 685-691	9.6	33
48	Designing Redox-Active Oligomers for Crossover-Free, Nonaqueous Redox-Flow Batteries with High Volumetric Energy Density. <i>Chemistry of Materials</i> , 2018 , 30, 3861-3866	9.6	33
47	From phage display to dendrimer display: insights into multivalent binding. <i>Journal of the American Chemical Society</i> , 2011 , 133, 6636-41	16.4	32
46	Thermally Rearranged Polymer Membranes Containing Tröger's Base Units Have Exceptional Performance for Air Separations. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 4912-4916	16.4	30
45	Sculpting Liquids with Two-Dimensional Materials: The Assembly of TiCT MXene Sheets at Liquid-Liquid Interfaces. <i>ACS Nano</i> , 2019 , 13, 12385-12392	16.7	30
44	Conformational Entropy as a Means to Control the Behavior of Poly(diketoenamine) Vitrimers In and Out of Equilibrium. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 735-739	16.4	30
43	Enhancement of CO binding and mechanical properties upon diamine functionalization of M(dobpdc) metal-organic frameworks. <i>Chemical Science</i> , 2018 , 9, 5197-5206	9.4	28
42	Evolution of ordered metal chalcogenide architectures through chemical transformations. <i>Journal of the American Chemical Society</i> , 2013 , 135, 7446-9	16.4	27
41	Effect of the Backbone Tether on the Electrochemical Properties of Soluble Cyclopropenium Redox-Active Polymers. <i>Macromolecules</i> , 2018 , 51, 3539-3546	5.5	26
40	Nanoporous semiconductors synthesized through polymer templating of ligand-stripped CdSe nanocrystals. <i>Advanced Materials</i> , 2013 , 25, 1315-22	24	25

39	Dispersible Plasmonic Doped Metal Oxide Nanocrystal Sensors that Optically Track Redox Reactions in Aqueous Media with Single-Electron Sensitivity. <i>Advanced Optical Materials</i> , 2015 , 3, 1293-1300	8.1	24
38	A practical approach to the living polymerization of functionalized monomers: application to block copolymers and 3-dimensional macromolecular architectures. <i>Macromolecular Symposia</i> , 2001 , 174, 85-92	9.8	24
37	Diversity-oriented synthesis of polymer membranes with ion solvation cages. <i>Nature</i> , 2021 , 592, 225-231	150.4	24
36	Reaction: Polymer Chemistries Enabling Cradle-to-Cradle Life Cycles for Plastics. <i>CheM</i> , 2016 , 1, 816-818	16.2	24
35	Functionalized Phosphonium Cations Enable Zinc Metal Reversibility in Aqueous Electrolytes. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 12438-12445	16.4	23
34	Diamine-Appended Mg(dobpdc) Nanorods as Phase-Change Fillers in Mixed-Matrix Membranes for Efficient CO ₂ /N ₂ Separations. <i>Nano Letters</i> , 2017 , 17, 6828-6832	11.5	22
33	Guiding kinetic trajectories between jammed and unjammed states in 2D colloidal nanocrystal-polymer assemblies with zwitterionic ligands. <i>Science Advances</i> , 2018 , 4, eaap8045	14.3	18
32	Colloidal Nanocrystal Frameworks. <i>Advanced Materials</i> , 2015 , 27, 5820-9	24	17
31	Synthesis of pyridine chitosan and its protonic conductivity. <i>Journal of Polymer Science Part A</i> , 2015 , 53, 211-214	2.5	17
30	Leveling the cost and carbon footprint of circular polymers that are chemically recycled to monomer. <i>Science Advances</i> , 2021 , 7,	14.3	17
29	Block Copolymer Packing Limits and Interfacial Reconfigurability in the Assembly of Periodic Mesoporous Organosilicas. <i>Advanced Functional Materials</i> , 2015 , 25, 4120-4128	15.6	16
28	Efficient polymer passivation of ligand-stripped nanocrystal surfaces. <i>Journal of Polymer Science Part A</i> , 2012 , 50, 3719-3727	2.5	16
27	Macromolecular Design Strategies for Preventing Active-Material Crossover in Non-Aqueous All-Organic Redox-Flow Batteries. <i>Angewandte Chemie</i> , 2017 , 129, 1617-1621	3.6	15
26	Exceptionally Mild Reactive Stripping of Native Ligands from Nanocrystal Surfaces by Using Meerwein's Salt. <i>Angewandte Chemie</i> , 2012 , 124, 708-713	3.6	15
25	Influence of Surface Composition on Electronic Transport through Naked Nanocrystal Networks. <i>Chemistry of Materials</i> , 2014 , 26, 2214-2217	9.6	14
24	A Versatile, Modular Platform for Multivalent Peptide Ligands Based on a Dendritic Wedge. <i>European Journal of Organic Chemistry</i> , 2010 , 2010, 111-119	3.2	14
23	Organic Nanotube with Subnanometer, pH-Responsive Lumen. <i>Journal of the American Chemical Society</i> , 2019 , 141, 10953-10957	16.4	13
22	Hanging droplets from liquid surfaces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 8360-8365	11.5	13

21	Direct observation of nanoparticle-surfactant assembly and jamming at the water-oil interface. <i>Science Advances</i> , 2020 , 6,	14.3	13
20	Stealth rare earth oxide nanodiscs for magnetic resonance imaging. <i>Advanced Healthcare Materials</i> , 2012 , 1, 437-42	10.1	12
19	Collagen targeting using multivalent protein-functionalized dendrimers. <i>Bioorganic and Medicinal Chemistry</i> , 2011 , 19, 1062-71	3.4	12
18	Interfacial Speciation Determines Interfacial Chemistry: X-ray-Induced Lithium Fluoride Formation from Water-in-salt Electrolytes on Solid Surfaces. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 23180-23187	16.4	12
17	Architected Macroporous Polyelectrolytes That Suppress Dendrite Formation during High-Rate Lithium Metal Electrodeposition. <i>Macromolecules</i> , 2018 , 51, 7666-7671	5.5	8
16	Synthetic development of cell-permeable polymer colloids decorated with nanocrystal imaging probes optimized for cell tracking. <i>Chemical Science</i> , 2012 , 3, 2246	9.4	7
15	Aqueous Processing and Spray Deposition of Polymer-Wrapped Tin-Doped Indium Oxide Nanocrystals as Electrochromic Thin Films. <i>Chemistry of Materials</i> , 2020 , 32, 8401-8411	9.6	7
14	Interfacial Speciation Determines Interfacial Chemistry: X-ray-Induced Lithium Fluoride Formation from Water-in-salt Electrolytes on Solid Surfaces. <i>Angewandte Chemie</i> , 2020 , 132, 23380-23387	3.6	6
13	Nearest-neighbour nanocrystal bonding dictates framework stability or collapse in colloidal nanocrystal frameworks. <i>Chemical Communications</i> , 2017 , 53, 4853-4856	5.8	5
12	Spontaneous emulsification induced by nanoparticle surfactants. <i>Journal of Chemical Physics</i> , 2020 , 153, 224705	3.9	4
11	Conformational Entropy as a Means to Control the Behavior of Poly(diketoenamine) Vitrimers In and Out of Equilibrium. <i>Angewandte Chemie</i> , 2020 , 132, 745-749	3.6	3
10	Chemical doping enhances electronic transport in networks of hexabenzocoronenes assembled in non-aqueous electrolyte. <i>Polymer Chemistry</i> , 2015 , 6, 5560-5564	4.9	2
9	Thermally Rearranged Polymer Membranes Containing Tröger's Base Units Have Exceptional Performance for Air Separations. <i>Angewandte Chemie</i> , 2018 , 130, 5006-5010	3.6	2
8	Chemically directing d-block heterometallics to nanocrystal surfaces as molecular beacons of surface structure. <i>Chemical Science</i> , 2015 , 6, 6295-6304	9.4	1
7	Functionalized Phosphonium Cations Enable Zinc Metal Reversibility in Aqueous Electrolytes. <i>Angewandte Chemie</i> , 2021 , 133, 12546-12553	3.6	1
6	Revealing Charge-Transfer Dynamics at Electrified Sulfur Cathodes Using Constrained Density Functional Theory. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 739-744	6.4	1
5	The Buckling Spectra of Nanoparticle Surfactant Assemblies. <i>Nano Letters</i> , 2021 , 21, 7116-7122	11.5	1
4	Lower-Cost, Lower-Carbon Production of Circular Polydiketoenamine Plastics. <i>ACS Sustainable Chemistry and Engineering</i> , 2022 , 10, 2740-2749	8.3	0

- 3 Rücktitelbild: Thermally Rearranged Polymer Membranes Containing Tröger's Base Units Have Exceptional Performance for Air Separations (Angew. Chem. 18/2018). *Angewandte Chemie*, **2018**, 130, 5274-5274 3.6
- 2 Synthetic control over the dynamics of mesoscaled cargo release from colloidal polymer vectors inside live cells. *Journal of Polymer Science Part A*, **2015**, 53, 256-264 2.5
- 1 Delivery of custom-purposed colloidal nanocrystals to cancer cells. *Therapeutic Delivery*, **2012**, 3, 1041-5 3.8