

Bradley F Chmelka

List of Publications by Citations

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100
papers

27,475
citations

44
h-index

103
g-index

103
ext. papers

28,709
ext. citations

11.7
avg, IF

6.48
L-index

#	Paper	IF	Citations
100	Triblock copolymer syntheses of mesoporous silica with periodic 50 to 300 angstrom pores. <i>Science</i> , 1998 , 279, 548-52	33.3	9892
99	Nonionic Triblock and Star Diblock Copolymer and Oligomeric Surfactant Syntheses of Highly Ordered, Hydrothermally Stable, Mesoporous Silica Structures. <i>Journal of the American Chemical Society</i> , 1998 , 120, 6024-6036	16.4	5794
98	Generalized syntheses of large-pore mesoporous metal oxides with semicrystalline frameworks. <i>Nature</i> , 1998 , 396, 152-155	50.4	2217
97	Organization of Organic Molecules with Inorganic Molecular Species into Nanocomposite Biphasic Arrays. <i>Chemistry of Materials</i> , 1994 , 6, 1176-1191	9.6	1373
96	Block Copolymer Templating Syntheses of Mesoporous Metal Oxides with Large Ordering Lengths and Semicrystalline Framework. <i>Chemistry of Materials</i> , 1999 , 11, 2813-2826	9.6	1011
95	Continuous Mesoporous Silica Films with Highly Ordered Large Pore Structures. <i>Advanced Materials</i> , 1998 , 10, 1380-1385	24	765
94	Directing zeolite structures into hierarchically nanoporous architectures. <i>Science</i> , 2011 , 333, 328-32	33.3	665
93	General Predictive Syntheses of Cubic, Hexagonal, and Lamellar Silica and Titania Mesostructured Thin Films. <i>Chemistry of Materials</i> , 2002 , 14, 3284-3294	9.6	619
92	Mirrorless lasing from mesostructured waveguides patterned by soft lithography. <i>Science</i> , 2000 , 287, 465-8	33.3	449
91	Importance of the donor:fullerene intermolecular arrangement for high-efficiency organic photovoltaics. <i>Journal of the American Chemical Society</i> , 2014 , 136, 9608-18	16.4	283
90	Efficient and color-tunable oxyfluoride solid solution phosphors for solid-state white lighting. <i>Advanced Materials</i> , 2011 , 23, 2300-5	24	281
89	Triblock-Copolymer-Directed Syntheses of Large-Pore Mesoporous Silica Fibers. <i>Chemistry of Materials</i> , 1998 , 10, 2033-2036	9.6	251
88	Doped Mesoporous Silica Fibers: A New Laser Material. <i>Advanced Materials</i> , 1999 , 11, 632-636	24	201
87	Role of Magnesium Ion in the Stabilization of Biogenic Amorphous Calcium Carbonate: A Structure-Function Investigation. <i>Chemistry of Materials</i> , 2010 , 22, 161-166	9.6	184
86	Local Environments of Dilute Activator Ions in the Solid-State Lighting Phosphor Y ₃ CeAl ₅ O ₁₂ . <i>Chemistry of Materials</i> , 2013 , 25, 3979-3995	9.6	172
85	Tuning underwater adhesion with cation-π interactions. <i>Nature Chemistry</i> , 2017 , 9, 473-479	17.6	171
84	Fluoride-Induced Hierarchical Ordering of Mesoporous Silica in Aqueous Acid-Syntheses. <i>Advanced Materials</i> , 1999 , 11, 303-307	24	161

83	Phase Transitions in Mesostructured Silica/Surfactant Composites: Surfactant Packing and the Role of Charge Density Matching. <i>Chemistry of Materials</i> , 2001 , 13, 2247-2256	9.6	144
82	Molecular Interactions and Ordering in Electrically Doped Polymers: Blends of PBTTT and F4TCNQ. <i>Macromolecules</i> , 2014 , 47, 6836-6846	5.5	138
81	A Synchrotron X-ray Diffraction, Neutron Diffraction, ²⁹ Si MAS-NMR, and Computational Study of the Siliceous Form of Zeolite Ferrierite. <i>Journal of the American Chemical Society</i> , 1994 , 116, 11849-11855	16.4	133
80	Nucleation and growth of zeolites and inorganic mesoporous solids: Molecular insights from magnetic resonance spectroscopy. <i>Current Opinion in Colloid and Interface Science</i> , 2006 , 11, 81-117	7.6	119
79	Molecularly ordered inorganic frameworks in layered silicate surfactant mesophases. <i>Journal of the American Chemical Society</i> , 2001 , 123, 4519-29	16.4	115
78	Use of X-ray diffraction, molecular simulations, and spectroscopy to determine the molecular packing in a polymer-fullerene bimolecular crystal. <i>Advanced Materials</i> , 2012 , 24, 6071-9	24	113
77	Understanding silicate hydration from quantitative analyses of hydrating tricalcium silicates. <i>Nature Communications</i> , 2016 , 7, 10952	17.4	106
76	Aqueous-sensitive reaction sites in sulfonic acid-functionalized mesoporous silicas. <i>Journal of Catalysis</i> , 2008 , 254, 205-217	7.3	99
75	Structure of a surfactant-templated silicate framework in the absence of 3d crystallinity. <i>Journal of the American Chemical Society</i> , 2004 , 126, 9425-32	16.4	86
74	Nanostructural features of demosphere biosilica. <i>Journal of Structural Biology</i> , 2003 , 144, 271-81	3.4	80
73	Eutectic Syntheses of Graphitic Carbon with High Pyrazinic Nitrogen Content. <i>Advanced Materials</i> , 2016 , 28, 1287-94	24	76
72	Functionalization of mesostructured inorganic/organic and porous inorganic materials. <i>Current Opinion in Colloid and Interface Science</i> , 2009 , 14, 281-292	7.6	73
71	Influences of Dilute Organic Adsorbates on the Hydration of Low-Surface-Area Silicates. <i>Journal of the American Chemical Society</i> , 2015 , 137, 8096-112	16.4	71
70	Probing local structures of siliceous zeolite frameworks by solid-state NMR and first-principles calculations of ²⁹ Si-O- ²⁹ Si scalar couplings. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 1825-37	3.6	70
69	Molecular silicate and aluminate species in anhydrous and hydrated cements. <i>Journal of the American Chemical Society</i> , 2010 , 132, 7321-37	16.4	68
68	Template Cross-Linking Effects on Morphologies of Swellable Block Copolymer and Mesostructured Silica Thin Films. <i>Macromolecules</i> , 2005 , 38, 7768-7783	5.5	67
67	A molecular cross-linking approach for hybrid metal oxides. <i>Nature Materials</i> , 2018 , 17, 341-348	27	66
66	One-step synthesis of ordered mesocomposites with non-ionic amphiphilic block copolymers: implications of isoelectric point, hydrolysis rate and fluoride. <i>Chemical Communications</i> , 2000 , 2437-2438	5.8	64

65	A general protocol for determining the structures of molecularly ordered but noncrystalline silicate frameworks. <i>Journal of the American Chemical Society</i> , 2013 , 135, 5641-55	16.4	58
64	Correlating Local Compositions and Structures with the Macroscopic Optical Properties of Ce ³⁺ -Doped CaSc ₂ O ₄ , an Efficient Green-Emitting Phosphor. <i>Chemistry of Materials</i> , 2017 , 29, 3538-3548	9.6	57
63	Synthesis and luminescence properties of mesostructured thin films activated by in-situ formed trivalent rare earth ion complexes. <i>Chemical Communications</i> , 2002 , 2474-2475	5.8	56
62	Molecular rotors in hierarchically ordered mesoporous organosilica frameworks. <i>Chemical Communications</i> , 2008 , 4798-800	5.8	55
61	Unifying Energetic Disorder from Charge Transport and Band Bending in Organic Semiconductors. <i>Advanced Functional Materials</i> , 2019 , 29, 1901109	15.6	51
60	(¹³ C NMR assignments of regenerated cellulose from solid-state 2D NMR spectroscopy. <i>Carbohydrate Polymers</i> , 2016 , 151, 480-487	10.3	49
59	Unifying Charge Generation, Recombination, and Extraction in Low-Offset Non-Fullerene Acceptor Organic Solar Cells. <i>Advanced Energy Materials</i> , 2020 , 10, 2001203	21.8	46
58	Well-Defined Silanols in the Structure of the Calcined High-Silica Zeolite SSZ-70: New Understanding of a Successful Catalytic Material. <i>Journal of the American Chemical Society</i> , 2017 , 139, 16803-16812	16.4	44
57	Dynamics and Disorder in Surfactant-Templated Silicate Layers Studied by Solid-State NMR Dephasing Times and Correlated Line Shapes. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 9145-9154	3.8	44
56	Molecular Insights into Carbon Dioxide Sorption in Hydrazone-Based Covalent Organic Frameworks with Tertiary Amine Moieties. <i>Chemistry of Materials</i> , 2019 , 31, 1946-1955	9.6	44
55	Local structures of polar wurtzites Zn _{1-x} Mg _x O studied by Raman and Z ⁶⁷ n/M ²⁵ g NMR spectroscopies and by total neutron scattering. <i>Physical Review B</i> , 2008 , 78,	3.3	42
54	Sensitivity considerations in polarization transfer and filtering using dipole-dipole couplings: implications for biomineral systems. <i>Solid State Nuclear Magnetic Resonance</i> , 2006 , 29, 170-82	3.1	41
53	Local Platinum Environments in a Solid Analogue of the Molecular Periana Catalyst. <i>ACS Catalysis</i> , 2016 , 6, 2332-2340	13.1	40
52	Insight into the structures and dynamics of organic semiconductors through solid-state NMR spectroscopy. <i>Nature Reviews Materials</i> , 2020 , 5, 910-930	73.3	36
51	Co-development of crystalline and mesoscopic order in mesostructured zeolite nanosheets. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 927-31	16.4	35
50	Highly Graphitic Mesoporous Fe,N-Doped Carbon Materials for Oxygen Reduction Electrochemical Catalysts. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 25337-25349	9.5	33
49	Proton-Based Structural Analysis of a Heptahelical Transmembrane Protein in Lipid Bilayers. <i>Journal of the American Chemical Society</i> , 2017 , 139, 13006-13012	16.4	32
48	Syntheses of Colloidal F:In ₂ O ₃ Cubes: Fluorine-Induced Faceting and Infrared Plasmonic Response. <i>Chemistry of Materials</i> , 2019 , 31, 2661-2676	9.6	31

47	Direct Observation of the Relationship between Molecular Topology and Bulk Morphology for a π -Conjugated Material. <i>Journal of the American Chemical Society</i> , 2019 , 141, 5078-5082	16.4	30
46	Hierarchically Porous Rutile Titania: Harnessing Spontaneous Compositional Change in Mixed-Metal Oxides. <i>Chemistry of Materials</i> , 2006 , 18, 6345-6351	9.6	30
45	Unifying Design Strategies in Demosponge and Hexactinellid Skeletal Systems 2010 , 86, 72-95		28
44	Anisotropic Optical Properties and Structures of Block Copolymer/Silica Thin Films Containing Aligned Porphyrin J-Aggregates. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 2565-2573	3.8	28
43	Mesostructured Silica/Block Copolymer Composites as Hosts for Optically Limiting Tetraphenylporphyrin Dye Molecules. <i>Journal of Physical Chemistry B</i> , 2004 , 108, 11909-11914	3.4	27
42	Evaluation of photoassisted treatments for norfloxacin removal in water using mesoporous FeO-TiO materials. <i>Journal of Environmental Management</i> , 2019 , 238, 243-250	7.9	26
41	Atomic-Level Insight into the Postsynthesis Band Gap Engineering of a Lewis Base Polymer Using Lewis Acid Tris(pentafluorophenyl)borane. <i>Chemistry of Materials</i> , 2019 , 31, 6715-6725	9.6	23
40	Long- and Short-Range Constraints for the Structure Determination of Layered Silicates with Stacking Disorder. <i>Chemistry of Materials</i> , 2014 , 26, 6994-7008	9.6	22
39	Macroscopic Structural Compositions of π -Conjugated Polymers: Combined Insights from Solid-State NMR and Molecular Dynamics Simulations. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 4155-4160 ²²	6.4	22
38	Correlating Surface-Functionalization of Mesoporous Silica with Adsorption and Release of Pharmaceutical Guest Species. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 16887-16898	3.8	22
37	NMR Studies on Hydrolysis and Condensation Reactions of Alkoxysilanes Containing Si-H Bonds. <i>Journal of Sol-Gel Science and Technology</i> , 1998 , 13, 75-80	2.3	21
36	Crystallization of Mordenite Platelets using Cooperative Organic Structure-Directing Agents. <i>Journal of the American Chemical Society</i> , 2019 , 141, 20155-20165	16.4	20
35	Preferential Siting of Aluminum Heteroatoms in the Zeolite Catalyst Al-SSZ-70. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 6255-6259	16.4	14
34	Nanoscale Surface Compositions and Structures Influence Boron Adsorption Properties of Anion Exchange Resins. <i>Langmuir</i> , 2019 , 35, 15661-15673	4	13
33	Materializing opportunities for NMR of solids. <i>Journal of Magnetic Resonance</i> , 2019 , 306, 91-97	3	13
32	Non-Topotactic Transformation of Silicate Nanolayers into Mesostructured MFI Zeolite Frameworks During Crystallization. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 5164-5169	16.4	12
31	Intraspecific Differences in Biogeochemical Responses to Thermal Change in the Coccolithophore <i>Emiliania huxleyi</i> . <i>PLoS ONE</i> , 2016 , 11, e0162313	3.7	12
30	Correlated Diffusivities, Solubilities, and Hydrophobic Interactions in Ternary Polydimethylsiloxane/Water/Tetrahydrofuran Mixtures. <i>Macromolecules</i> , 2016 , 49, 6910-6917	5.5	12

29	Local environments of boron heteroatoms in non-crystalline layered borosilicates. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 21664-82	3.6	11
28	Scaling analyses for hyperpolarization transfer across a spin-diffusion barrier and into bulk solid media. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 1006-1020	3.6	11
27	Polymorph Selection by Continuous Precipitation. <i>Crystal Growth and Design</i> , 2018 , 18, 4306-4319	3.5	10
26	Synthesis of ¹³ C-enriched pyrrole from 2- ¹³ C d-galactose. <i>Journal of Labelled Compounds and Radiopharmaceuticals</i> , 1999 , 42, 927-936	1.9	10
25	Co-development of Crystalline and Mesoscopic Order in Mesostructured Zeolite Nanosheets. <i>Angewandte Chemie</i> , 2015 , 127, 941-945	3.6	9
24	Preferential Siting of Aluminum Heteroatoms in the Zeolite Catalyst Al-SSZ-70. <i>Angewandte Chemie</i> , 2019 , 131, 6321-6325	3.6	7
23	Functionally Active Membrane Proteins Incorporated in Mesostructured Silica Films. <i>Journal of the American Chemical Society</i> , 2018 , 140, 3892-3906	16.4	7
22	Spatially correlated distributions of local metallic properties in bulk and nanocrystalline GaN. <i>Physical Review B</i> , 2017 , 95,	3.3	6
21	Proteorhodopsin Function Is Primarily Mediated by Oligomerization in Different Micellar Surfactant Solutions. <i>Journal of Physical Chemistry B</i> , 2019 , 123, 4180-4192	3.4	6
20	Determination of molecular orientational order in cold-stretched poly(p-phenylene vinylene) thin films by DECODER ¹³ C NMR. <i>Solid State Nuclear Magnetic Resonance</i> , 2002 , 22, 275-97	3.1	5
19	Measurement of dilute ²⁹ Si species in solution using a large volume coil and DEPT NMR. <i>Analytical Chemistry</i> , 2000 , 72, 5131-5	7.8	5
18	Electrochemically Enhanced Dissolution of Silica and Alumina in Alkaline Environments. <i>Langmuir</i> , 2019 , 35, 15651-15660	4	4
17	Relationship between aqueous chemistry and composition, structure, and solubility of sodium aluminosilicate hydrates. <i>Journal of the American Ceramic Society</i> , 2020 , 103, 2160-2172	3.8	4
16	Doped Mesoporous Silica Fibers: A New Laser Material 1999 , 11, 632		4
15	Non-Topotactic Transformation of Silicate Nanolayers into Mesostructured MFI Zeolite Frameworks During Crystallization. <i>Angewandte Chemie</i> , 2017 , 129, 5246-5251	3.6	3
14	Robust transparent mesoporous silica membranes as matrices for colorimetric sensors. <i>RSC Advances</i> , 2015 , 5, 16549-16553	3.7	3
13	Structural and optoelectronic properties of hybrid bulk-heterojunction materials based on conjugated small molecules and mesostructured TiO ₂ . <i>Applied Physics Letters</i> , 2014 , 104, 233305	3.4	3
12	Atomic Environments in N-Containing Graphitic Carbon Probed by First-Principles Calculations and Solid-State Nuclear Magnetic Resonance. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 8779-8787	3.8	3

11	Fluoride-Induced Hierarchical Ordering of Mesoporous Silica in Aqueous Acid-Syntheses 1999 , 11, 303		3
10	Carbon: Eutectic Syntheses of Graphitic Carbon with High Pyrazinic Nitrogen Content (Adv. Mater. 6/2016). <i>Advanced Materials</i> , 2016 , 28, 1328-1328	24	2
9	Measurement of Proton Spin Diffusivity in Hydrated Cementitious Solids. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 5064-5069	6.4	2
8	Improved Amplified Spontaneous Emission of Dye-Doped Functionalized Mesostructured Silica Waveguide Films. <i>Advanced Optical Materials</i> , 2015 , 3, 1454-1461	8.1	2
7	Electrochemical Oxidative Fluorination of an Oxide Perovskite. <i>Chemistry of Materials</i> , 2021 , 33, 5757-5768	9.8	2
6	Doped Mesoporous Silica Fibers: A New Laser Material 1999 , 11, 632		2
5	Low Voltage-Loss Organic Solar Cells Light the Way for Efficient Semitransparent Photovoltaics. <i>Solar Rrl</i> , 2200135	7.1	2
4	Hopping dynamics and diffusion of atoms, molecules, and ions in nanoporous solids by exchange NMR spectroscopy. <i>Adsorption</i> , 2021 , 27, 857-874	2.6	1
3	Nanoscale Surface Compositions and Structures of Plasma-Modified Poly(ethylene terephthalate) Thin Films. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 20658-20669	3.8	1
2	Innenstruktur: Preferential Siting of Aluminum Heteroatoms in the Zeolite Catalyst Al-SSZ-70 (Angew. Chem. 19/2019). <i>Angewandte Chemie</i> , 2019 , 131, 6523-6523	3.6	
1	Structures of Poly(dimethylsiloxane)-Poly(oxyethylene) Diblock Copolymer Micelles in Aqueous Solvents 2010 , 195-211		