

Christopher J Barrett

List of Publications by Year in descending order

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120
papers

13,148
citations

44069

48
h-index

23533

111
g-index

125
all docs

125
docs citations

125
times ranked

12434
citing authors

#	ARTICLE	IF	CITATIONS
1	Cold photo-carving of halogen-bonded co-crystals of a dye and a volatile co-former using visible light. <i>Nature Chemistry</i> , 2022, 14, 574-581.	13.6	17
2	Electrospun Azo-Cellulose Fabric: A Smart Polysaccharidic Photo-Actuator. <i>Macromolecular Rapid Communications</i> , 2022, 43, e2200063.	3.9	3
3	Controlled disassembly of azobenzene cellulose-based thin films using visible light. <i>Materials Advances</i> , 2022, 3, 6222-6230.	5.4	3
4	Theory and experiment of chain length effects on the adsorption of polyelectrolytes onto spherical particles: the long and the short of it. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 300-310.	2.8	7
5	After 200 Years: The Structure of Bleach and Characterization of Hypohalite Ions by Single-Crystal X-Ray Diffraction**. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 24400-24405.	13.8	2
6	Innentitelbild: After 200 Years: The Structure of Bleach and Characterization of Hypohalite Ions by Single-Crystal X-Ray Diffraction (Angew. Chem. 46/2021). <i>Angewandte Chemie</i> , 2021, 133, 24538-24538.	2.0	0
7	Halogen bonding to the azulene π -system: cocrystal design of pleochroism. <i>Chemical Communications</i> , 2020, 56, 15145-15148.	4.1	18
8	In-Situ Ellipsometric Study of the Optical Properties of LTL-Doped Thin Film Sensors for Copper(II) Ion Detection. <i>Coatings</i> , 2020, 10, 423.	2.6	7
9	Electrospinning of photo-responsive Azo-Cellulose: towards smart fibrous materials. <i>Cellulose</i> , 2019, 26, 6903-6915.	4.9	11
10	Photoinduced multi-directional deformation of azobenzene molecular crystals. <i>Journal of Materials Chemistry C</i> , 2019, 7, 503-508.	5.5	48
11	Photoreversible Soft Azo Dye Materials: Toward Optical Control of Bio-Interfaces. <i>Advanced Optical Materials</i> , 2019, 7, 1900091.	7.3	63
12	Tunable Engineered Extracellular Matrix Materials: Polyelectrolyte Multilayers Promote Improved Neural Cell Growth and Survival. <i>Macromolecular Bioscience</i> , 2019, 19, 1900036.	4.1	7
13	Effect of surface treatment on molecular alignment behavior by scanning wave photopolymerization. <i>Applied Physics Express</i> , 2019, 12, 041004.	2.4	7
14	Direct fabrication of a q-plate array by scanning wave photopolymerization. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019, 36, D47.	2.1	14
15	Single-step creation of polarization gratings by scanning wave photopolymerization with unpolarized light. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019, 36, D112.	2.1	16
16	Layers and Multilayers of Self-Assembled Polymers: Tunable Engineered Extracellular Matrix Coatings for Neural Cell Growth. <i>Langmuir</i> , 2018, 34, 8709-8730.	3.5	33
17	Shape-Shifting Azo Dye Polymers: Towards Sunlight-Driven Molecular Devices. <i>Macromolecular Rapid Communications</i> , 2018, 39, 1700253.	3.9	70
18	Halogen-Bonded Cocrystals as Optical Materials: Next-Generation Control over Light-Matter Interactions. <i>Crystal Growth and Design</i> , 2018, 18, 1245-1259.	3.0	115

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19	Crystal structure of octane-1,8-diaminium 4,4- <i>ε</i> -(diazene-1,2-diyl)dibenzoate monohydrate. <i>Acta Crystallographica Section E: Crystallographic Communications</i> , 2018, 74, 724-727.	0.5	0
20	Unpolarized light-induced alignment of azobenzene by scanning wave photopolymerization. <i>Polymer Journal</i> , 2018, 50, 753-759.	2.7	14
21	Crystal structure of 2-oxopyrrolidin-3-yl 4-(2-phenyldiazene-1-yl)benzoate. <i>Acta Crystallographica Section E: Crystallographic Communications</i> , 2018, 74, 458-460.	0.5	1
22	Crystal structures of the solvent-free and ethanol disolvate forms of 4,4- <i>ε</i> -(diazenediyl)bis(2,3,5,6-tetrafluorobenzoic acid) exemplifying self-stabilized azobenzene <i>cis</i> -configurations. <i>Acta Crystallographica Section E: Crystallographic Communications</i> , 2018, 74, 1486-1490.	0.5	0
23	Assembly and dichroism of a four-component halogen-bonded metal-organic cocrystal salt solvate involving dicyanoaurate(I) acceptors. <i>Faraday Discussions</i> , 2017, 203, 441-457.	3.2	29
24	Photo-induced structural modification of silk gels containing azobenzene side groups. <i>Soft Matter</i> , 2017, 13, 2903-2906.	2.7	14
25	Thermo-, photo-, and mechano-responsive liquid crystal networks enable tunable photonic crystals. <i>Soft Matter</i> , 2017, 13, 7486-7491.	2.7	26
26	Non-covalent formulation of active principles with dendrimers: Current state-of-the-art and prospects for further development. <i>Journal of Controlled Release</i> , 2017, 264, 288-305.	9.9	13
27	Surface-Plasmon-Mediated Hydrogenation of Carbonyls Catalyzed by Silver Nanocubes under Visible Light. <i>ACS Catalysis</i> , 2017, 7, 6128-6133.	11.2	90
28	Scanning wave photopolymerization enables dye-free alignment patterning of liquid crystals. <i>Science Advances</i> , 2017, 3, e1701610.	10.3	50
29	The Orange Side of Disperse Red 1: Humidity-Driven Color Switching in Supramolecular Azo-Polymer Materials Based on Reversible Dye Aggregation. <i>Macromolecular Rapid Communications</i> , 2017, 38, 1600582.	3.9	17
30	Reversing adhesion with light: a general method for functionalized bead release from cells. <i>Biomaterials Science</i> , 2016, 4, 1193-1196.	5.4	3
31	Photo-induced motion of azo dyes in organized media: from single and liquid crystals, to MOFs and machines. <i>CrystEngComm</i> , 2016, 18, 7204-7211.	2.6	40
32	Computer-aided combined movement examination of the lumbar spine and manual therapy implications: Case report. <i>Manual Therapy</i> , 2016, 21, 297-302.	1.6	8
33	Rapid Mechanically Controlled Rewiring of Neuronal Circuits. <i>Journal of Neuroscience</i> , 2016, 36, 979-987.	3.6	30
34	Azo-phenyl stacking: a persistent self-assembly motif guides the assembly of fluorinated <i>cis</i> -azobenzenes into photo-mechanical needle crystals. <i>Chemical Communications</i> , 2016, 52, 2103-2106.	4.1	35
35	Controlling Dichroism of Molecular Crystals by Cocrystallization. <i>Crystal Growth and Design</i> , 2016, 16, 541-545.	3.0	41
36	Diet as a mechanism of coexistence between intertidal fish species of the U.K.. <i>Hydrobiologia</i> , 2016, 768, 125-135.	2.0	8

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37	Double-charge model for classical force-field simulations. <i>Physical Review B</i> , 2015, 91, .	3.2	7
38	Supramolecular hierarchy among halogen and hydrogen bond donors in light-induced surface patterning. <i>Journal of Materials Chemistry C</i> , 2015, 3, 759-768.	5.5	87
39	Controlling Motion at the Nanoscale: Rise of the Molecular Machines. <i>ACS Nano</i> , 2015, 9, 7746-7768.	14.6	385
40	Self-assembly of microscopic tablets within polymeric thin films: a possible pathway towards new hybrid materials. <i>RSC Advances</i> , 2015, 5, 4780-4787.	3.6	13
41	Nanoindentation studies to separate thermal and optical effects in photo-softening of azo polymers. <i>Journal of Materials Chemistry C</i> , 2015, 3, 995-1003.	5.5	44
42	Fluorinated azobenzenes with highly strained geometries for halogen bond-driven self-assembly in the solid state. <i>CrystEngComm</i> , 2015, 17, 73-80.	2.6	27
43	Effect of head group size on the photoswitching applications of azobenzene Disperse Red 1 analogues. <i>Journal of Materials Chemistry C</i> , 2014, 2, 7505-7512.	5.5	32
44	Photo-tuning of highly selective wetting in inverse opals. <i>Soft Matter</i> , 2014, 10, 1325-1328.	2.7	20
45	Are Two Azo Groups Better than One? Investigating the Photoresponse of Polymer-Bisazobenzene Complexes. <i>Chemistry of Materials</i> , 2014, 26, 5089-5096.	6.7	57
46	Planar Multilayer Assemblies Containing Block Copolymer Aggregates. <i>Langmuir</i> , 2014, 30, 891-899.	3.5	10
47	Recent twists in photoactuation and photoalignment control. <i>Journal of Materials Chemistry C</i> , 2014, 2, 7155-7162.	5.5	142
48	Photo-mechanical azobenzene cocrystals and in situ X-ray diffraction monitoring of their optically-induced crystal-to-crystal isomerisation. <i>Chemical Science</i> , 2014, 5, 3158-3164.	7.4	139
49	Modular assembly of azo photo-switches using click chemistry allows for predictable photo-behaviour. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2014, 294, 62-67.	3.9	3
50	Shaping Crystals with Light: Crystal-to-Crystal Isomerization and Photomechanical Effect in Fluorinated Azobenzenes. <i>Journal of the American Chemical Society</i> , 2013, 135, 12556-12559.	13.7	268
51	High levels of molecular orientation of surface azo chromophores can be optically induced even in a wet biological environment. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 19985.	2.8	10
52	Fast, Reversible, and General Photomechanical Motion in Single Crystals of Various Azo Compounds Using Visible Light. <i>Advanced Materials</i> , 2013, 25, 1796-1800.	21.0	155
53	Nanoindentation study of light-induced softening of supramolecular and covalently functionalized azo polymers. <i>Journal of Materials Chemistry C</i> , 2013, 1, 2806.	5.5	34
54	Photo-control of biological systems with azobenzene polymers. <i>Journal of Polymer Science Part A</i> , 2013, 51, 3058-3070.	2.3	109

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55	Wetting in color: from photonic fingerprinting of liquids to optical control of liquid percolation. Proceedings of SPIE, 2013, , .	0.8	1
56	Photo-Mechanical Azo Polymers for Light-Powered Actuation and Artificial Muscles. , 2012, , 107-151.		0
57	Photoreversible Surfaces to Regulate Cell Adhesion. Biomacromolecules, 2012, 13, 2958-2963.	5.4	50
58	Azobenzene Photoisomerization under High External Pressures: Testing the Strength of a Light-Activated Molecular Muscle. Journal of Physical Chemistry B, 2012, 116, 9860-9865.	2.6	45
59	The Mechanical Performance of a Biomimetic Nanointerface Made of Multilayered Polyelectrolytes. European Journal of Inorganic Chemistry, 2012, 2012, 5380-5389.	2.0	6
60	Azobenzene photomechanics: prospects and potential applications. Polymer Bulletin, 2012, 69, 967-1006.	3.3	339
61	Fabrication of Two-Dimensional Gradient Layer-by-Layer Films for Combinatorial Biosurface Studies. Macromolecules, 2012, 45, 5704-5711.	4.8	16
62	High-throughput cellular screening of engineered ECM based on combinatorial polyelectrolyte multilayer films. Biomaterials, 2012, 33, 5841-5847.	11.4	18
63	Simultaneous Analysis of Optical and Mechanical Properties of Cross-Linked Azobenzene-Containing Liquid-Crystalline Polymer Films. ACS Applied Materials & Interfaces, 2011, 3, 4190-4196.	8.0	86
64	Stabilization of Neodymium Oxide Nanoparticles via Soft Adsorption of Charged Polymers. ACS Applied Materials & Interfaces, 2011, 3, 3357-3365.	8.0	20
65	Photomechanical effect of azobenzene thin polymer films measured with an AFM cantilever based sensor. , 2010, , .		3
66	Novel Azobenzene-Functionalized Polyelectrolytes of Different Substituted Head Groups 2: Control of Surface Wetting in Self-Assembled Multilayer Films. Journal of Macromolecular Science - Pure and Applied Chemistry, 2010, 47, 534-544.	2.2	7
67	Novel Azobenzene-Functionalized Polyelectrolytes of Different Substituted Head Groups 3: Control of Properties of Self-Assembled Multilayer Thin Films. Journal of Macromolecular Science - Pure and Applied Chemistry, 2010, 47, 571-579.	2.2	10
68	Exploring interhemispheric collaboration in older compared to younger adults. Brain and Cognition, 2010, 72, 218-227.	1.8	8
69	Stable photo-reversible surface energy switching with azobenzene polyelectrolyte multilayers. Journal of Materials Chemistry, 2010, 20, 244-247.	6.7	19
70	Novel Azobenzene-Functionalized Polyelectrolytes of Different Substituted Head Groups 1: Synthesis, Characterization and Absorption Spectroscopy Studies. Journal of Macromolecular Science - Pure and Applied Chemistry, 2009, 47, 106-118.	2.2	7
71	Spacer-Free Ionic Dye ⁺ Polyelectrolyte Complexes: Influence of Molecular Structure on Liquid Crystal Order and Photoinduced Motion. Chemistry of Materials, 2009, 21, 3216-3227.	6.7	62
72	Photomechanical properties of azobenzene liquid-crystalline elastomers. Liquid Crystals, 2009, 36, 1289-1293.	2.2	35

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73	Photomobile polymer materialsâ€™ various three-dimensional movements. <i>Journal of Materials Chemistry</i> , 2009, 19, 60-62.	6.7	369
74	Photoresponsive Behavior of Laminated Films Composed of a Flexible Plastic Sheet and a Crosslinked Azobenzene Liquid-Crystalline Polymer Layer with Different Initial Alignment of Mesogens. <i>Molecular Crystals and Liquid Crystals</i> , 2009, 498, 65-73.	0.9	6
75	Photomobile Polymer Materials: Towards Lightâ€Driven Plastic Motors. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 4986-4988.	13.8	919
76	Control of DNA incorporation into nanoparticles with poly(L-lysine) multilayers. <i>Canadian Journal of Chemistry</i> , 2008, 86, 1085-1094.	1.1	8
77	Preparation and Characterization of Polyelectrolyte-Coated Gold Nanoparticles. <i>Langmuir</i> , 2008, 24, 2532-2538.	3.5	58
78	Simple Spacer-Free Dye-Polyelectrolyte Ionic Complex: Side-Chain Liquid Crystal Order with High and Stable Photoinduced Birefringence. <i>Chemistry of Materials</i> , 2008, 20, 29-31.	6.7	58
79	Ion distribution in multilayers of weak polyelectrolytes: A neutron reflectometry study. <i>Journal of Chemical Physics</i> , 2008, 129, 084901.	3.0	32
80	Confinement of surface patterning in azo-polymer thin films. <i>Journal of Chemical Physics</i> , 2007, 126, 094908.	3.0	27
81	Chapter 17. Azobenzene Polymers as Photomechanical and Multifunctional Smart Materials. , 2007, , 424-446.		9
82	Production of dimethylfuran for liquid fuels from biomass-derived carbohydrates. <i>Nature</i> , 2007, 447, 982-985.	27.8	2,011
83	Photo-mechanical effects in azobenzene-containing soft materials. <i>Soft Matter</i> , 2007, 3, 1249.	2.7	512
84	Photomechanical Surface Patterning in Azo-Polymer Materials. <i>Macromolecules</i> , 2006, 39, 9320-9326.	4.8	107
85	Water Distribution in Multilayers of Weak Polyelectrolytes. <i>Langmuir</i> , 2006, 22, 5137-5143.	3.5	50
86	Photomechanical Effects in Azo-Polymers Studied by Neutron Reflectometry. <i>Macromolecules</i> , 2006, 39, 9311-9319.	4.8	92
87	Novel photo-switching using azobenzene functional materials. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2006, 182, 250-261.	3.9	485
88	Temperature-controlled neutron reflectometry sample cell suitable for study of photoactive thin films. <i>Review of Scientific Instruments</i> , 2006, 77, 045106.	1.3	9
89	Variable temperature, relative humidity (0%â€“100%), and liquid neutron reflectometry sample cell suitable for polymeric and biomimetic materials. <i>Review of Scientific Instruments</i> , 2005, 76, 065101.	1.3	26
90	Production of Liquid Alkanes by Aqueous-Phase Processing of Biomass-Derived Carbohydrates. <i>Science</i> , 2005, 308, 1446-1450.	12.6	1,502

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91	Swelling Behavior of Hyaluronic Acid/Polyallylamine Hydrochloride Multilayer Films. <i>Biomacromolecules</i> , 2005, 6, 1419-1428.	5.4	72
92	Light-Induced Reversible Volume Changes in Thin Films of Azo Polymers: The Photomechanical Effect. <i>Macromolecules</i> , 2005, 38, 10566-10570.	4.8	199
93	Temperature modeling of laser-irradiated azo-polymer thin films. <i>Journal of Chemical Physics</i> , 2004, 120, 1089-1096.	3.0	89
94	Using light to control physical properties of polymers and surfaces with azobenzene chromophores. <i>Pure and Applied Chemistry</i> , 2004, 76, 1445-1465.	1.9	177
95	Swelling Dynamics of Multilayer Films of Weak Polyelectrolytes. <i>Chemistry of Materials</i> , 2004, 16, 2734-2739.	6.7	73
96	NMR Studies of PAH/PSS Polyelectrolyte Multilayers Adsorbed onto Silica. <i>Macromolecules</i> , 2004, 37, 4830-4838.	4.8	71
97	pH-Dependent Loading and Release Behavior of Small Hydrophilic Molecules in Weak Polyelectrolyte Multilayer Films. <i>Macromolecules</i> , 2004, 37, 5375-5384.	4.8	137
98	Controlling the physicochemical properties of weak polyelectrolyte multilayer films through acid/base equilibria. <i>Pure and Applied Chemistry</i> , 2004, 76, 1387-1398.	1.9	24
99	pH-Responsive Properties of Multilayered Poly(L-lysine)/Hyaluronic Acid Surfaces. <i>Biomacromolecules</i> , 2003, 4, 1773-1783.	5.4	235
100	¹³ C Solid-State NMR Study of Polyelectrolyte Multilayers. <i>Macromolecules</i> , 2003, 36, 1876-1881.	4.8	46
101	NMR Studies of the Effect of Adsorbed Water on Polyelectrolyte Multilayer Films in the Solid State. <i>Macromolecules</i> , 2003, 36, 3616-3625.	4.8	81
102	Structural and Mechanical Properties of Polyelectrolyte Multilayer Films Studied by AFM. <i>Macromolecules</i> , 2003, 36, 8819-8824.	4.8	100
103	Effects of Charge Density and Counterions on the Assembly of Polyelectrolyte Multilayers. <i>Journal of Physical Chemistry B</i> , 2003, 107, 2525-2530.	2.6	111
104	Acid-Base Equilibria of Weak Polyelectrolytes in Multilayer Thin Films. <i>Langmuir</i> , 2003, 19, 3297-3303.	3.5	208
105	Thin films of light-responsive polymers for sensing and surface patterning. , 2003, , .		0
106	Solution Properties of Self-Assembled Amphiphilic Copolymers Determined by Isomerization Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2002, 106, 8499-8503.	2.6	17
107	All-optical patterning of azo polymer films. <i>Current Opinion in Solid State and Materials Science</i> , 2001, 5, 487-494.	11.5	213
108	Stable sensor layers self-assembled onto surfaces using azobenzene-containing polyelectrolytes. <i>Analyst</i> , The, 2001, 126, 1861-1865.	3.5	25

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109	Anomalous Adsorption of Polyelectrolyte Layers. <i>Macromolecules</i> , 2001, 34, 3384-3388.	4.8	62
110	Fast Magic-Angle Spinning and Double-Quantum ^1H Solid-State NMR Spectroscopy of Polyelectrolyte Multilayers. <i>Advanced Materials</i> , 2000, 12, 1934-1938.	21.0	55
111	Fabrication of Microporous Thin Films from Polyelectrolyte Multilayers. <i>Langmuir</i> , 2000, 16, 5017-5023.	3.5	641
112	Assessment of combined movements of the lumbar spine in asymptomatic and low back pain subjects using a three-dimensional electromagnetic tracking system. <i>Manual Therapy</i> , 1999, 4, 94-99.	1.6	43
113	The intrinsic rate response of the isolated right atrium of the rat, <i>Rattus norvegicus</i> . <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 1998, 120, 391-397.	1.8	11
114	Azocarbazole Polymethacrylates as Single-Component Electrooptic Materials. <i>Macromolecules</i> , 1998, 31, 4845-4851.	4.8	69
115	Model of laser-driven mass transport in thin films of dye-functionalized polymers. <i>Journal of Chemical Physics</i> , 1998, 109, 1505-1516.	3.0	336
116	Molecular Addressing? Selective Photoinduced Cooperative Motion of Polar Ester Groups in Copolymers Containing Azobenzene Groups. <i>Macromolecules</i> , 1998, 31, 1155-1161.	4.8	111
117	Mechanism of Optically Inscribed High-Efficiency Diffraction Gratings in Azo Polymer Films. <i>The Journal of Physical Chemistry</i> , 1996, 100, 8836-8842.	2.9	478
118	Release kinetics of fluphenazine from biodegradable microspheres. <i>Journal of Microencapsulation</i> , 1992, 9, 415-423.	2.8	20
119	Amorphous Azobenzene Polymers for Light-Induced Surface Patterning. , 0, , 145-175.		5
120	After 200 Years: The Structure of Bleach and Characterization of Hypohalite Ions by Single-Crystal X-Ray Diffraction**. <i>Angewandte Chemie</i> , 0, , .	2.0	0