Bryan W Boudouris

List of Publications by Year
in descending order

99 papers	3,992 citations	126907 33 h-index	123424 61 g-index
101 all docs	101 docs citations	101 times ranked	5321 citing authors

#	Article	IF	Citations
1	Controlling inelastic light scattering quantum pathways in graphene. Nature, 2011, 471, 617-620.	27.8	492
2	Molecular engineering of organicâ€“inorganic hybrid perovskites quantum wells. Nature Chemistry, 2019, 11, 1151-1157.	13.6	302
3	A nonconjugated radical polymer glass with high electrical conductivity. Science, 2018, 359, 1391-1395.	12.6	203
4	Nanoporous Poly(3-alkylthiophene) Thin Films Generated from Block Copolymer Templates. Macromolecules, 2008, 41, 67-75.	4.8	182
5	Tuning Polythiophene Crystallization through Systematic Side Chain Functionalization. Macromolecules, 2010, 43, 7895-7899.	4.8	148
6	Radical Polymers and Their Application to Organic Electronic Devices. Macromolecules, 2014, 47, 6145-6158.	4.8	137
7	Poly(3-alkylthiophene) Diblock Copolymers with Ordered Microstructures and Continuous Semiconducting Pathways. Journal of the American Chemical Society, 2011, 133, 9270-9273.	13.7	117
8	Real-Time Observation of Poly(3-alkylthiophene) Crystallization and Correlation with Transient Optoelectronic Properties. Macromolecules, 2011, 44, 6653-6658.	4.8	99
9	Controlled Radical Polymerization and Quantification of Solid State Electrical Conductivities of Macromolecules Bearing Pendant Stable Radical Groups. ACS Applied Materials & Interfaces, 2013, 5, 9896-9901.	8.0	93
10	Intramolecular Exciton Relaxation and Migration Dynamics in Poly(3-hexylthiophene). Journal of Physical Chemistry C, 2007, 111, 15404-15414.	3.1	89
11	Tunable nanoporous membranes with chemically-tailored pore walls from triblock polymer templates. Journal of Membrane Science, 2014, 470, 246-256.	8.2	88
12	Solid State Electrical Conductivity of Radical Polymers as a Function of Pendant Group Oxidation State. Macromolecules, 2014, 47, 3713-3719.	4.8	85
13	Nanoporous membranes generated from selfâ€assembled block polymer precursors: <i><scp>Q</scp>uo <scp>V</scp>adis</i>?. Journal of Applied Polymer Science, 2015, 132, .	2.6	72
14	Fit-for-purpose block polymer membranes molecularly engineered for water treatment. Npj Clean Water, 2018, 1, .	8.0	72
15	Unusually Stable Hysteresis in the pH-Response of Poly(Acrylic Acid) Brushes Confined within Nanoporous Block Polymer Thin Films. Journal of the American Chemical Society, 2016, 138, 7030-7039.	13.7	70
16	Stable Radical Materials for Energy Applications. Annual Review of Chemical and Biomolecular Engineering, 2018, 9, 83-103.	6.8	70
17	Block Polymer Membranes Functionalized with Nanoconfined Polyelectrolyte Brushes Achieve Sub-Nanometer Selectivity. ACS Macro Letters, 2017, 6, 726-732.	4.8	63
18	Rapid, continuous projection multi-photon 3D printing enabled by spatiotemporal focusing of femtosecond pulses. Light: Science and Applications, 2021, 10, 199.	16.6	57

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19	High-Affinity Detection and Capture of Heavy Metal Contaminants using Block Polymer Composite Membranes. ACS Central Science, 2018, 4, 1697-1707.	11.3	56
20	Ligand-Driven Grain Engineering of High Mobility Two-Dimensional Perovskite Thin-Film Transistors. Journal of the American Chemical Society, 2021, 143, 15215-15223.	13.7	55
21	Synthesis, Optical Properties, and Microstructure of a Fullerene-Terminated Poly(3-hexylthiophene). Macromolecules, 2009, 42, 4118-4126.	4.8	54
22	Thermoelectric Performance of an Open-Shell Donorâ€"Acceptor Conjugated Polymer Doped with a Radical-Containing Small Molecule. Macromolecules, 2018, 51, 3886-3894.	4.8	51
23	Two-dimensional halide perovskites featuring semiconducting organic building blocks. Materials Chemistry Frontiers, 2020, 4, 3400-3418.	5.9	50
24	Recent advances in the syntheses of radical-containing macromolecules. Journal of Polymer Science Part A, 2016, 54, 1875-1894.	2.3	49
25	100th Anniversary of Macromolecular Science Viewpoint: Recent Advances and Opportunities for Mixed Ion and Charge Conducting Polymers. ACS Macro Letters, 2020, 9, 646-655.	4.8	49
26	Nanoporous Block Polymer Thin Films Functionalized with Bio-Inspired Ligands for the Efficient Capture of Heavy Metal Ions from Water. ACS Applied Materials & Interfaces, 2017, 9, 19152-19160.	8.0	48
27	Radical polymers as interfacial layers in inverted hybrid perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 23831-23839.	10.3	44
28	Nanostructured Membranes from Triblock Polymer Precursors as High Capacity Copper Adsorbents. Langmuir, 2015, 31, 11113-11123.	3.5	41
29	All-printed stretchable corneal sensor on soft contact lenses for noninvasive and painless ocular electrodiagnosis. Nature Communications, 2021, 12, 1544.	12.8	41
30	Defect Characterization in Organic Semiconductors by Forward Bias Capacitanceâ€"Voltage (FB-CV) Analysis. Journal of Physical Chemistry C, 2014, 118, 17461-17466.	3.1	40
31	Polylactideâˆ'Polythiopheneâˆ'Polylactide Triblock Copolymers. Macromolecules, 2010, 43, 3566-3569.	4.8	39
32	Electronic and Spintronic Open-Shell Macromolecules,<i>Quo Vadis</i>?. Journal of the American Chemical Society, 2022, 144, 626-647.	13.7	38
33	Highly Transparent Crosslinkable Radical Copolymer Thin Film as the Ion Storage Layer in Organic Electrochromic Devices. ACS Applied Materials & Interfaces, 2018, 10, 18956-18963.	8.0	37
34	Molecular Design Features for Charge Transport in Nonconjugated Radical Polymers. Journal of the American Chemical Society, 2021, 143, 11994-12002.	13.7	35
35	Nanoscale Mapping of Dielectric Properties of Nanomaterials from Kilohertz to Megahertz Using Ultrasmall Cantilevers. ACS Nano, 2016, 10, 4062-4071.	14.6	32
36	Quantification of the solid-state charge mobility in a model radical polymer. Applied Physics Letters, 2014, 104, .	3.3	31

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37	High-Spin (<i>S</i> = 1) Blatter-Based Diradical with Robust Stability and Electrical Conductivity. Journal of the American Chemical Society, 2022, 144, 6059-6070.	13.7	30
38	Engineering optoelectronically active macromolecules for polymer-based photovoltaic and thermoelectric devices. Current Opinion in Chemical Engineering, 2013, 2, 294-301.	7.8	28
39	Suppressing the environmental dependence of the openâ€circuit voltage in inverted polymer solar cells through a radical polymer anodic modifier. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 311-316.	2.1	28
40	Tuning the Thermoelectric Properties of a Conducting Polymer through Blending with Open-Shell Molecular Dopants. ACS Applied Materials & Interfaces, 2015, 7, 18195-18200.	8.0	28
41	Impact of the Addition of Redox-Active Salts on the Charge Transport Ability of Radical Polymer Thin Films. Macromolecules, 2016, 49, 4784-4791.	4.8	28
42	Thermoelectric Performance of Lead-Free Two-Dimensional Halide Perovskites Featuring Conjugated Ligands. Nano Letters, 2021, 21, 7839-7844.	9.1	28
43	Systematic Control of the Nanostructure of Semiconducting-Ferroelectric Polymer Composites in Thin Film Memory Devices. ACS Macro Letters, 2015, 4, 293-297.	4.8	27
44	Nanomanufacturing of high-performance hollow fiber nanofiltration membranes by coating uniform block polymer films from solution. Journal of Materials Chemistry A, 2017, 5, 3358-3370.	10.3	27
45	Organic Radical Polymers. SpringerBriefs in Materials, 2017, , .	0.3	26
46	Collection-limited theory interprets the extraordinary response of single semiconductor organic solar cells. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11193-11198.	7.1	24
47	Controlling openâ€shell loading in norborneneâ€based radical polymers modulates the solidâ€state charge transport exponentially. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 1516-1525.	2.1	24
48	Fabrication of silver nanostructures using femtosecond laser-induced photoreduction. Nanotechnology, 2017, 28, 505302.	2.6	24
49	Designing Donorâ€“Acceptor Copolymers for Stable and High-Performance Organic Electrochemical Transistors. ACS Macro Letters, 2021, 10, 1061-1067.	4.8	24
50	Tailored thioxanthoneâ€based photoinitiators for twoâ€photonâ€controllable polymerization and nanolithographic printing. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 1462-1475.	2.1	23
51	Mixed Ionic and Electronic Conduction in Radical Polymers. Macromolecules, 2020, 53, 4435-4441.	4.8	21
52	Design of Super-Paramagnetic Coreâ€“Shell Nanoparticles for Enhanced Performance of Inverted Polymer Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 25061-25068.	8.0	19
53	Substituted Thioxanthone-Based Photoinitiators for Efficient Two-Photon Direct Laser Writing Polymerization with Two-Color Resolution. ACS Applied Polymer Materials, 2021, 3, 1426-1435.	4.4	19
54	Intramolecular Exciton Diffusion in Poly(3-hexylthiophene). Journal of Physical Chemistry Letters, 2013, 4, 3445-3449.	4.6	18

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55	Radical polymers improve the metal-semiconductor interface in organic field-effect transistors. Organic Electronics, 2016, 37, 148-154.	2.6	17
56	Solution-based synthesis and characterization of earth abundant Cu₃(As,Sb)Se₄ nanocrystal alloys: towards scalable room-temperature thermoelectric devices. Journal of Materials Chemistry A, 2016, 4, 2198-2204.	10.3	17
57	Surface tension behavior of aqueous solutions of a propoxylated surfactant and interfacial tension behavior against a crude oil. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 537, 163-172.	4.7	17
58	Structure, properties and applications of thermoelectric polymers. Journal of Applied Polymer Science, 2017, 134, .	2.6	16
59	Device Engineering in Organic Electrochemical Transistors toward Multifunctional Applications. ACS Applied Electronic Materials, 2021, 3, 2434-2448.	4.3	16
60	An evaluation of complementary approaches to elucidate fundamental interfacial phenomena driving adhesion of energetic materials. Journal of Colloid and Interface Science, 2016, 473, 28-33.	9.4	14
61	Enhancing polymer thermoelectric performance using radical dopants. Organic Electronics, 2017, 51, 243-248.	2.6	14
62	Design of an n-type low glass transition temperature radical polymer. Polymer Chemistry, 2021, 12, 1448-1457.	3.9	13
63	Synthesis and thin-film self-assembly of radical-containing diblock copolymers. MRS Communications, 2015, 5, 257-263.	1.8	12
64	Modifying the Surface Chemistry and Nanostructure of Carbon Nanotubes Facilitates the Detection of Aromatic Hydrocarbon Gases. ACS Applied Nano Materials, 2020, 3, 10389-10398.	5.0	12
65	Radical Polymer-Based Organic Electrochemical Transistors. ACS Macro Letters, 2022, 11, 243-250.	4.8	11
66	Polymerization Rate Considerations for High Molecular Weight Polyisopreneâ€<i>b</i>â€Polystyreneâ€<i>b</i>â€Poly(<i>N</i>,<i>N</i>â€dimethylacrylamide) Triblock Polymers Synthesized Via Sequential Reversible Additionâ€Fragmentation Chain Transfer (RAFT) Reactions. Macromolecular Chemistry and Physics, 2015, 216, 1831-1840.	2.2	10
67	A rheometry method to assess the evaporationâ€induced mechanical strength development of polymer solutions used for membrane applications. Journal of Applied Polymer Science, 2019, 136, 47038.	2.6	9
68	Manipulating polymer composition to create low-cost, high-fidelity sensors for indoor CO2 monitoring. Scientific Reports, 2021, 11, 13237.	3.3	9
69	Two-Dimensional Organic Semiconductor-Incorporated Perovskite (OSiP) Electronics. ACS Applied Electronic Materials, 2021, 3, 5155-5164.	4.3	9
70	Design of a three-state switchable chromogenic radical-based moiety and its translation to molecular logic systems. Molecular Systems Design and Engineering, 2017, 2, 159-164.	3.4	8
71	Organic Cation Engineering for Vertical Charge Transport in Leadâ€Free Perovskite Quantum Wells. Small Science, 2021, 1, 2000024.	9.9	8
72	Design of Mixed Electron- and Ion-Conducting Radical Polymer-Based Blends. Macromolecules, 2021, 54, 5178-5186.	4.8	8

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73	Design of freeâ€standing microstructured conducting polymer films for enhanced particle removal from nonâ€uniform surfaces. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1968-1974.	2.1	7
74	Electronic and Magnetic Properties of a Three-Arm Nonconjugated Open-Shell Macromolecule. ACS Polymers Au, 2022, 2, 59-68.	4.1	6
75	Design Considerations for Nextâ€Generation Polymer Sorbents: From Polymer Chemistry to Device Configurations. Macromolecular Chemistry and Physics, 2022, 223, .	2.2	6
76	On the Environmental and Electrical Bias Stability of Radical Polymer Conductors in the Solid State. Macromolecular Chemistry and Physics, 2016, 217, 477-484.	2.2	5
77	Phase and rheological behavior of aqueous mixtures of an isopropoxylated surfactant. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 554, 60-73.	4.7	5
78	Radical Polymers Alter the Carrier Properties of Semiconducting Carbon Nanotubes. ACS Applied Polymer Materials, 2019, 1, 204-210.	4.4	5
79	Rethinking the Analysis of the Linear Viscoelastic Behavior of an Epoxy Polymer near and above the Glass Transition. Macromolecules, 2020, 53, 1867-1880.	4.8	5
80	Highâ€Speed Oneâ€Photon 3D Nanolithography Using Controlled Initiator Depletion and Inhibitor Transport. Advanced Optical Materials, 2022, 10, .	7.3	5
81	Effect of intrachain sulfonic acid dopants on the solid-state charge mobility of a model radical polymer. Thin Solid Films, 2015, 577, 56-61.	1.8	4
82	Impact of surface chemistry on the adhesion of an energetic small molecule to a conducting polymer surface. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 551, 74-80.	4.7	4
83	Solution selfâ€assembly behavior of A â€•B â€•C triblock polymers and the implications for nanoporous membrane fabrication. Journal of Applied Polymer Science, 2018, 135, 45531.	2.6	4
84	Effects of the water-oil volume ratio and premixing or pre-equilibration on the interfacial tension and phase behavior of biphasic mixtures. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 571, 55-63.	4.7	4
85	Modifying field-effect transistor response in a conjugated polymer upon the addition of radical dopants. Thin Solid Films, 2020, 714, 138391.	1.8	4
86	A Chemiresistive CO₂ Sensor Based on CNT-Functional Polymer Composite Films. , 2020, , .		4
87	Impact of openâ€shell loading on mass transport and doping in conjugated radical polymers. Journal of Polymer Science, 0, , .	3.8	4
88	Analyzing adhesion in microstructured systems through a robust computational approach. Surface and Interface Analysis, 2017, 49, 1165-1170.	1.8	3
89	Energetic Microparticle Adhesion to Functionalized Surfaces. Propellants, Explosives, Pyrotechnics, 2018, 43, 862-868.	1.6	3
90	Tuning the interfacial and energetic interactions between a photoexcited conjugated polymer and open-shell small molecules. Soft Matter, 2019, 15, 1413-1422.	2.7	3

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91	A Resonant CO₂ Sensor Functionalized with a Polymerized Ionic Liquid. , 2019, , .		3
92	Relationship of Various Interfacial Tensions of Surfactants/Brine/Oil Formulations to Oil Recovery Efficiency. Energy & Fuels, 2021, 35, 7768-7777.	5.1	3
93	A Carbon Nanotube-Functional Polymer Composite Film for Low-Power Indoor COâ‚‚ Monitoring. IEEE Sensors Journal, 2022, 22, 11233-11240.	4.7	3
94	Applications of Radical Polymers in Solid-State Devices. SpringerBriefs in Materials, 2017, , 57-71.	0.3	2
95	Poly (5-carboxyindole)â€"Î²-cyclodextrin composite material for enhanced formaldehyde gas sensing. Journal of Materials Science, 2022, 57, 11460-11474.	3.7	2
96	Accurate Determination of the Equilibrium Surface Tension Values with Area Perturbation Tests. Journal of Visualized Experiments, 2019, , .	0.3	1
97	Sorption Kinetics of Poly(ethyleneimine)â€"Poly(ethylene Oxide) Blends and the Implication for Low-Cost, Small-Scale CO₂ Sensors. ACS Applied Polymer Materials, 2022, 4, 4389-4397.	4.4	1
98	A Vapor Phase Trinitrotoluene Threshold Detector Enabled by Nonlinear Feedback. , 2020, 4, 1-4.		0
99	Conductive Polymer Spark Gap Igniters. Propellants, Explosives, Pyrotechnics, 2021, 46, 1500.	1.6	0