Gregory A Sotzing

List of Publications by Year
in descending order

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126 papers	7,354 citations	57758 44 h-index	56724 83 g-index
129 all docs	129 docs citations	129 times ranked	7050 citing authors

#	Article	IF	Citations
1	Cross-Reactive Chemical Sensor Arrays. Chemical Reviews, 2000, 100, 2595-2626.	47.7	1,194
2	High Contrast Ratio and Fast-Switching Dual Polymer Electrochromic Devices. Chemistry of Materials, 1998, 10, 2101-2108.	6.7	414
3	Electrochromic Conducting Polymers via Electrochemical Polymerization of Bis(2-(3,4-ethylenedioxy)thienyl) Monomers. Chemistry of Materials, 1996, 8, 882-889.	6.7	328
4	Rational design of all organic polymer dielectrics. Nature Communications, 2014, 5, 4845.	12.8	259
5	Conductivity Trends of PEDOT-PSS Impregnated Fabric and the Effect of Conductivity on Electrochromic Textile. ACS Applied Materials & Interfaces, 2010, 2, 1588-1593.	8.0	191
6	Multiply Colored Electrochromic Carbazole-Based Polymers. Chemistry of Materials, 1997, 9, 1578-1587.	6.7	188
7	Poly(3,4-ethylenedioxythiophene) (PEDOT) prepared via electrochemical polymerization of EDOT, 2,2?-Bis(3,4-ethylenedioxythiophene) (BiEDOT), and their TMS derivatives. Advanced Materials, 1997, 9, 795-798.	21.0	170
8	Rational Coâ€Design of Polymer Dielectrics for Energy Storage. Advanced Materials, 2016, 28, 6277-6291.	21.0	149
9	Rapid switching solid state electrochromic devices based on complementary conducting polymer films. Advanced Materials, 1996, 8, 808-811.	21.0	139
10	Inkjet-printed gold nanoparticle electrochemical arrays on plastic. Application to immunodetection of a cancer biomarker protein. Physical Chemistry Chemical Physics, 2011, 13, 4888.	2.8	132
11	Flexible Temperatureâ€Invariant Polymer Dielectrics with Large Bandgap. Advanced Materials, 2020, 32, e2000499.	21.0	128
12	All-Organic Electrochromic Spandex. ACS Applied Materials & Interfaces, 2010, 2, 296-300.	8.0	120
13	Screen-Printed PEDOT:PSS Electrodes on Commercial Finished Textiles for Electrocardiography. ACS Applied Materials & Interfaces, 2017, 9, 37524-37528.	8.0	119
14	PEDOT:PSS â€œWiresâ€•Printed on Textile for Wearable Electronics. ACS Applied Materials & Interfaces, 2016, 8, 26998-27005.	8.0	117
15	Electroactive and luminescent polymers: new fluorene-heterocycle-based hybrids. Journal of Materials Chemistry, 1999, 9, 2189-2200.	6.7	113
16	Preparation and Properties of Vapor Detector Arrays Formed from Poly(3,4-ethylenedioxy)thiopheneâ^'Poly(styrene sulfonate)/Insulating Polymer Composites. Analytical Chemistry, 2000, 72, 3181-3190.	6.5	112
17	Poly(thieno[3,4-b]thiophene):Â A p- and n-Dopable Polythiophene Exhibiting High Optical Transparency in the Semiconducting State. Macromolecules, 2002, 35, 7281-7286.	4.8	103
18	Poly(thieno[3,4-b]thiophene). A New Stable Low Band Gap Conducting Polymer. Macromolecules, 2001, 34, 5746-5747.	4.8	101

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19	A review of organic electrochromic fabric devices. Coloration Technology, 2014, 130, 73-80.	1.5	98
20	Rationally Designed Polyimides for High-Energy Density Capacitor Applications. ACS Applied Materials & Interfaces, 2014, 6, 10445-10451.	8.0	98
21	Highly Sensitive Detection and Discrimination of Biogenic Amines Utilizing Arrays of Polyaniline/Carbon Black Composite Vapor Detectors. Chemistry of Materials, 2000, 12, 593-595.	6.7	95
22	Preparation of Conductive Polypyrrole/Polyurethane Composite Foams by In situ Polymerization of Pyrrole. Chemistry of Materials, 2008, 20, 2574-2582.	6.7	86
23	Rational design and synthesis of polythioureas as capacitor dielectrics. Journal of Materials Chemistry A, 2015, 3, 14845-14852.	10.3	81
24	Rapid Direct Nanowriting of Conductive Polymer via Electrochemical Oxidative Nanolithography. Journal of the American Chemical Society, 2004, 126, 9476-9477.	13.7	80
25	Conjugated Polymers via Electrochemical Polymerization of Thieno[3,4-b]thiophene (T34bT) and 3,4-Ethylenedioxythiophene (EDOT). Langmuir, 2003, 19, 9479-9485.	3.5	75
26	Frequency-dependent dielectric constant prediction of polymers using machine learning. Npj Computational Materials, 2020, 6, .	8.7	75
27	Low Band Gap Cyanovinylene Polymers Based on Ethylenedioxythiophene. Macromolecules, 1998, 31, 3750-3752.	4.8	74
28	High energy density and high efficiency all-organic polymers with enhanced dipolar polarization. Journal of Materials Chemistry A, 2019, 7, 15026-15030.	10.3	72
29	Acrylated Poly(3,4-propylenedioxythiophene) for Enhancement of Lifetime and Optical Properties for Single-Layer Electrochromic Devices. ACS Applied Materials & Interfaces, 2014, 6, 1734-1739.	8.0	68
30	Poly(dimethyltin glutarate) as a Prospective Material for High Dielectric Applications. Advanced Materials, 2015, 27, 346-351.	21.0	64
31	Wiring of Enzymes to Electrodes by Ultrathin Conductive Polyion Underlayers:Â Enhanced Catalytic Response to Hydrogen Peroxide. Analytical Chemistry, 2003, 75, 4565-4571.	6.5	59
32	Poly[bis(pyrrol-2-yl)arylenes]:Â Conducting Polymers from Low Oxidation Potential Monomers Based on Pyrrole via Electropolymerization. Macromolecules, 1996, 29, 1679-1684.	4.8	57
33	Electrospinning nanoribbons of a bioengineered silk-elastin-like protein (SELP) from water. Polymer, 2009, 50, 5828-5836.	3.8	57
34	Intrinsically Conducting Polymer Networks of Poly(thiophene) via Solid-State Oxidative Cross-Linking of a Poly(norbornylene) Containing Terthiophene Moieties. Macromolecules, 2002, 35, 7293-7300.	4.8	56
35	Preparation of the thermally stable conducting polymer PEDOT â€“ Sulfonated poly(imide). Polymer, 2010, 51, 1231-1236.	3.8	56
36	A simple, low waste and versatile procedure to make polymer electrochromic devices. Journal of Materials Chemistry, 2011, 21, 11873.	6.7	56

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37	Flexible polyolefin dielectric by strategic design of organic modules for harsh condition electrification. Energy and Environmental Science, 2022, 15, 1307-1314.	30.8	56
38	Preparation of conductive graphene/graphite infused fabrics using an interface trapping method. Carbon, 2015, 81, 38-42.	10.3	55
39	Preparation of Conjugated Polymers Inside Assembled Solidâ€State Devices. Advanced Materials, 2010, 22, 1379-1382.	21.0	54
40	Rational Design of Organotin Polyesters. Macromolecules, 2015, 48, 2422-2428.	4.8	54
41	Poly[1,4-bis(pyrrol-2-yl)phenylene]: A New Electrically Conducting and Electroactive Polymer Containing the Bipyrrole-Phenylene Repeat Unit. Macromolecules, 1994, 27, 7225-7227.	4.8	48
42	Optimization, preparation, and electrical short evaluation for 30cm2 active area dual conjugated polymer electrochromic windows. Organic Electronics, 2007, 8, 367-381.	2.6	48
43	Poly(3,4-propylenedioxythiophene)s as a Single Platform for Full Color Realization. Macromolecules, 2011, 44, 2415-2417.	4.8	48
44	Gold Nanoparticles with Externally Controlled, Reversible Shifts of Local Surface Plasmon Resonance Bands. Langmuir, 2009, 25, 13120-13124.	3.5	46
45	Solid-state electrochromic devices: relationship of contrast as a function of device preparation parameters. Journal of Materials Chemistry C, 2014, 2, 2510-2516.	5.5	46
46	Color tuning of black for electrochromic polymers using precursor blends. Chemical Communications, 2013, 49, 5192.	4.1	44
47	Electrochromic properties as a function of electrolyte on the performance of electrochromic devices consisting of a single-layer polymer. Organic Electronics, 2014, 15, 1378-1386.	2.6	44
48	Conductive Polymer Foams as Sensors for Volatile Amines. Chemistry of Materials, 2003, 15, 375-377.	6.7	43
49	All-organic flexible fabric antenna for wearable electronics. Journal of Materials Chemistry C, 2020, 8, 5662-5667.	5.5	43
50	Polythieno[3,4-b]thiophene as an Optically Transparent Ion-Storage Layer. Chemistry of Materials, 2009, 21, 3332-3336.	6.7	40
51	High contrast solid-state electrochromic devices from substituted 3,4-propylenedioxythiophenes using the dual conjugated polymer approach. Synthetic Metals, 2007, 157, 261-268.	3.9	38
52	Poly(thieno[3,4-b]furan), a New Low Band Gap Polymer: Experiment and Theory. Macromolecules, 2008, 41, 7098-7108.	4.8	38
53	Phase Segregation of PEDOT:PSS on Textile to Produce Materials of >10 A mm^{â^'2} Current Carrying Capacity. Macromolecular Materials and Engineering, 2017, 302, 1600348.	3.6	38
54	Poly(thieno[3,4-b]thiophene)â^'Poly(styrene sulfonate):Â A Low Band Gap, Water Dispersible Conjugated Polymer. Langmuir, 2005, 21, 10797-10802.	3.5	37

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55	Comparison of the thermally stable conducting polymers PEDOT, PANi, and PPy using sulfonated poly(imide) templates. Polymer, 2010, 51, 4472-4476.	3.8	37
56	Poly(thieno[3,4-b]thiophene)s from Three Symmetrical Thieno[3,4-b]thiophene Dimers. Macromolecules, 2006, 39, 3118-3124.	4.8	36
57	Enhanced fluorescence in electrospun dye-doped DNA nanofibers. Soft Matter, 2008, 4, 1448.	2.7	35
58	Structureâ€“property relationship of polyimides based on pyromellitic dianhydride and shortâ€chain aliphatic diamines for dielectric material applications. Journal of Applied Polymer Science, 2013, 130, 1276-1280.	2.6	34
59	Poly(thiophene)s Prepared via Electrochemical Solid-State Oxidative Cross-Linking. A Comparative Study. Macromolecules, 2004, 37, 4351-4359.	4.8	33
60	Optimization of Organotin Polymers for Dielectric Applications. ACS Applied Materials & Interfaces, 2016, 8, 21270-21277.	8.0	33
61	Solidâ€State Highâ€Throughput Screening for Color Tuning of Electrochromic Polymers. Advanced Materials, 2013, 25, 6256-6260.	21.0	31
62	Solidâ€State Conversion of Processable 3,4â€Ethylenedioxythiophene (EDOT) Containing Poly(arylsilane) Precursors to Ï€â€Conjugated Conducting Polymers. Advanced Materials, 2008, 20, 1175-1178.	21.0	29
63	Effect of Incorporating Aromatic and Chiral Groups on the Dielectric Properties of Poly(dimethyltin) Tj ETQq1 1 0.784314 rgBT /Overlo	3.9	29
64	Sorption of iodine by polyurethane and melamine-formaldehyde foams using iodine sublimation and iodine solutions. Polymer, 2006, 47, 2728-2740.	3.8	28
65	Facile chemical synthesis of DNA-doped PEDOT. Synthetic Metals, 2010, 160, 351-353.	3.9	27
66	Enhanced conductivity in sorbitol-treated PEDOTâ€“PSS. Observation of an in situ cyclodehydration reaction. Synthetic Metals, 2010, 160, 2284-2289.	3.9	27
67	The effects of coloured base fabric on electrochromic textile. Coloration Technology, 2011, 127, 167-172.	1.5	27
68	A rational co-design approach to the creation of new dielectric polymers with high energy density. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 732-743.	2.9	26
69	Electronic Structure of Polymer Dielectrics: The Role of Chemical and Morphological Complexity. Chemistry of Materials, 2018, 30, 7699-7706.	6.7	26
70	Photopatterned electrochromic conjugated polymer films via precursor approach. Polymer, 2008, 49, 3686-3692.	3.8	24
71	Nanofiber Alignment on a Flexible Substrate: Hierarchical Order from Macro to Nano. ACS Applied Materials & Interfaces, 2009, 1, 2093-2097.	8.0	24
72	Allâ€Organic Flexible Ferroelectret Nanogenerator with Fabricâ€Based Electrodes for Selfâ€Powered Body Area Networks. Small, 2021, 17, e2103161.	10.0	24

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73	Modified processing techniques of a DNA biopolymer for enhanced performance in photonics applications. Applied Physics Letters, 2012, 101, .	3.3	23
74	Polyelectrolytes exceeding ITO flexibility in electrochromic devices. Journal of Materials Chemistry C, 2014, 2, 9874-9881.	5.5	23
75	Graphene and Poly(3,4-ethylene dioxythiophene):Poly(4-styrenesulfonate) on Nonwoven Fabric as a Room Temperature Metal and Its Application as Dry Electrodes for Electrocardiography. ACS Applied Materials & Interfaces, 2019, 11, 32339-32345.	8.0	23
76	Water Dispersible Low Band Gap Conductive Polymer Based on Thieno[3,4-b]thiophene. Synthetic Metals, 2005, 152, 177-180.	3.9	22
77	Enhancement of poly(3,4-ethylenedioxy thiophene)/poly(styrene sulfonate) properties by poly(vinyl) Tj ETQq1 1 0.784314 rgBT /Over Materials Science: Materials in Electronics, 2013, 24, 2897-2905.	2.2	22
78	Flexible cyclic-olefin with enhanced dipolar relaxation for harsh condition electrification. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	22
79	Improving the Rotational Freedom of Polyetherimide: Enhancement of the Dielectric Properties of a Commodity High-Temperature Polymer Using a Structural Defect. Chemistry of Materials, 2022, 34, 6553-6558.	6.7	22
80	Poly(thieno[3,4-b]furan). A New Low Band Gap Conjugated Polymer. Macromolecules, 2006, 39, 2723-2725.	4.8	21
81	Variable-color poly(3,4-propylenedioxythiophene) electrochromics from precursor polymers. Polymer, 2010, 51, 378-382.	3.8	21
82	Colorâ€Tuning Neutrality for Flexible Electrochromics Via a Singleâ€Layer Dual Conjugated Polymer Approach. Advanced Materials, 2014, 26, 8004-8009.	21.0	20
83	Dielectric Polymers Tolerant to Electric Field and Temperature Extremes: Integration of Phenomenology, Informatics, and Experimental Validation. ACS Applied Materials & Interfaces, 2021, 13, 53416-53424.	8.0	20
84	Snâ€Polyester/Polyimide Hybrid Flexible Freeâ€Standing Film as a Tunable Dielectric Material. Macromolecular Rapid Communications, 2019, 40, e1800679.	3.9	19
85	Colorless to black electrochromic devices using subtractive color mixing of two electrochromes: A conjugated polymer with a small organic molecule. Organic Electronics, 2020, 84, 105748.	2.6	19
86	Dipole-relaxation dynamics in a modified polythiourea with high dielectric constant for energy storage applications. Applied Physics Letters, 2019, 115, .	3.3	18
87	Polymerization of Two Unsymmetrical Isomeric Monomers Based on Thieno[3,4-b]thiophene Containing Cyanovinylene Spacers. Chemistry of Materials, 2004, 16, 5644-5649.	6.7	17
88	Neutral color tuning of polymer electrochromic devices using an organic dye. Chemical Communications, 2014, 50, 8167.	4.1	17
89	Nanostructured ion gels from liquid crystalline block copolymers and gold nanoparticles in ionic liquids: manifestation of mechanical and electrochemical properties. Journal of Materials Chemistry C, 2015, 3, 399-408.	5.5	17
90	Molecular Engineering: Flexible Temperatureâ€Invariant Polymer Dielectrics with Large Bandgap (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 T	21.0	17

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91	Electrochromic Fabric Displays from a Robust, Openâ€Air Fabrication Technique. Advanced Materials Technologies, 2022, 7, 2100548.	5.8	16
92	Effects of the addition of anionic surfactant during template polymerization of conducting polymers containing pedot with sulfonated poly(imide) and poly(styrene sulfonate) as templates for nano-thin film applications. Synthetic Metals, 2013, 179, 10-17.	3.9	15
93	Nanopatterned Electrochromic Conjugated Poly(terthiophene)s via Thermal Nanoimprint Lithography of Precursor Polymer. Journal of Macromolecular Science - Pure and Applied Chemistry, 2007, 44, 1305-1309.	2.2	14
94	Versatile synthesis of 3,4-b diheteropentalenes. Tetrahedron Letters, 2010, 51, 2089-2091.	1.4	14
95	Fabrication of DNAâ€“magnetite hybrid nanofibers for water detoxification. Materials Letters, 2011, 65, 219-221.	2.6	14
96	Stabilization of fluorophore in DNA thin films. Applied Physics Letters, 2009, 95, .	3.3	13
97	Polymer-mediated cyclodehydration of alditols and ketohexoses. Carbohydrate Research, 2011, 346, 1662-1670.	2.3	13
98	Rollâ€toâ€Roll Production of Novel Largeâ€Area Piezoelectric Films for Transparent, Flexible, and Wearable Fabric Loudspeakers. Advanced Materials Technologies, 2020, 5, 2000296.	5.8	13
99	Green and Blue Electrochromic Polymers from Processable Siloxane Precursors. Chemistry of Materials, 2013, 25, 2898-2904.	6.7	12
100	Sulfonated polyimide as a thermally stable template for water processable conductive polymers. Synthetic Metals, 2012, 162, 941-947.	3.9	9
101	Furan/imide Dielsâ€“Alder polymers as dielectric materials. Journal of Applied Polymer Science, 2014, 131, .	2.6	9
102	Orthogonal alignment of DNA using hexafluoroisopropanol as solvent for film castings. RSC Advances, 2014, 4, 39798-39801.	3.6	9
103	Dielsâ€“Alder polysulfones as dielectric materials: Computational guidance & synthesis. Polymer, 2014, 55, 3573-3578.	3.8	9
104	Chemical reactions of the conducting polymer poly(3,4-ethylene dioxythiophene) and alcohols. Journal of Polymer Science Part A, 2007, 45, 2328-2333.	2.3	7
105	A material genome approach towards exploration of Zn and Cd coordination complex polyester as dielectrics: Design, synthesis and characterization. Polymer, 2018, 159, 95-105.	3.8	7
106	Long Vibrational Lifetime R-Selenocyanate Probes for Ultrafast Infrared Spectroscopy: Properties and Synthesis. Journal of Physical Chemistry B, 2021, 125, 8907-8918.	2.6	7
107	High dielectric constant and high breakdown strength polyimide via tin complexation of the polyamide acid precursor. RSC Advances, 2022, 12, 9095-9100.	3.6	7
108	Poly(terthiophene)s from copolymer precursors via solidâ€state oxidative conversion. Journal of Polymer Science Part A, 2010, 48, 756-763.	2.3	6

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109	Secondary dopants modified PEDOT-sulfonated poly(imide)s for high-temperature range application. Journal of Applied Polymer Science, 2013, 128, 3840-3845.	2.6	6
110	Conjugated polymers atypically prepared in water. Journal of Polymer Science Part A, 2010, 48, 2024-2031.	2.3	5
111	Modification of Novel Conductive PEDOT:Sulfonated Polyimide Nano-Thin Films by Anionic Surfactant and Poly(vinyl alcohol) for Electronic Applications. Journal of Electronic Materials, 2013, 42, 3471-3480.	2.2	5
112	Remarks on the Design of Flexible High-Temperature Polymer Dielectrics for Emerging Grand Electrification - Exemplified by Poly(oxa)norbornenes. IEEE Transactions on Dielectrics and Electrical Insulation, 2021, 28, 1468-1470.	2.9	5
113	Deep Well Trapping of Hot Carriers in a Hexagonal Boron Nitride Coating of Polymer Dielectrics. ACS Applied Materials & Interfaces, 2021, 13, 60393-60400.	8.0	5
114	Chemical stability of conducting polymers: Friedelâ€“Crafts reactions of alcohols with poly(3,4-ethylenedioxythiophene) (PEDOT). Polymer, 2007, 48, 4328-4336.	3.8	4
115	Surface grafting of electrochemically crosslinked poly(3,4-ethylenedioxythiophene) (PEDOT) brushes via surface-initiated ring-opening metathesis polymerization. European Polymer Journal, 2012, 48, 875-880.	5.4	4
116	Preparation and characterization of conductive polyimide-graft-polyaniline. Microelectronic Engineering, 2013, 104, 22-28.	2.4	4
117	Oxidative Solid-State Cross-Linking of Polymer Precursors to Pattern Intrinsically Conducting Polymers. ACS Symposium Series, 2004, , 44-53.	0.5	2
118	Optically Transparent Conducting Polymers from Fused Heterocycles. Materials Research Society Symposia Proceedings, 2006, 965, 1.	0.1	1
119	Experimental observation on the mixing systems and ways to significantly enhance the conductivity of PEDOT-sulfonated poly(imide) aqueous dispersion. Microelectronic Engineering, 2013, 111, 7-13.	2.4	1
120	Micropatterned Polythiophene Nanofibers via Electrostatic Spinning and Photolithography. Materials Research Society Symposia Proceedings, 2006, 948, 1.	0.1	0
121	Polymer-Mediated Reactions. A Nazarov-Like Cyclization. Synlett, 2011, 2011, 2195-2199.	1.8	0
122	Response of varactors containing DNA-conjugated polymer. , 2012, , .		0
123	Organometallic-Organic Hybrid System as Flexible Dielectric Material. , 2018, , .		0
124	Allâ€Organic Flexible Ferroelectret Nanogenerator with Fabricâ€Based Electrodes for Selfâ€Powered Body Area Networks (Small 33/2021). Small, 2021, 17, 2170170.	10.0	0
125	A Rational Co-Design Approach for Next Generation Dielectric Materials with the Transition Metal Containing Coordination Polymers. ECS Meeting Abstracts, 2017, , .	0.0	0
126	Tin-Polyester/Polyimide Hybrid System As Flexible Free- Standing Film with Tunable Dielectric Constant for Energy Storage Application. ECS Meeting Abstracts, 2018, , .	0.0	0