Elsa Reichmanis

List of Publications by Year
in descending order

128 papers	5,464 citations	57758 44 h-index	95266 68 g-index
130 all docs	130 docs citations	130 times ranked	6959 citing authors

#	Article	IF	Citations
1	Photopolymer Materials and Processes for Advanced Technologies. Chemistry of Materials, 2014, 26, 533-548.	6.7	306
2	Chemical amplification mechanisms for microlithography. Chemistry of Materials, 1991, 3, 394-407.	6.7	217
3	Molecular-channel driven actuator with considerations for multiple configurations and color switching. Nature Communications, 2018, 9, 590.	12.8	159
4	Polymer materials for microlithography. Chemical Reviews, 1989, 89, 1273-1289.	47.7	146
5	Nanoporous Ultralow Dielectric Constant Organosilicates Templated by Triblock Copolymers. Chemistry of Materials, 2002, 14, 369-374.	6.7	130
6	Elastomerâ€“Polymer Semiconductor Blends for High-Performance Stretchable Charge Transport Networks. Chemistry of Materials, 2016, 28, 1196-1204.	6.7	129
7	Nucleation, Growth, and Alignment of Poly(3-hexylthiophene) Nanofibers for High-Performance OFETs. Accounts of Chemical Research, 2017, 50, 932-942.	15.6	121
8	Tunable Crystallinity in Regioregular Poly(3â€Hexylthiophene) Thin Films and Its Impact on Field Effect Mobility. Advanced Functional Materials, 2011, 21, 2652-2659.	14.9	115
9	Enhancing Fieldâ€Effect Mobility of Conjugated Polymers Through Rational Design of Branched Side Chains. Advanced Functional Materials, 2014, 24, 3734-3744.	14.9	112
10	Ordering of Poly(3-hexylthiophene) in Solutions and Films: Effects of Fiber Length and Grain Boundaries on Anisotropy and Mobility. Chemistry of Materials, 2016, 28, 3905-3913.	6.7	103
11	Photoinduced Anisotropic Supramolecular Assembly and Enhanced Charge Transport of Poly(3â€hexylthiophene) Thin Films. Advanced Functional Materials, 2014, 24, 4457-4465.	14.9	102
12	Microfluidic Crystal Engineering of Ï€-Conjugated Polymers. ACS Nano, 2015, 9, 8220-8230.	14.6	102
13	Versatile Interpenetrating Polymer Network Approach to Robust Stretchable Electronic Devices. Chemistry of Materials, 2017, 29, 7645-7652.	6.7	101
14	Molecular Templating of Nanoporous Ultralow Dielectric Constant (â‰ˆ1.5) Organosilicates by Tailoring the Microphase Separation of Triblock Copolymers. Chemistry of Materials, 2001, 13, 2762-2764.	6.7	98
15	Additive-Free Hollow-Structured Co₃O₄ Nanoparticle Li-Ion Battery: The Origins of Irreversible Capacity Loss. ACS Nano, 2014, 8, 6701-6712.	14.6	94
16	Solvent Based Hydrogen Bonding: Impact on Poly(3-hexylthiophene) Nanoscale Morphology and Charge Transport Characteristics. ACS Nano, 2013, 7, 5402-5413.	14.6	88
17	Unipolar Electron Transport Polymers: A Thiazole Based All-Electron Acceptor Approach. Chemistry of Materials, 2016, 28, 6045-6049.	6.7	85
18	SWNT Anchored with Carboxylated Polythiophene â€œLinksâ€•on High-Capacity Li-Ion Battery Anode Materials. Journal of the American Chemical Society, 2018, 140, 5666-5669.	13.7	80

#	Article	IF	Citations
19	Molecular Engineering of Nonhalogenated Solution-Processable Bithiazole-Based Electron-Transport Polymeric Semiconductors. Chemistry of Materials, 2015, 27, 2928-2937.	6.7	79
20	The role of Cr doping in Ni Fe oxide/(oxy)hydroxide electrocatalysts for oxygen evolution. Electrochimica Acta, 2018, 265, 10-18.	5.2	79
21	Vertical Stratification Engineering for Organic Bulk-Heterojunction Devices. ACS Nano, 2018, 12, 4440-4452.	14.6	77
22	High Charge Carrier Mobility, Low Band Gap Donorâ€“Acceptor Benzothiadiazole-oligothiophene Based Polymeric Semiconductors. Chemistry of Materials, 2012, 24, 4123-4133.	6.7	76
23	Toward Precision Control of Nanofiber Orientation in Conjugated Polymer Thin Films: Impact on Charge Transport. Chemistry of Materials, 2016, 28, 9099-9109.	6.7	75
24	Organic Materials Challenges for 193 nm Imaging. Accounts of Chemical Research, 1999, 32, 659-667.	15.6	72
25	Controlled Assembly of Poly(3â€hexylthiophene): Managing the Disorder to Order Transition on the Nanoâ€through Mesoâ€Scales. Advanced Functional Materials, 2015, 25, 920-927.	14.9	72
26	Lowâ€Threshold Photon Upconversion Capsules Obtained by Photoinduced Interfacial Polymerization. Angewandte Chemie - International Edition, 2012, 51, 11841-11844.	13.8	68
27	Solvent Evaporation Induced Liquid Crystalline Phase in Poly(3-hexylthiophene). Journal of the American Chemical Society, 2011, 133, 7244-7247.	13.7	66
28	Control of Molecular Ordering, Alignment, and Charge Transport in Solution-Processed Conjugated Polymer Thin Films. Polymers, 2017, 9, 212.	4.5	66
29	Consensus statement: Standardized reporting of power-producing luminescent solar concentrator performance. Joule, 2022, 6, 8-15.	24.0	66
30	Ultrasound-Induced Ordering in Poly(3-hexylthiophene): Role of Molecular and Process Parameters on Morphology and Charge Transport. ACS Applied Materials & Interfaces, 2013, 5, 2368-2377.	8.0	65
31	Liquid Crystalline Poly(3-hexylthiophene) Solutions Revisited: Role of Time-Dependent Self-Assembly. Chemistry of Materials, 2015, 27, 2687-2694.	6.7	64
32	Modifying Perovskite Films with Polyvinylpyrrolidone for Ambient-Air-Stable Highly Bendable Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 35385-35394.	8.0	64
33	Plastic electronic devices: From materials design to device applications. Bell Labs Technical Journal, 2005, 10, 87-105.	0.7	62
34	High Performance Graphitic Carbon from Waste Polyethylene: Thermal Oxidation as a Stabilization Pathway Revisited. Chemistry of Materials, 2017, 29, 9518-9527.	6.7	61
35	Electron/Ion Transport Enhancer in High Capacity Li-Ion Battery Anodes. Chemistry of Materials, 2016, 28, 6689-6697.	6.7	60
36	Automated Analysis of Orientational Order in Images of Fibrillar Materials. Chemistry of Materials, 2017, 29, 3-14.	6.7	57

#	Article	IF	Citations
37	Synergistic Effect of Regioregular and Regiorandom Poly(3â€hexylthiophene) Blends for High Performance Flexible Organic Field Effect Transistors. Advanced Electronic Materials, 2016, 2, 1500384.	5.1	54
38	Imparting Chemical Stability in Nanoparticulate Silver via a Conjugated Polymer Casing Approach. ACS Applied Materials & Interfaces, 2012, 4, 4357-4365.	8.0	53
39	Preface to the Chemistry of Materials Special Issue on Ï€-Functional Materials. Chemistry of Materials, 2011, 23, 309-309.	6.7	51
40	Carbon Nanotube Web with Carboxylated Polythiophene â€œAssistâ€•for High-Performance Battery Electrodes. ACS Nano, 2018, 12, 3126-3139.	14.6	51
41	Photoinduced Anisotropic Assembly of Conjugated Polymers in Insulating Polymer Blends. ACS Applied Materials & Interfaces, 2015, 7, 14095-14103.	8.0	49
42	Toward Uniformly Dispersed Battery Electrode Composite Materials: Characteristics and Performance. ACS Applied Materials & Interfaces, 2016, 8, 3452-3463.	8.0	47
43	Amplified Photon Upconversion by Photonic Shell of Cholesteric Liquid Crystals. Journal of the American Chemical Society, 2017, 139, 5708-5711.	13.7	47
44	Upconversion-Assisted Dual-Band Luminescent Solar Concentrator Coupled for High Power Conversion Efficiency Photovoltaic Systems. ACS Photonics, 2018, 5, 3621-3627.	6.6	45
45	Regioregularity and Intrachain Ordering: Impact on the Nanostructure and Charge Transport in Two-Dimensional Assemblies of Poly(3-hexylthiophene). Chemistry of Materials, 2012, 24, 2845-2853.	6.7	44
46	Aqueous Processing for Printed Organic Electronics: Conjugated Polymers with Multistage Cleavable Side Chains. ACS Central Science, 2017, 3, 961-967.	11.3	43
47	Anisotropic Assembly of Conjugated Polymer Nanocrystallites for Enhanced Charge Transport. ACS Applied Materials & Interfaces, 2014, 6, 21541-21549.	8.0	42
48	Rational Design of a Narrow-Bandgap Conjugated Polymer Using the Quinoidal Thieno[3,2-b]thiophene-Based Building Block for Organic Field-Effect Transistor Applications. Macromolecules, 2019, 52, 4749-4756.	4.8	41
49	26.7% Efficient 4-Terminal Perovskiteâ€“Silicon Tandem Solar Cell Composed of a High-Performance Semitransparent Perovskite Cell and a Doped Poly-Si/SiOx Passivating Contact Silicon Cell. IEEE Journal of Photovoltaics, 2020, 10, 417-422.	2.5	40
50	Radiation chemistry of polymeric materials: novel chemistry and applications for microlithography. Polymer International, 1999, 48, 1053-1059.	3.1	39
51	Best Practices for Reporting Organic Field Effect Transistor Device Performance. Chemistry of Materials, 2015, 27, 4167-4168.	6.7	39
52	Robust and Stretchable Polymer Semiconducting Networks: From Film Microstructure to Macroscopic Device Performance. Chemistry of Materials, 2019, 31, 6530-6539.	6.7	37
53	Integrated dynamic wet spinning of core-sheath hydrogel fibers for optical-to-brain/tissue communications. National Science Review, 2021, 8, nwaa209.	9.5	36
54	Design, synthesis, characterization, and use of all-organic, nonionic photogenerators of acid. Chemistry of Materials, 1991, 3, 462-471.	6.7	35

#	Article	IF	Citations
55	A Thiazoleâ€“Naphthalene Diimide Based n-Channel Donorâ€“Acceptor Conjugated Polymer. Macromolecules, 2018, 51, 7320-7328.	4.8	35
56	Carboxylic Acid Functionalization Yields Solvent-Resistant Organic Electrochemical Transistors. , 2019, 1, 599-605.		35
57	Synthesis and evaluation of copolymers of (tert-butoxycarbonyloxy)styrene and (2-nitrobenzyl)styrene sulfonates: single-component chemically amplified deep-UV imaging materials. Chemistry of Materials, 1992, 4, 837-842.	6.7	34
58	Thermally Switchable Liquid Crystals Based on Cellulose Nanocrystals with Patchy Polymer Grafts. Small, 2018, 14, e1802060.	10.0	34
59	An overview of resist processing for deep-UV lithography.. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1991, 4, 299-318.	0.3	33
60	Electrical Contact Properties between the Accumulation Layer and Metal Electrodes in Ultrathin Poly(3-hexylthiophene)(P3HT) Field Effect Transistors. ACS Applied Materials & Interfaces, 2011, 3, 1574-1580.	8.0	31
61	High-Throughput Image Analysis of Fibrillar Materials: A Case Study on Polymer Nanofiber Packing, Alignment, and Defects in Organic Field Effect Transistors. ACS Applied Materials & Interfaces, 2017, 9, 36090-36102.	8.0	31
62	An Electrifying Choice for the 2019 Chemistry Nobel Prize: Goodenough, Whittingham, and Yoshino. Chemistry of Materials, 2019, 31, 8577-8581.	6.7	31
63	Investigation of Solubilityâ^'Field Effect Mobility Orthogonality in Substituted Phenyleneâ^'Thiophene Co-oligomers. Chemistry of Materials, 2007, 19, 4676-4681.	6.7	27
64	Memory and Photovoltaic Elements in Organic Field Effect Transistors with Donor/Acceptor Planar-Hetero Junction Interfaces. Journal of Physical Chemistry C, 2012, 116, 9390-9397.	3.1	27
65	Transparent Quasi-Interdigitated Electrodes for Semitransparent Perovskite Back-Contact Solar Cells. ACS Applied Energy Materials, 2018, 1, 4473-4478.	5.1	27
66	Conjugated Polymer Alignment: Synergisms Derived from Microfluidic Shear Design and UV Irradiation. ACS Applied Materials & Interfaces, 2016, 8, 24761-24772.	8.0	26
67	Functionalization-Directed Stabilization of Hydrogen-Bonded Polymer Complex Fibers: Elasticity and Conductivity. Advanced Fiber Materials, 2019, 1, 71-81.	16.1	26
68	Synergistic Use of Bithiazole and Pyridinyl Substitution for Effective Electron Transport Polymer Materials. Chemistry of Materials, 2019, 31, 3957-3966.	6.7	26
69	Advances and opportunities in development of deformable organic electrochemical transistors. Journal of Materials Chemistry C, 2020, 8, 15067-15078.	5.5	25
70	Electrically Conductive Shell-Protective Layer Capping on the Silicon Surface as the Anode Material for High-Performance Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2019, 11, 40034-40042.	8.0	24
71	Influence of Polymer Structure on the Miscibility of Photoacid Generators. Chemistry of Materials, 1994, 6, 295-301.	6.7	23
72	Enhanced Mobility and Effective Control of Threshold Voltage in P3HT-Based Field-Effect Transistors via Inclusion of Oligothiophenes. ACS Applied Materials & Interfaces, 2015, 7, 6652-6660.	8.0	23

#	Article	IF	Citations
73	Solvent vapor annealing of oriented PbI2 films for improved crystallization of perovskite films in the air. Solar Energy Materials and Solar Cells, 2017, 166, 167-175.	6.2	22
74	Ultrathin Doubleâ€Shell Capsules for High Performance Photon Upconversion. Advanced Materials, 2017, 29, 1606830.	21.0	22
75	<title>Preliminary lithographic characteristics of an all-organic chemically amplified resist formulation for single-layer deep-UV lithography</title>. , 1991, , .		21
76	Functionalized Cellulose Nanocrystal-Mediated Conjugated Polymer Aggregation. ACS Applied Materials & Interfaces, 2019, 11, 25338-25350.	8.0	21
77	Protein-Assisted Assembly of Ï€-Conjugated Polymers. Chemistry of Materials, 2016, 28, 573-582.	6.7	20
78	Enhanced Alignment of Water-Soluble Polythiophene Using Cellulose Nanocrystals as a Liquid Crystal Template. Biomacromolecules, 2017, 18, 1556-1562.	5.4	19
79	Three-Dimensional Clustered Nanostructures for Microfluidic Surface-Enhanced Raman Detection. ACS Applied Materials & Interfaces, 2016, 8, 24974-24981.	8.0	18
80	Wetting of Inkjet Polymer Droplets on Porous Alumina Substrates. Langmuir, 2017, 33, 130-137.	3.5	18
81	Solving Materialsâ€™ Small Data Problem with Dynamic Experimental Databases. Processes, 2018, 6, 79.	2.8	18
82	Tuning Conjugated Polymers for Binder Applications in High-Capacity Magnetite Anodes. ACS Applied Energy Materials, 2019, 2, 7584-7593.	5.1	18
83	Conducting Channel Formation in Poly(3-hexylthiophene) Field Effect Transistors: Bulk to Interface. Journal of Physical Chemistry C, 2011, 115, 11719-11726.	3.1	17
84	Synthesis of electroactive polystyrene derivatives paraâ€substituted with Ï€â€conjugated oligothiophene via postgrafting functionalization. Journal of Polymer Science Part A, 2011, 49, 1155-1162.	2.3	16
85	High capacity Li-ion battery anodes: Impact of crystallite size, surface chemistry and PEG-coating. Electrochimica Acta, 2018, 260, 235-245.	5.2	16
86	Perovskite solar cells with a hybrid electrode structure. AIP Advances, 2019, 9, 125037.	1.3	16
87	Highly Oriented and Ordered Water-Soluble Semiconducting Polymers in a DNA Matrix. Chemistry of Materials, 2020, 32, 688-696.	6.7	16
88	The Solution is the Solution: Data-Driven Elucidation of Solution-to-Device Feature Transfer for Ï€-Conjugated Polymer Semiconductors. ACS Applied Materials & Interfaces, 2022, 14, 3613-3620.	8.0	16
89	Competition between Charge Transport and Energy Barrier in Injection-Limited Metal/Quantum Dot Nanocrystal Contacts. Chemistry of Materials, 2014, 26, 6393-6400.	6.7	14
90	Silicon Valley meets the ivory tower: Searchable data repositories for experimental nanomaterials research. Current Opinion in Solid State and Materials Science, 2016, 20, 338-343.	11.5	14

#	Article	IF	Citations
91	A Polymer Blend Approach for Creation of Effective Conjugated Polymer Charge Transport Pathways. ACS Applied Materials & Interfaces, 2018, 10, 36464-36474.	8.0	14
92	Data Science Guided Experiments Identify Conjugated Polymer Solution Concentration as a Key Parameter in Device Performance. , 2021, 3, 1321-1327.		14
93	Small Data Machine Learning: Classification and Prediction of Poly(ethylene terephthalate) Stabilizers Using Molecular Descriptors. ACS Applied Polymer Materials, 2020, 2, 5592-5601.	4.4	13
94	Simultaneous Study of Exciton Diffusion/Dissociation and Charge Transport in a Donorâ€Acceptor Bilayer: Pentacene on a C₆₀â€terminated Selfâ€Assembled Monolayer. Advanced Materials, 2013, 25, 6453-6458.	21.0	12
95	Flow Effects on the Controlled Growth of Nanostructured Networks at Microcapillary Walls for Applications in Continuous Flow Reactions. ACS Applied Materials & Interfaces, 2015, 7, 21580-21588.	8.0	12
96	Life Cycle Inventory Assessment as a Sustainable Chemistry and Engineering Education Tool. ACS Sustainable Chemistry and Engineering, 2017, 5, 9603-9613.	6.7	12
97	SWNT Networks with Polythiophene Carboxylate Links for High-Performance Silicon Monoxide Electrodes. ACS Applied Energy Materials, 2018, 1, 2417-2423.	5.1	12
98	Exciton dissociation and charge trapping at poly(3-hexylthiophene)/phenyl-C61-butyric acid methyl ester bulk heterojunction interfaces: Photo-induced threshold voltage shifts in organic field-effect transistors and solar cells. Journal of Applied Physics, 2012, 111, 084908.	2.5	11
99	Domed Silica Microcylinders Coated with Oleophilic Polypeptides and Their Behavior in Lyotropic Cholesteric Liquid Crystals of the Same Polypeptide. Langmuir, 2016, 32, 13137-13148.	3.5	11
100	Carboxylated Poly(thiophene) Binders for High-Performance Magnetite Anodes: Impact of Cation Structure. ACS Applied Materials & Interfaces, 2019, 11, 44046-44057.	8.0	11
101	Control of Nucleation Density in Conjugated Polymers via Seed Nucleation. ACS Applied Materials & Interfaces, 2019, 11, 37955-37965.	8.0	11
102	Synthesis and characterization of poly[4-((tert-butoxycarbonyl)oxy)styrene-sulfone]. Chemistry of Materials, 1991, 3, 660-667.	6.7	10
103	An approach to coreâ€“shell nanostructured materials with high colloidal and chemical stability: synthesis, characterization and mechanistic evaluation. Colloid and Polymer Science, 2012, 290, 1913-1926.	2.1	10
104	Synthesis and characterization of graft polymethacrylates containing conducting diphenyldithiophene for organic thinâ€film transistors. Journal of Polymer Science Part A, 2012, 50, 199-206.	2.3	10
105	Polypeptide Composite Particle-Assisted Organization of Ï€-Conjugated Polymers into Highly Crystalline â€œCoffee Stainsâ€. ACS Applied Materials & Interfaces, 2017, 9, 34337-34348.	8.0	10
106	Exciton Dissociation and Charge Transport Properties at a Modified Donor/Acceptor Interface: Poly(3-hexylthiophene)/Thiol-ZnO Bulk Heterojunction Interfaces. Journal of Physical Chemistry C, 2012, 116, 4252-4258.	3.1	9
107	Toward data-enabled process optimization of deformable electronic polymer-based devices. Current Opinion in Chemical Engineering, 2020, 27, 72-80.	7.8	8
108	Perspectiveâ€”Enhancing Active Anode Material Performance for Lithium-Ion Batteries via Manipulation of Interfacial Chemistry. Journal of the Electrochemical Society, 2020, 167, 050507.	2.9	8

#	Article	IF	Citations
109	Single-Pot Fabrication of Cellulose-Reinforced Solid Polymer Lithium-Ion Conductors. ACS Applied Polymer Materials, 2022, 4, 1948-1955.	4.4	6
110	Combining post-specimen aberration correction and direct electron detection to image molecular structure in liquid crystal polymers. Microscopy and Microanalysis, 2016, 22, 1924-1925.	0.4	5
111	From Staple Food to Flexible Substrate to Electronics: Rice as a Biocompatible Precursor for Flexible Electronic Components. Chemistry of Materials, 2016, 28, 8475-8479.	6.7	5
112	Patterning Bubbles by the Stickâ€“Slip Motion of the Advancing Triple Phase Line on Nanostructures. Langmuir, 2018, 34, 15804-15811.	3.5	5
113	APPLIED PHYSICS: Testing the Limits for Resists. Science, 2002, 297, 349-350.	12.6	4
114	Polypeptide-Assisted Organization of Ï€-Conjugated Polymers into Responsive, Soft 3D Networks. Chemistry of Materials, 2017, 29, 5058-5062.	6.7	4
115	Best Practices for New Polymers and Nanoparticulate Systems. Chemistry of Materials, 2018, 30, 6587-6588.	6.7	4
116	Active Material Interfacial Chemistry and Its Impact on Composite Magnetite Electrodes. ACS Applied Energy Materials, 2021, 4, 9836-9847.	5.1	4
117	Synergistic Effect of N,N-Dimethylformamide and Hydrochloric Acid on the Growth of MAPbI₃ Perovskite Films for Solar Cells. ACS Omega, 2020, 5, 32295-32304.	3.5	3
118	Ring-Patterned Perovskite Single Crystals Fabricated by the Combination of Rigid and Flexible Templates. ACS Applied Materials & Interfaces, 2020, 12, 27786-27793.	8.0	3
119	Composition Gradient High-Throughput Polymer Libraries Enabled by Passive Mixing and Elevated Temperature Operability. Chemistry of Materials, 2022, 34, 6659-6670.	6.7	3
120	Polymers, Photoresponsive (in Electronic Applications). , 2003, , 723-744.		2
121	Thermoresponsive Liquid Crystals: Thermally Switchable Liquid Crystals Based on Cellulose Nanocrystals with Patchy Polymer Grafts (Small 46/2018). Small, 2018, 14, 1870218.	10.0	2
122	Festschrift in Honor of Prof. Jean-Luc BrÃ©das on His 65th Birthday. Chemistry of Materials, 2019, 31, 6307-6308.	6.7	2
123	Anisotropic Responsive Microgels Based on the Cholesteric Phase of Chitin Nanocrystals. ACS Macro Letters, 2022, 11, 96-102.	4.8	2
124	Drain Current in Poly(3â€hexylthiophene) Solutions during Film Formation: Correlations to Structural Changes. ChemNanoMat, 2015, 1, 32-38.	2.8	1
125	Flexible Ofets: Synergistic Effect of Regioregular and Regiorandom Poly(3â€hexylthiophene) Blends for High Performance Flexible Organic Field Effect Transistors (Adv. Electron. Mater. 2/2016). Advanced Electronic Materials, 2016, 2, .	5.1	1
126	Process-Structure-Property Relationships for Design of Polymer Organic Electronics Manufacturing. Computer Aided Chemical Engineering, 2018, , 2467-2472.	0.5	1

#	Article	IF	Citations
127	More Than Another Halochromic Polymer: Thiazole-Based Conjugated Polymer Transistors for Acid-Sensing Applications. ACS Applied Polymer Materials, 2020, 2, 5898-5906.	4.4	1
128	The Evolution Study Of Thin Film Structure During The Film Formation. , 2010, , .		0