

Mohammad Afsar Uddin

List of Publications by Year in descending order

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62
papers

3,951
citations

159585

30
h-index

133252

59
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63
all docs

63
docs citations

63
times ranked

3765
citing authors

#	ARTICLE	IF	CITATIONS
1	Semi-crystalline photovoltaic polymers with efficiency exceeding 9% in a \sim 300 nm thick conventional single-cell device. <i>Energy and Environmental Science</i> , 2014, 7, 3040-3051.	30.8	600
2	Determining the Role of Polymer Molecular Weight for High-Performance All-Polymer Solar Cells: Its Effect on Polymer Aggregation and Phase Separation. <i>Journal of the American Chemical Society</i> , 2015, 137, 2359-2365.	13.7	347
3	Highly Efficient Fullerene-Free Polymer Solar Cells Fabricated with Polythiophene Derivative. <i>Advanced Materials</i> , 2016, 28, 9416-9422.	21.0	303
4	Morphology Control Enables Efficient Ternary Organic Solar Cells. <i>Advanced Materials</i> , 2018, 30, e1803045.	21.0	243
5	A High Efficiency Nonfullerene Organic Solar Cell with Optimized Crystalline Organizations. <i>Advanced Materials</i> , 2016, 28, 910-916.	21.0	179
6	(Semi)ladder-Type Bithiophene Imide-Based All-Acceptor Semiconductors: Synthesis, Structure-Property Correlations, and Unipolar n-Type Transistor Performance. <i>Journal of the American Chemical Society</i> , 2018, 140, 6095-6108.	13.7	178
7	Benzotriazole-Containing Planar Conjugated Polymers with Noncovalent Conformational Locks for Thermally Stable and Efficient Polymer Field-Effect Transistors. <i>Chemistry of Materials</i> , 2014, 26, 2147-2154.	6.7	167
8	Effects of Bithiophene Imide Fusion on the Device Performance of Organic Thin-Film Transistors and All-Polymer Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 15304-15308.	13.8	152
9	Interplay of Intramolecular Noncovalent Coulomb Interactions for Semicrystalline Photovoltaic Polymers. <i>Chemistry of Materials</i> , 2015, 27, 5997-6007.	6.7	150
10	A Fluorinated Polythiophene Derivative with Stabilized Backbone Conformation for Highly Efficient Fullerene and Non-Fullerene Polymer Solar Cells. <i>Macromolecules</i> , 2016, 49, 2993-3000.	4.8	141
11	Effects of Bithiophene Imide Fusion on the Device Performance of Organic Thin-Film Transistors and All-Polymer Solar Cells. <i>Angewandte Chemie</i> , 2017, 129, 15506-15510.	2.0	115
12	Investigation of Charge Carrier Behavior in High Performance Ternary Blend Polymer Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1600637.	19.5	85
13	High-efficiency photovoltaic cells with wide optical band gap polymers based on fluorinated phenylene-alkoxybenzothiadiazole. <i>Energy and Environmental Science</i> , 2017, 10, 1443-1455.	30.8	84
14	A Wide Bandgap Polymer with Strong π - π Interaction for Efficient Fullerene-Free Polymer Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1600742.	19.5	76
15	Controlling Energy Levels and Blend Morphology for All-Polymer Solar Cells via Fluorination of a Naphthalene Diimide-Based Copolymer Acceptor. <i>Macromolecules</i> , 2016, 49, 6374-6383.	4.8	66
16	Measuring the competition between bimolecular charge recombination and charge transport in organic solar cells under operating conditions. <i>Energy and Environmental Science</i> , 2018, 11, 3019-3032.	30.8	59
17	Enhanced Efficiency and Long-Term Stability of Perovskite Solar Cells by Synergistic Effect of Nonhygroscopic Doping in Conjugated Polymer-Based Hole-Transporting Layer. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 43846-43854.	8.0	51
18	Quinoxaline-thiophene based thick photovoltaic devices with an efficiency of \sim 48%. <i>Journal of Materials Chemistry A</i> , 2016, 4, 9967-9976.	10.3	49

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19	Photocurrent Extraction Efficiency near Unity in a Thick Polymer Bulk Heterojunction. <i>Advanced Functional Materials</i> , 2016, 26, 3324-3330.	14.9	48
20	New M- and V-shaped perylene diimide small molecules for high-performance nonfullerene polymer solar cells. <i>Chemical Communications</i> , 2016, 52, 8873-8876.	4.1	48
21	Excellent Long-Term Stability of Power Conversion Efficiency in Non-Fullerene-Based Polymer Solar Cells Bearing Tricyanovinylene-Functionalized n-Type Small Molecules. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 8838-8847.	8.0	46
22	Spectroscopically tracking charge separation in polymer:fullerene blends with a three-phase morphology. <i>Energy and Environmental Science</i> , 2015, 8, 2713-2724.	30.8	44
23	Triimide-Functionalized n-Type Polymer Semiconductors Enabling All-Polymer Solar Cells with Power Conversion Efficiencies Approaching 9%. <i>Solar Rrl</i> , 2019, 3, 1900107.	5.8	43
24	Fluorine Substituted Bithiophene Imide-Based n-Type Polymer Semiconductor for High-Performance Organic Thin-Film Transistors and All-Polymer Solar Cells. <i>Solar Rrl</i> , 2019, 3, 1800265.	5.8	42
25	Quinoxaline-Based Wide Band Gap Polymers for Efficient Nonfullerene Organic Solar Cells with Large Open-Circuit Voltages. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 23235-23246.	8.0	39
26	Surfactant chemistry for fluorescence imaging of latent fingerprints using conjugated polyelectrolyte nanoparticles. <i>Chemical Communications</i> , 2015, 51, 13634-13637.	4.1	38
27	Optimization of side chains in alkylthiophene-substituted benzo[1,2-b:4,5-b']dithiophene-based photovoltaic polymers. <i>Polymer Chemistry</i> , 2015, 6, 2752-2760.	3.9	37
28	Backbone Conformation Tuning of Carboxylate-Functionalized Wide Band Gap Polymers for Efficient Non-Fullerene Organic Solar Cells. <i>Macromolecules</i> , 2019, 52, 341-353.	4.8	37
29	Alkynyl-Functionalized Head-to-Head Linkage Containing Bithiophene as a Weak Donor Unit for High-Performance Polymer Semiconductors. <i>Chemistry of Materials</i> , 2017, 29, 4109-4121.	6.7	32
30	Bichalcogenophene Imide-Based Homopolymers: Chalcogen-Atom Effects on the Optoelectronic Property and Device Performance in Organic Thin-Film Transistors. <i>Macromolecules</i> , 2019, 52, 7301-7312.	4.8	32
31	Thiophene-benzothiadiazole based A ₁ A ₂ type alternating copolymers for polymer solar cells. <i>Polymer Chemistry</i> , 2017, 8, 3622-3631.	3.9	30
32	Head-to-Head Linked Dialkylbifuran-Based Polymer Semiconductors for High-Performance Organic Thin-Film Transistors with Tunable Charge Carrier Polarity. <i>Chemistry of Materials</i> , 2019, 31, 1808-1817.	6.7	30
33	Straight chain A copolymers based on thienothiophene and benzothiadiazole for efficient polymer field effect transistors and photovoltaic cells. <i>Polymer Chemistry</i> , 2016, 7, 4638-4646.	3.9	29
34	Cyano-Substituted Head-to-Head Polythiophenes: Enabling High-Performance n-Type Organic Thin-Film Transistors. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 10089-10098.	8.0	29
35	2,1,3-Benzothiadiazole-5,6-dicarboxylicimide-Based Polymer Semiconductors for Organic Thin-Film Transistors and Polymer Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 42167-42178.	8.0	25
36	Dithienylbenzodiimide: a new electron-deficient unit for n-type polymer semiconductors. <i>Journal of Materials Chemistry C</i> , 2017, 5, 9559-9569.	5.5	24

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37	Cyano-substituted benzochalcogenadiazole-based polymer semiconductors for balanced ambipolar organic thin-film transistors. <i>Polymer Chemistry</i> , 2018, 9, 3873-3884.	3.9	24
38	Perylene diimide isomers containing a simple sp ³ -core for non-fullerene-based polymer solar cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 663-671.	10.3	22
39	Drastic Effects of Fluorination on Backbone Conformation of Head-to-Head Bithiophene-Based Polymer Semiconductors. <i>ACS Macro Letters</i> , 2018, 7, 519-524.	4.8	22
40	A High Dielectric N-type Small Molecular Acceptor Containing Oligoethyleneglycol Side Chains for Organic Solar Cells. <i>Chinese Journal of Chemistry</i> , 2018, 36, 199-205.	4.9	22
41	1,4-Di(3-alkoxy-2-thienyl)-2,5-difluorophenylene: A Building Block Enabling High-Performance Polymer Semiconductors with Increased Open-Circuit Voltages. <i>Macromolecules</i> , 2018, 51, 5352-5363.	4.8	19
42	Fluorinated Head-to-Head Dialkoxybithiophene: A New Electron-Donating Building Block for High-Performance Polymer Semiconductors. <i>Advanced Electronic Materials</i> , 2018, 4, 1700519.	5.1	16
43	Green-, Red-, and Near-Infrared-Emitting Polymer Dot Probes for Simultaneous Multicolor Cell Imaging with a Single Excitation Wavelength. <i>Chemistry of Materials</i> , 2020, 32, 6685-6696.	6.7	14
44	Difluorobenzoxadiazole-Based Polymer Semiconductors for High-Performance Organic Thin-Film Transistors with Tunable Charge Carrier Polarity. <i>Advanced Electronic Materials</i> , 2017, 3, 1700100.	5.1	13
45	Backbone Configuration and Electronic Property Tuning of Imide-Functionalized Ladder-Type Heteroarenes-Based Polymer Acceptors for Efficient All-Polymer Solar Cells. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	12
46	Ultranarrow Bandgap Naphthalenediimide-Dialkylbifuran-Based Copolymers with High-Performance Organic Thin-Film Transistors and All-Polymer Solar Cells. <i>Macromolecular Rapid Communications</i> , 2020, 41, 2000144.	3.9	11
47	Thienothiophene-benzotriazole-based semicrystalline linear copolymers for organic field effect transistors. <i>Pure and Applied Chemistry</i> , 2014, 86, 1293-1302.	1.9	9
48	Fused Bithiophene Imide Oligomer and Diketopyrrolopyrrole Copolymers for n-type Thin-Film Transistors. <i>Macromolecular Rapid Communications</i> , 2019, 40, e1900394.	3.9	9
49	Synthesis and photovoltaic properties of three different types of terpolymers. <i>Materials Chemistry Frontiers</i> , 2017, 1, 1147-1155.	5.9	6
50	Semi-crystalline A1-D-A2-type copolymers for efficient polymer solar cells. <i>Polymer Journal</i> , 2017, 49, 141-148.	2.7	6
51	Germinant ZnO nanorods as a charge-selective layer in organic solar cells. <i>Journal of Materials Science and Technology</i> , 2020, 55, 89-94.	10.7	6
52	Spectroscopic comparison of charge dynamics in fullerene and non fullerene acceptor-based organic photovoltaic cells. <i>Journal of Materials Chemistry C</i> , 0, , .	5.5	6
53	2,1,3-benzothiadiazole-5,6-dicarboxylicimide based semicrystalline polymers for photovoltaic cells. <i>Journal of Polymer Science Part A</i> , 2016, 54, 3826-3834.	2.3	5
54	Density Functional Theoretical and Time-Dependent Density Functional Theoretical Study on Thiophene-Benzothiadiazole-based Polymers. <i>Bulletin of the Korean Chemical Society</i> , 2015, 36, 427-430.	1.9	4

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55	2,7-Carbazole and thieno[3,4-c]pyrrole-4,6-dione based copolymers with deep highest occupied molecular orbital for photovoltaic cells. <i>Current Applied Physics</i> , 2015, 15, 654-661.	2.4	4
56	Thermochromism, Franck-Condon Analysis and Interfacial Dynamics of a Donor-Acceptor Copolymer with a Low Band Gap. <i>Chemistry of Materials</i> , 2015, 27, 2770-2779.	6.7	4
57	Improving the Photostability of Small-Molecule-Based Organic Photovoltaics by Providing a Charge Percolation Pathway of Crystalline Conjugated Polymer. <i>Polymers</i> , 2020, 12, 2598.	4.5	4
58	Influence of Irradiation on Fenton Degradation of Brilliant Red X-3B. <i>International Journal of Chemical Reactor Engineering</i> , 2010, 8, .	1.1	3
59	Synthesis and characterization of fluorene-based copolymers as electron-transporting materials for PLEDs. <i>Organic Electronics</i> , 2015, 25, 206-211.	2.6	3
60	How Heteroatom Substitution in Donor-Acceptor Copolymers Affects Excitonic and Charge Photogeneration Processes in Organic Photovoltaic Cells. <i>Journal of Physical Chemistry C</i> , 0, , .	3.1	2
61	Solar Cells: Investigation of Charge Carrier Behavior in High Performance Ternary Blend Polymer Solar Cells (<i>Adv. Energy Mater.</i> 19/2016). <i>Advanced Energy Materials</i> , 2016, 6, .	19.5	0
62	Organic Electronics: Fluorinated Head-to-Head Dialkoxybithiophene: A New Electron-Donating Building Block for High-Performance Polymer Semiconductors (<i>Adv. Electron. Mater.</i> 3/2018). <i>Advanced Electronic Materials</i> , 2018, 4, 1870019.	5.1	0