Mohammad Afsar Uddin

List of Publications by Year in Descending Order

60 papers	3,245 citations	27 h-index	56 g-index
63 ext. papers	3,585 ext. citations	10.5 avg, IF	5.01 L-index

#	Paper	IF	Citations
60	Improving the Photostability of Small-Molecule-Based Organic Photovoltaics by Providing a Charge Percolation Pathway of Crystalline Conjugated Polymer. *Polymers*, **2020**, 12,	4.5	3
59	Ultranarrow Bandgap Naphthalenediimide-Dialkylbifuran-Based Copolymers with High-Performance Organic Thin-Film Transistors and All-Polymer Solar Cells. *Macromolecular Rapid Communications*, **2020**, 41, e2000144	4.8	7
58	Green-, Red-, and Near-Infrared-Emitting Polymer Dot Probes for Simultaneous Multicolor Cell Imaging with a Single Excitation Wavelength. *Chemistry of Materials*, **2020**, 32, 6685-6696	9.6	11
57	Germinant ZnO nanorods as a charge-selective layer in organic solar cells. *Journal of Materials Science and Technology*, **2020**, 55, 89-94	9.1	5
56	Bichalcogenophene Imide-Based Homopolymers: Chalcogen-Atom Effects on the Optoelectronic Property and Device Performance in Organic Thin-Film Transistors. *Macromolecules*, **2019**, 52, 7301-7312	5.5	18
55	Triimide-Functionalized n-Type Polymer Semiconductors Enabling All-Polymer Solar Cells with Power Conversion Efficiencies Approaching 9%. *Solar Rrl*, **2019**, 3, 1900107	7.1	26
54	Head-to-Head Linked Dialkylbifuran-Based Polymer Semiconductors for High-Performance Organic Thin-Film Transistors with Tunable Charge Carrier Polarity. *Chemistry of Materials*, **2019**, 31, 1808-1817	9.6	15
53	Fused Bithiophene Imide Oligomer and Diketopyrrolopyrrole Copolymers for n-Type Thin-Film Transistors. *Macromolecular Rapid Communications*, **2019**, 40, e1900394	4.8	6
52	Cyano-Substituted Head-to-Head Polythiophenes: Enabling High-Performance n-Type Organic Thin-Film Transistors. *ACS Applied Materials & Interfaces*, **2019**, 11, 10089-10098	9.5	23
51	Backbone Conformation Tuning of Carboxylate-Functionalized Wide Band Gap Polymers for Efficient Non-Fullerene Organic Solar Cells. *Macromolecules*, **2019**, 52, 341-353	5.5	30
50	Fluorine Substituted Bithiophene Imide-Based n-Type Polymer Semiconductor for High-Performance Organic Thin-Film Transistors and All-Polymer Solar Cells. *Solar Rrl*, **2019**, 3, 1800265	7.1	33
49	Organic Electronics: Fluorinated Head-to-Head Dialkoxybithiophene: A New Electron-Donating Building Block for High-Performance Polymer Semiconductors (Adv. Electron. Mater. 3/2018). *Advanced Electronic Materials*, **2018**, 4, 1870019	6.4	
48	Drastic Effects of Fluorination on Backbone Conformation of Head-to-Head Bithiophene-Based Polymer Semiconductors. *ACS Macro Letters*, **2018**, 7, 519-524	6.6	19
47	(Semi)ladder-Type Bithiophene Imide-Based All-Acceptor Semiconductors: Synthesis, Structure-Property Correlations, and Unipolar n-Type Transistor Performance. *Journal of the American Chemical Society*, **2018**, 140, 6095-6108	16.4	123
46	Fluorinated Head-to-Head Dialkoxybithiophene: A New Electron-Donating Building Block for High-Performance Polymer Semiconductors. *Advanced Electronic Materials*, **2018**, 4, 1700519	6.4	15
45	Measuring the competition between bimolecular charge recombination and charge transport in organic solar cells under operating conditions. *Energy and Environmental Science*, **2018**, 11, 3019-3032	35.4	45
44	1,4-Di(3-alkoxy-2-thienyl)-2,5-difluorophenylene: A Building Block Enabling High-Performance Polymer Semiconductors with Increased Open-Circuit Voltages. *Macromolecules*, **2018**, 51, 5352-5363	5.5	13

43	Morphology Control Enables Efficient Ternary Organic Solar Cells. *Advanced Materials*, **2018**, 30, e1803045	14	197
42	Cyano-substituted benzochalcogenadiazole-based polymer semiconductors for balanced ambipolar organic thin-film transistors. *Polymer Chemistry*, **2018**, 9, 3873-3884	4.9	13
41	Quinoxaline-Based Wide Band Gap Polymers for Efficient Nonfullerene Organic Solar Cells with Large Open-Circuit Voltages. *ACS Applied Materials & Interfaces*, **2018**, 10, 23235-23246	9.5	30
40	A High Dielectric N-Type Small Molecular Acceptor Containing Oligoethyleneglycol Side-Chains for Organic Solar Cells. *Chinese Journal of Chemistry*, **2018**, 36, 199-205	4.9	16
39	Synthesis and photovoltaic properties of three different types of terpolymers. *Materials Chemistry Frontiers*, **2017**, 1, 1147-1155	7.8	4
38	Excellent Long-Term Stability of Power Conversion Efficiency in Non-Fullerene-Based Polymer Solar Cells Bearing Tricyanovinylene-Functionalized n-Type Small Molecules. *ACS Applied Materials & Interfaces*, **2017**, 9, 8838-8847	9.5	43
37	Alkynyl-Functionalized Head-to-Head Linkage Containing Bithiophene as a Weak Donor Unit for High-Performance Polymer Semiconductors. *Chemistry of Materials*, **2017**, 29, 4109-4121	9.6	27
36	High-efficiency photovoltaic cells with wide optical band gap polymers based on fluorinated phenylene-alkoxybenzothiadiazole. *Energy and Environmental Science*, **2017**, 10, 1443-1455	35.4	63
35	Thiophene-benzothiadiazole based DA1DA2 type alternating copolymers for polymer solar cells. *Polymer Chemistry*, **2017**, 8, 3622-3631	4.9	25
34	Effects of Bithiophene Imide Fusion on the Device Performance of Organic Thin-Film Transistors and All-Polymer Solar Cells. *Angewandte Chemie*, **2017**, 129, 15506-15510	3.6	13
33	Effects of Bithiophene Imide Fusion on the Device Performance of Organic Thin-Film Transistors and All-Polymer Solar Cells. *Angewandte Chemie - International Edition*, **2017**, 56, 15304-15308	16.4	119
32	Dithienylbenzodiimide: a new electron-deficient unit for n-type polymer semiconductors. *Journal of Materials Chemistry C*, **2017**, 5, 9559-9569	7.1	18
31	Enhanced Efficiency and Long-Term Stability of Perovskite Solar Cells by Synergistic Effect of Nonhygroscopic Doping in Conjugated Polymer-Based Hole-Transporting Layer. *ACS Applied Materials & Interfaces*, **2017**, 9, 43846-43854	9.5	31
30	2,1,3-Benzothiadiazole-5,6-dicarboxylicimide-Based Polymer Semiconductors for Organic Thin-Film Transistors and Polymer Solar Cells. *ACS Applied Materials & Interfaces*, **2017**, 9, 42167-42178	9.5	20
29	Difluorobenzoxadiazole-Based Polymer Semiconductors for High-Performance Organic Thin-Film Transistors with Tunable Charge Carrier Polarity. *Advanced Electronic Materials*, **2017**, 3, 1700100	6.4	9
28	Semi-crystalline A1DA2-type copolymers for efficient polymer solar cells. *Polymer Journal*, **2017**, 49, 141-148	2.7	4
27	Perylene diimide isomers containing a simple sp3-core for non-fullerene-based polymer solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 663-671	13	19
26	Controlling Energy Levels and Blend Morphology for All-Polymer Solar Cells via Fluorination of a Naphthalene Diimide-Based Copolymer Acceptor. *Macromolecules*, **2016**, 49, 6374-6383	5.5	62

25	2,1,3-benzothiadiazole-5,6-dicarboxylicimide based semicrystalline polymers for photovoltaic cells. *Journal of Polymer Science Part A*, **2016**, 54, 3826-3834	2.5	3
24	Investigation of Charge Carrier Behavior in High Performance Ternary Blend Polymer Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1600637	21.8	79
23	Photocurrent Extraction Efficiency near Unity in a Thick Polymer Bulk Heterojunction. *Advanced Functional Materials*, **2016**, 26, 3324-3330	15.6	38
22	Straight chain D-A copolymers based on thienothiophene and benzothiadiazole for efficient polymer field effect transistors and photovoltaic cells. *Polymer Chemistry*, **2016**, 7, 4638-4646	4.9	27
21	Quinoxaline-thiophene based thick photovoltaic devices with an efficiency of ~8%. *Journal of Materials Chemistry A*, **2016**, 4, 9967-9976	13	42
20	New M- and V-shaped perylene diimide small molecules for high-performance nonfullerene polymer solar cells. *Chemical Communications*, **2016**, 52, 8873-6	5.8	44
19	A Wide Bandgap Polymer with Strong -Interaction for Efficient Fullerene-Free Polymer Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1600742	21.8	74
18	A High Efficiency Nonfullerene Organic Solar Cell with Optimized Crystalline Organizations. *Advanced Materials*, **2016**, 28, 910-6	24	164
17	A Fluorinated Polythiophene Derivative with Stabilized Backbone Conformation for Highly Efficient Fullerene and Non-Fullerene Polymer Solar Cells. *Macromolecules*, **2016**, 49, 2993-3000	5.5	125
16	Highly Efficient Fullerene-Free Polymer Solar Cells Fabricated with Polythiophene Derivative. *Advanced Materials*, **2016**, 28, 9416-9422	24	253
15	Optimization of side chains in alkylthiothiophene-substituted benzo[1,2-b:4,5-b?]dithiophene-based photovoltaic polymers. *Polymer Chemistry*, **2015**, 6, 2752-2760	4.9	33
14	2,7-Carbazole and thieno[3,4-c]pyrrole-4,6-dione based copolymers with deep highest occupied molecular orbital for photovoltaic cells. *Current Applied Physics*, **2015**, 15, 654-661	2.6	4
13	Surfactant chemistry for fluorescence imaging of latent fingerprints using conjugated polyelectrolyte nanoparticles. *Chemical Communications*, **2015**, 51, 13634-7	5.8	33
12	Spectroscopically tracking charge separation in polymer : fullerene blends with a three-phase morphology. *Energy and Environmental Science*, **2015**, 8, 2713-2724	35.4	38
11	Thermochromism, Franck-Condon Analysis and Interfacial Dynamics of a Donor-Acceptor Copolymer with a Low Band Gap. *Chemistry of Materials*, **2015**, 27, 2770-2779	9.6	4
10	Interplay of Intramolecular Noncovalent Coulomb Interactions for Semicrystalline Photovoltaic Polymers. *Chemistry of Materials*, **2015**, 27, 5997-6007	9.6	132
9	Synthesis and characterization of fluorene-based copolymers as electron-transporting materials for PLEDs. *Organic Electronics*, **2015**, 25, 206-211	3.5	3
8	Density Functional Theoretical and Time-dependent Density Functional Theoretical Study on Thiophene-Benzothiadiazole-based Polymers. *Bulletin of the Korean Chemical Society*, **2015**, 36, 427-430	1.2	3

7	Determining the role of polymer molecular weight for high-performance all-polymer solar cells: its effect on polymer aggregation and phase separation. *Journal of the American Chemical Society*, **2015**, 137, 2359-65	16.4	311
6	Semi-crystalline photovoltaic polymers with efficiency exceeding 9% in a ~300 nm thick conventional single-cell device. *Energy and Environmental Science*, **2014**, 7, 3040-3051	35.4	554
5	Benzotriazole-Containing Planar Conjugated Polymers with Noncovalent Conformational Locks for Thermally Stable and Efficient Polymer Field-Effect Transistors. *Chemistry of Materials*, **2014**, 26, 2147-2154	9.6	154
4	Thienothiophene-benzotriazole-based semicrystalline linear copolymers for organic field effect transistors. *Pure and Applied Chemistry*, **2014**, 86, 1293-1302	2.1	9
3	Influence of Irradiation on Fenton Degradation of Brilliant Red X-3B. *International Journal of Chemical Reactor Engineering*, **2010**, 8,	1.2	3
2	Spectroscopic comparison of charge dynamics in fullerene and non-fullerene acceptor-based organic photovoltaic cells. *Journal of Materials Chemistry C*,	7.1	2
1	Backbone Configuration and Electronic Property Tuning of Imide-Functionalized Ladder-Type Heteroarenes-Based Polymer Acceptors for Efficient All-Polymer Solar Cells. *Advanced Functional Materials*,2200065	15.6	1