Raja Shahid Ashraf

List of Publications by Year
in descending order

80	10,299	50276 46	69250 77
papers	citations	h-index	g-index

85	85	85	8465
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-efficiency and air-stable P3HT-based polymer solar cells with a new non-fullerene acceptor. Nature Communications, 2016, 7, 11585.	12.8	1,053
2	Reducing the efficiencyâ€“stabilityâ€“cost gap of organic photovoltaics with highly efficient and stable small molecule acceptor ternary solar cells. Nature Materials, 2017, 16, 363-369.	27.5	921
3	Thieno[3,2-<i>b</i>]thiopheneâ˘Diketopyrrolopyrrole-Containing Polymers for High-Performance Organic Field-Effect Transistors and Organic Photovoltaic Devices. Journal of the American Chemical Society, 2011, 133, 3272-3275.	13.7	854
4	Indacenodithiophene Semiconducting Polymers for High-Performance, Air-Stable Transistors. Journal of the American Chemical Society, 2010, 132, 11437-11439.	13.7	529
5	Highâ€Performance Ambipolar Diketopyrrolopyrroleâ€Thieno[3,2â€<i>b</i>]thiophene Copolymer Fieldâ€Effect Transistors with Balanced Hole and Electron Mobilities. Advanced Materials, 2012, 24, 647-652.	21.0	521
6	Reduced voltage losses yield 10% efficient fullerene free organic solar cells with >1 V open circuit voltages. Energy and Environmental Science, 2016, 9, 3783-3793.	30.8	477
7	A Rhodanine Flanked Nonfullerene Acceptor for Solution-Processed Organic Photovoltaics. Journal of the American Chemical Society, 2015, 137, 898-904.	13.7	446
8	Molecular Packing of High-Mobility Diketo Pyrrolo-Pyrrole Polymer Semiconductors with Branched Alkyl Side Chains. Journal of the American Chemical Society, 2011, 133, 15073-15084.	13.7	381
9	Chalcogenophene Comonomer Comparison in Small Band Gap Diketopyrrolopyrrole-Based Conjugated Polymers for High-Performing Field-Effect Transistors and Organic Solar Cells. Journal of the American Chemical Society, 2015, 137, 1314-1321.	13.7	363
10	Exploring the origin of high optical absorption in conjugated polymers. Nature Materials, 2016, 15, 746-753.	27.5	314
11	Photocurrent Enhancement from Diketopyrrolopyrrole Polymer Solar Cells through Alkyl-Chain Branching Point Manipulation. Journal of the American Chemical Society, 2013, 135, 11537-11540.	13.7	258
12	Design of Semiconducting Indacenodithiophene Polymers for High Performance Transistors and Solar Cells. Accounts of Chemical Research, 2012, 45, 714-722.	15.6	256
13	Competition between the Charge Transfer State and the Singlet States of Donor or Acceptor Limiting the Efficiency in Polymer:Fullerene Solar Cells. Journal of the American Chemical Society, 2012, 134, 685-692.	13.7	238
14	A new thiophene substituted isoindigo based copolymer for high performance ambipolar transistors. Chemical Communications, 2012, 48, 3939.	4.1	225
15	Effect of Fluorination on the Properties of a Donorâ€“Acceptor Copolymer for Use in Photovoltaic Cells and Transistors. Chemistry of Materials, 2013, 25, 277-285.	6.7	218
16	Silaindacenodithiopheneâ€Based Low Band Gap Polymers â€“ The Effect of Fluorine Substitution on Device Performances and Film Morphologies. Advanced Functional Materials, 2012, 22, 1663-1670.	14.9	177
17	Indacenodithiophene-<i>co</i>-benzothiadiazole Copolymers for High Performance Solar Cells or Transistors via Alkyl Chain Optimization. Macromolecules, 2011, 44, 6649-6652.	4.8	165
18	Thienopyrazine-Based Low-Bandgap Poly(heteroaryleneethynylene)s for Photovoltaic Devices. Macromolecular Rapid Communications, 2006, 27, 1454-1459.	3.9	161

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19	The Influence of Polymer Purification on Photovoltaic Device Performance of a Series of Indacenodithiophene Donor Polymers. Advanced Materials, 2013, 25, 2029-2034.	21.0	129
20	Silaindacenodithiophene Semiconducting Polymers for Efficient Solar Cells and High-Mobility Ambipolar Transistors. Chemistry of Materials, 2011, 23, 768-770.	6.7	126
21	A Thieno[3,2â€‹<i>b</i>][1]benzothiophene Isoindigo Building Block for Additiveâ€•and Annealingâ€Free Highâ€Performance Polymer Solar Cells. Advanced Materials, 2015, 27, 4702-4707.	21.0	120
22	Random benzotrithiophene-based donorâ€“acceptor copolymers for efficient organic photovoltaic devices. Chemical Communications, 2012, 48, 5832.	4.1	111
23	Progress in Poly (3â€Hexylthiophene) Organic Solar Cells and the Influence of Its Molecular Weight on Device Performance. Advanced Energy Materials, 2018, 8, 1801001.	19.5	95
24	Photovoltaic and field effect transistor performance of selenophene and thiophene diketopyrrolopyrrole co-polymers with dithienothiophene. Journal of Materials Chemistry, 2012, 22, 12817.	6.7	92
25	Highly Efficient and Reproducible Nonfullerene Solar Cells from Hydrocarbon Solvents. ACS Energy Letters, 2017, 2, 1494-1500.	17.4	89
26	2,1,3â€Benzothiadiazoleâ€5,6â€Dicarboxylic Imide â€“ A Versatile Building Block for Additiveâ€•and Annealingâ€Free Processing of Organic Solar Cells with Efficiencies Exceeding 8%. Advanced Materials, 2015, 27, 948-953.	21.0	88
27	Enhancing Fullereneâ€Based Solar Cell Lifetimes by Addition of a Fullerene Dumbbell. Angewandte Chemie - International Edition, 2014, 53, 12870-12875.	13.8	86
28	Influence of Crystallinity and Energetics on Charge Separation in Polymerâ€“Inorganic Nanocomposite Films for Solar Cells. Scientific Reports, 2013, 3, 1531.	3.3	84
29	Thieno[3,2â€‹<i>b</i>]thiopheneâ€diketopyrrolopyrrole Containing Polymers for Inverted Solar Cells Devices with High Short Circuit Currents. Advanced Functional Materials, 2013, 23, 5647-5654.	14.9	78
30	Influence of Side Chains on the n-Type Organic Electrochemical Transistor Performance. ACS Applied Materials & Interfaces, 2021, 13, 4253-4266.	8.0	76
31	Material Crystallinity as a Determinant of Triplet Dynamics and Oxygen Quenching in Donor Polymers for Organic Photovoltaic Devices. Advanced Functional Materials, 2014, 24, 1474-1482.	14.9	71
32	Alkyl Chain Extension as a Route to Novel Thieno[3,2-<i>b</i>]thiophene Flanked Diketopyrrolopyrrole Polymers for Use in Organic Solar Cells and Field Effect Transistors. Macromolecules, 2013, 46, 5961-5967.	4.8	67
33	Thioalkyl-Substituted Benzothiadiazole Acceptors: Copolymerization with Carbazole Affords Polymers with Large Stokes Shifts and High Solar Cell Voltages. Macromolecules, 2014, 47, 2279-2288.	4.8	66
34	Synthesis of novel thieno[3,2-b]thienobis(silolothiophene) based low bandgap polymers for organic photovoltaics. Chemical Communications, 2012, 48, 7699.	4.1	63
35	Dual Function Additives: A Small Molecule Crosslinker for Enhanced Efficiency and Stability in Organic Solar Cells. Advanced Energy Materials, 2015, 5, 1401426.	19.5	61
36	Influence of the Electron Deficient Coâ€Monomer on the Optoelectronic Properties and Photovoltaic Performance of Dithienogermoleâ€based Coâ€Polymers. Advanced Functional Materials, 2014, 24, 678-687.	14.9	59

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37	Thieno[3,2â€<i>b</i>]thiophene Flanked Isoindigo Polymers for High Performance Ambipolar OFET Applications. Advanced Functional Materials, 2014, 24, 7109-7115.	14.9	58
38	Synthesis and properties of fluorene-based polyheteroarylenes for photovoltaic devices. Journal of Polymer Science Part A, 2006, 44, 6952-6961.	2.3	56
39	Isostructural, Deeper Highest Occupied Molecular Orbital Analogues of Poly(3-hexylthiophene) for High-Open Circuit Voltage Organic Solar Cells. Chemistry of Materials, 2013, 25, 4239-4249.	6.7	55
40	Synthesis and Properties of Novel Low-Band-Gap Thienopyrazine-Based Poly(heteroarylenevinylene)s. Macromolecules, 2006, 39, 7844-7853.	4.8	53
41	Germaindacenodithiophene based low band gap polymers for organic solar cells. Chemical Communications, 2012, 48, 2955.	4.1	53
42	Indolo-naphthyridine-6,13-dione Thiophene Building Block for Conjugated Polymer Electronics: Molecular Origin of Ultrahigh n-Type Mobility. Chemistry of Materials, 2016, 28, 8366-8378.	6.7	52
43	Toward Improved Lifetimes of Organic Solar Cells under Thermal Stress: Substrate-Dependent Morphological Stability of PCDTBT:PCBM Films and Devices. Scientific Reports, 2015, 5, 15149.	3.3	51
44	Pyrroloindacenodithiophene containing polymers for organic field effect transistors and organic photovoltaics. Journal of Materials Chemistry, 2011, 21, 18744.	6.7	50
45	A Systematic Approach to the Design Optimization of Lightâ€Absorbing Indenofluorene Polymers for Organic Photovoltaics. Advanced Energy Materials, 2012, 2, 260-265.	19.5	48
46	A Nature-Inspired Conjugated Polymer for High Performance Transistors and Solar Cells. Macromolecules, 2015, 48, 5148-5154.	4.8	48
47	Increased Exciton Dipole Moment Translates into Charge-Transfer Excitons in Thiophene-Fluorinated Low-Bandgap Polymers for Organic Photovoltaic Applications. Chemistry of Materials, 2015, 27, 7934-7944.	6.7	46
48	Synthesis and properties of poly(heteroaryleneethynylene)s consisting of electron-accepting benzothiadiazole/quinoxaline units and electron-donating alkyl thiophene units. Journal of Polymer Science Part A, 2005, 43, 6445-6454.	2.3	44
49	New Fused Bis-Thienobenzothienothiophene Copolymers and Their Use in Organic Solar Cells and Transistors. Macromolecules, 2013, 46, 727-735.	4.8	43
50	Towards optimisation of photocurrent from fullerene excitons in organic solar cells. Energy and Environmental Science, 2014, 7, 1037.	30.8	42
51	Synthesis of a Novel Fused Thiopheneâ€thieno[3,2â€b]thiopheneâ€thiophene Donor Monomer and Coâ€polymer for Use in OPV and OFETs. Macromolecular Rapid Communications, 2011, 32, 1664-1668.	3.9	41
52	End Group Tuning in Acceptorâ€“Donorâ€“Acceptor Nonfullerene Small Molecules for High Fill Factor Organic Solar Cells. Advanced Functional Materials, 2019, 29, 1808429.	14.9	41
53	Fused ring thiophene-based poly(heteroarylene ethynylene)s for organic solar cells. Solar Energy Materials and Solar Cells, 2010, 94, 1759-1766.	6.2	37
54	Improving the Compatibility of Diketopyrrolopyrrole Semiconducting Polymers for Biological Interfacing by Lysine Attachment. Chemistry of Materials, 2018, 30, 6164-6172.	6.7	37

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55	Photo- and electroluminescence of ambipolar, high-mobility, donor-acceptor polymers. Organic Electronics, 2016, 32, 220-227.	2.6	32
56	P3HT Molecular Weight Determines the Performance of P3HT:Oâ€IDTBR Solar Cells. Solar Rrl, 2019, 3, 1900023.	5.8	27
57	Pyrroloindacenodithiophene polymers: the effect of molecular structure on OFET performance. Polymer Chemistry, 2013, 4, 3537.	3.9	23
58	Polythiophenes with vinylene linked <i>ortho</i>, <i>meta</i> and <i>para</i>-carborane sidechains. Polymer Chemistry, 2014, 5, 6190-6199.	3.9	23
59	Impact of Acceptor Quadrupole Moment on Charge Generation and Recombination in Blends of IDTâ€Based Nonâ€Fullerene Acceptors with PCE10 as Donor Polymer. Advanced Energy Materials, 2021, 11, 2100839.	19.5	23
60	Systematic Assessment of Visible-Light-Driven Microspherical V2O5 Photocatalyst for the Removal of Hazardous Organosulfur Compounds from Diesel. Nanomaterials, 2021, 11, 2908.	4.1	21
61	Dihydropyrroloindoledione-based copolymers for organic electronics. Journal of Materials Chemistry C, 2013, 1, 2711.	5.5	19
62	Diselenogermole as a novel donor monomer for low band gap polymers. Journal of Materials Chemistry A, 2015, 3, 1986-1994.	10.3	19
63	Naphthacenodithiophene Based Polymersâ€”New Members of the Acenodithiophene Family Exhibiting High Mobility and Power Conversion Efficiency. Advanced Functional Materials, 2016, 26, 6961-6969.	14.9	19
64	Crystalline and porous CoSe dendrimeric architectures for efficient oxygen evolution reaction. Fuel, 2022, 323, 124324.	6.4	19
65	Post-Polymerization Ketalization for Improved Organic Photovoltaic Materials. Macromolecules, 2013, 46, 7727-7732.	4.8	14
66	Power conversion efficiency enhancement in diketopyrrolopyrrole based solar cells through polymer fractionation. Journal of Materials Chemistry C, 2014, 2, 8593-8598.	5.5	14
67	Conjugated Polymerâ€“Porphyrin Complexes for Organic Electronics. ChemPhysChem, 2015, 16, 1223-1230.	2.1	10
68	Influence of alkyne spacers on the performance of thiophene-based donors in bulk-heterojunction organic photovoltaic cells. Dyes and Pigments, 2021, 188, 109152.	3.7	9
69	Enhancing Fullereneâ€Based Solar Cell Lifetimes by Addition of a Fullerene Dumbbell. Angewandte Chemie, 2014, 126, 13084-13089.	2.0	8
70	Prato reaction derived polythiophene/C₆₀ donorâ€“acceptor double cable polymer, fabrication of photodetectors and evaluation of photocurrent generation. Journal of Materials Chemistry C, 2020, 8, 17365-17373.	5.5	8
71	Excitation Wavelength-Dependent Internal Quantum Efficiencies in a P3HT/Nonfullerene Acceptor Solar Cell. Journal of Physical Chemistry C, 2019, 123, 5826-5832.	3.1	6
72	Synthesis, photophysical, electrochemical and computational studies of novel 2-aminoimidazolones with D-Ï€-A framework. Journal of Photochemistry and Photobiology A: Chemistry, 2022, 429, 113918.	3.9	5

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73	NiRu0.3Se Nanoparticles In Situ Grown on Reduced Graphene: Synthesis and Electrocatalytic Activity in the Oxygen Evolution Reaction. ChemistrySelect, 2021, 6, 502-510.	1.5	4
74	Synthesis, in vitro anticancer activity and reactions with biomolecule of gold(I)-NHC carbene complexes. Journal of Molecular Structure, 2022, 1255, 132482.	3.6	4
75	Bis-lactam-based donor polymers for organic solar cells: Evolution by design. Thin Solid Films, 2014, 560, 82-85.	1.8	3
76	Dithienosilolothiophene: A New Polyfused Donor for Organic Electronics. Macromolecules, 2015, 48, 5557-5562.	4.8	3
77	Correlation Between Crystallinity and Solarâ€Cell Efficiency of the Lowâ€Bandgap Polymer PDDTP. Macromolecular Chemistry and Physics, 2010, 211, 1689-1694.	2.2	2
78	Efficiency Limits in Wideâ€Bandgap Geâ€Containing Donor Polymer:Nonfullerene Acceptor Bulk Heterojunction Solar Cells. Physica Status Solidi - Rapid Research Letters, 0, , 2100206.	2.4	1
79	Electronic structure tuning of new fused thieno[3,2-b]thieno bisthiophene based polymers via alkyl chain and Group IV heteroatom modulation. Proceedings of SPIE, 2012, , .	0.8	0
80	Novel nature-inspired conjugated polymers for high performance transistors and solar cells (Presentation Recording). , 2015, , .		0