

Safakath Karuthedath

List of Publications by Year in descending order

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35
papers

1,735
citations

361296

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414303

32
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docs citations

36
times ranked

2109
citing authors

#	ARTICLE	IF	CITATIONS
1	Intrinsic efficiency limits in low-bandgap non-fullerene acceptor organic solar cells. <i>Nature Materials</i> , 2021, 20, 378-384.	13.3	257
2	Generation of Triplet Excited States via Photoinduced Electron Transfer in <i>meso</i> -anthra-BODIPY: Fluorogenic Response toward Singlet Oxygen in Solution and in Vitro. <i>Journal of the American Chemical Society</i> , 2017, 139, 6282-6285.	6.6	248
3	Long-range exciton diffusion in molecular non-fullerene acceptors. <i>Nature Communications</i> , 2020, 11, 5220.	5.8	204
4	17.1% Efficient Single-Junction Organic Solar Cells Enabled by n-Type Doping of the Bulk-Heterojunction. <i>Advanced Science</i> , 2020, 7, 1903419.	5.6	173
5	Control of triplet state generation in heavy atom-free BODIPY-anthracene dyads by media polarity and structural factors. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 8016-8031.	1.3	96
6	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8%. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 21683-21692.	7.2	82
7	Nonlinear optical studies of lead lanthanum borate glass doped with Au nanoparticles. <i>Journal of Non-Crystalline Solids</i> , 2012, 358, 1667-1672.	1.5	70
8	BODIPY-Pyrene and Perylene Dyads as Heavy-Atom-Free Singlet Oxygen Sensitizers. <i>ChemPhotoChem</i> , 2018, 2, 606-615.	1.5	66
9	Intramolecular Charge Transfer and Z-Scan Studies of a Semiorganic Nonlinear Optical Material Sodium Acid Phthalate Hemihydrate: A Vibrational Spectroscopic Study. <i>Journal of Physical Chemistry A</i> , 2011, 115, 8216-8226.	1.1	58
10	Thermal annealing reduces geminate recombination in TQ1:N2200 all-polymer solar cells. <i>Journal of Materials Chemistry A</i> , 2018, 6, 7428-7438.	5.2	45
11	The effect of oxygen induced degradation on charge carrier dynamics in P3HT:PCBM and Si-PCPDTBT:PCBM thin films and solar cells. <i>Journal of Materials Chemistry A</i> , 2015, 3, 3399-3408.	5.2	42
12	Impact of Fullerene on the Photophysics of Ternary Small Molecule Organic Solar Cells. <i>Advanced Energy Materials</i> , 2019, 9, 1901443.	10.2	37
13	Charge Photogeneration in Non-Fullerene Organic Solar Cells: Influence of Excess Energy and Electrostatic Interactions. <i>Advanced Functional Materials</i> , 2021, 31, 2007479.	7.8	31
14	Revealing the Side-Chain-Dependent Ordering Transition of Highly Crystalline Double-Cable Conjugated Polymers. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 25499-25507.	7.2	31
15	Highly Crystalline Near-Infrared Acceptor Enabling Simultaneous Efficiency and Photostability Boosting in High-Performance Ternary Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 48095-48102.	4.0	30
16	Buildup of Triplet-State Population in Operating TQ1:PC ₇₁ BM Devices Does Not Limit Their Performance. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 2838-2845.	2.1	30
17	Mechanistic insights into photochemical nickel-catalyzed cross-couplings enabled by energy transfer. <i>Nature Communications</i> , 2022, 13, 2737.	5.8	30
18	Double-Cable Conjugated Polymers with Pendant Near-Infrared Electron Acceptors for Single-Component Organic Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	28

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19	Deciphering the Role of Fluorination: Morphological Manipulation Prompts Charge Separation and Reduces Carrier Recombination in All- <small>Molecule</small> Photovoltaics. Solar Rrl, 2020, 4, 1900528.	3.1	27
20	Synthesis, electrochemical and optical studies of new cyanopyridine based conjugated polymers as potential fluorescent materials. Polymer, 2011, 52, 4174-4183.	1.8	20
21	Charge and Triplet Exciton Generation in Neat PC ₇₀ BM Films and Hybrid CuSCN:PC ₇₀ BM Solar Cells. Advanced Energy Materials, 2019, 9, 1802476.	10.2	20
22	Miscibility-Controlled Phase Separation in Double-Cable Conjugated Polymers for Single-Component Organic Solar Cells with Efficiencies over 8%. Angewandte Chemie, 2020, 132, 21867-21876.	1.6	18
23	Trace Solvent Additives Enhance Charge Generation in Layer-by-Layer Coated Organic Solar Cells. Small Structures, 0, , .	6.9	18
24	The role of spin in the degradation of organic photovoltaics. Nature Communications, 2021, 12, 471.	5.8	16
25	Ultrafast Charge Dynamics in Dilute-Donor versus Highly Intermixed TAPC:C ₆₀ Organic Solar Cell Blends. Journal of Physical Chemistry Letters, 2020, 11, 5610-5617.	2.1	15
26	Uphill and downhill charge generation from charge transfer to charge separated states in organic solar cells. Journal of Materials Chemistry C, 2021, 9, 14463-14489.	2.7	10
27	Charge Photogeneration and Recombination in Mesostructured CuSCN-Nanowire/PC ₇₀ BM Solar Cells. Solar Rrl, 2018, 2, 1800095.	3.1	9
28	Efficient long-range electron transfer processes in polyfluorene-perylene diimide blends. Nanoscale, 2018, 10, 10934-10944.	2.8	8
29	Degradation effects on charge carrier transport in P3HT:PCBM solar cells studied by Photo-CELIV and ToF. Proceedings of SPIE, 2014, , .	0.8	5
30	Design, Synthesis and Selective Functionalization of a Rigid, Truxene Derived Pure Blue-Emitting Chromophore. ChemistrySelect, 2020, 5, 109-116.	0.7	3
31	Revealing the Side-Chain-Dependent Ordering Transition of Highly Crystalline Double-Cable Conjugated Polymers. Angewandte Chemie, 2021, 133, 25703-25711.	1.6	3
32	Effect of Quencher, Geometry, and Light Outcoupling on the Determination of Exciton Diffusion Length in Nonfullerene Acceptors. Solar Rrl, 2022, 6, .	3.1	2
33	Ultrafast Energy Transfer Triggers Ionization Energy Offset Dependence of Quantum Efficiency in Low-bandgap Non-fullerene Acceptor Solar Cells. , 0, , .		0
34	Role of Energy Transfer and Ionization Energy Offset in NFA-based Ternary Organic Solar Cells: Implications to Design Rules. , 0, , .		0
35	Double-Cable Conjugated Polymers with Pendent Near-Infrared Electron Acceptors for Single-Component Organic Solar Cells. Angewandte Chemie, 0, , .	1.6	0