Jegadesan Subbiah

List of Publications by Year
in descending order

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92 papers	6,545 citations	94433 37 h-index	60623 81 g-index
93 all docs	93 docs citations	93 times ranked	8416 citing authors

#	Article	IF	Citations
1	High-efficiency inverted dithienogermoleâ€“thienopyrrolodione-based polymer solar cells. Nature Photonics, 2012, 6, 115-120.	31.4	903
2	Toward Large Scale Rollâ€toâ€Roll Production of Fully Printed Perovskite Solar Cells. Advanced Materials, 2015, 27, 1241-1247.	21.0	785
3	Dithienogermole As a Fused Electron Donor in Bulk Heterojunction Solar Cells. Journal of the American Chemical Society, 2011, 133, 10062-10065.	13.7	693
4	A molecular nematic liquid crystalline material for high-performance organic photovoltaics. Nature Communications, 2015, 6, 6013.	12.8	541
5	Inverted Polymer Solar Cells with Reduced Interface Recombination. Advanced Energy Materials, 2012, 2, 1333-1337.	19.5	210
6	The effect of molybdenum oxide interlayer on organic photovoltaic cells. Applied Physics Letters, 2009, 95, .	3.3	190
7	Energy level evolution of air and oxygen exposed molybdenum trioxide films. Applied Physics Letters, 2010, 96, .	3.3	189
8	Organic Solar Cells Using a Highâ€Molecularâ€Weight Benzodithiopheneâ€“Benzothiadiazole Copolymer with an Efficiency of 9.4%. Advanced Materials, 2015, 27, 702-705.	21.0	188
9	n-Type Conjugated Polyisoindigos. Macromolecules, 2011, 44, 6303-6310.	4.8	156
10	Synthetic Principles Directing Charge Transport in Low-Band-Gap Dithienosiloleâ€“Benzothiadiazole Copolymers. Journal of the American Chemical Society, 2012, 134, 8944-8957.	13.7	124
11	Energy level evolution of molybdenum trioxide interlayer between indium tin oxide and organic semiconductor. Applied Physics Letters, 2010, 96, 073304.	3.3	114
12	On the magnetic properties of ultra-fine zinc ferrites. Journal of Magnetism and Magnetic Materials, 1998, 189, 83-88.	2.3	108
13	Organic photovoltaic modules fabricated by an industrial gravure printing proofer. Solar Energy Materials and Solar Cells, 2013, 109, 47-55.	6.2	103
14	Dielectric properties of rubber ferrite composites containing mixed ferrites. Journal Physics D: Applied Physics, 1999, 32, 1801-1810.	2.8	99
15	Printing-friendly sequential deposition via intra-additive approach for roll-to-roll process of perovskite solar cells. Nano Energy, 2017, 41, 443-451.	16.0	91
16	Organic and Inorganic Blocking Layers for Solutionâ€Processed Colloidal PbSe Nanocrystal Infrared Photodetectors. Advanced Functional Materials, 2011, 21, 167-171.	14.9	88
17	An isoindigo and dithieno[3,2-b:2â€²,3â€²-d]silole copolymer for polymer solar cells. Polymer Chemistry, 2012, 3, 89-92.	3.9	84
18	High-performance polymer solar cells with a conjugated zwitterion by solution processing or thermal deposition as the electron-collection interlayer. Journal of Materials Chemistry, 2012, 22, 24155.	6.7	76

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19	Green Dioxythiophene-Benzothiadiazole Donorâ^'Acceptor Copolymers for Photovoltaic Device Applications. Chemistry of Materials, 2010, 22, 2093-2106.	6.7	73
20	Effect of molecular weight on the properties and organic solar cell device performance of a donorâ€“acceptor conjugated polymer. Polymer Chemistry, 2015, 6, 2312-2318.	3.9	70
21	Reduced Recombination in High Efficiency Molecular Nematic Liquid Crystalline: Fullerene Solar Cells. Advanced Energy Materials, 2016, 6, 1600939.	19.5	68
22	MoO 3 /poly(9,9-dioctylfluorene-co-N-[4-(3-methylpropyl)]-diphenylamine) double-interlayer effect on polymer solar cells. Applied Physics Letters, 2010, 96, .	3.3	63
23	High-Efficiency Inverted Polymer Solar Cells with Double Interlayer. ACS Applied Materials & Interfaces, 2012, 4, 866-870.	8.0	63
24	Highly ordered anodized Nb2O5 nanochannels for dye-sensitized solar cells. Electrochemistry Communications, 2014, 40, 20-23.	4.7	61
25	Liquid crystalline hexa-peri-hexabenzocoronene-diketopyrrolopyrrole organic dyes for photovoltaic applications. Journal of Materials Chemistry, 2012, 22, 21131.	6.7	55
26	Single Isomer of Indene-C₇₀ Bisadductâ€”Isolation and Performance in Bulk Heterojunction Solar Cells. Chemistry of Materials, 2014, 26, 1686-1689.	6.7	55
27	Photoâ€Carrier Recombination in Polymer Solar Cells Based on P3HT and Siloleâ€Based Copolymer. Advanced Energy Materials, 2011, 1, 963-969.	19.5	52
28	Loss Mechanisms in Thickâ€Film Lowâ€Bandgap Polymer Solar Cells. Advanced Energy Materials, 2013, 3, 909-916.	19.5	52
29	Direct Electrochemical Nanopatterning of Polycarbazole Monomer and Precursor Polymer Films:â€‰ Ambient Formation of Thermally Stable Conducting Nanopatterns. Langmuir, 2006, 22, 780-786.	3.5	50
30	Aesthetically Pleasing Conjugated Polymer:Fullerene Blends for Blue-Green Solar Cells Via Roll-to-Roll Processing. ACS Applied Materials & Interfaces, 2012, 4, 1847-1853.	8.0	50
31	Reverse gravure coating for roll-to-roll production of organic photovoltaics. Solar Energy Materials and Solar Cells, 2016, 149, 154-161.	6.2	46
32	Solâ€“gel-coated oligomers as novel stationary phases for solid-phase microextraction. Journal of Chromatography A, 2005, 1087, 252-258.	3.7	45
33	Synthesis and characterization of ferrite nanocomposite spheres from hydroxylated polymers. Journal of Magnetism and Magnetic Materials, 2006, 296, 104-113.	2.3	45
34	Nanolithographic Electropolymerization of a Precursor Polymer Film to Form Conducting Nanopatterns. Advanced Materials, 2005, 17, 1282-1285.	21.0	44
35	Enhanced photovoltaic efficiency via light-triggered self-assembly. Chemical Communications, 2013, 49, 6552.	4.1	42
36	High-Performance Large-Area Luminescence Solar Concentrator Incorporating a Donorâ€“Emitter Fluorophore System. ACS Energy Letters, 2019, 4, 1839-1844.	17.4	42

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37	Effect of TiO₂ Nanoparticles on Properties of Silica Refractory. Journal of the American Ceramic Society, 2010, 93, 2236-2243.	3.8	38
38	Transparent metal electrodes from ordered nanosphere arrays. Journal of Applied Physics, 2013, 114, .	2.5	38
39	A Green Route to Conjugated Polyelectrolyte Interlayers for Highâ€Performance Solar Cells. Angewandte Chemie - International Edition, 2017, 56, 8431-8434.	13.8	37
40	Electron deficient conjugated polymers based on benzotriazole. Polymer Chemistry, 2013, 4, 1077-1083.	3.9	36
41	Development of a High-Performance Donorâ€“Acceptor Conjugated Polymer: Synergy in Materials and Device Optimization. Chemistry of Materials, 2016, 28, 3481-3487.	6.7	35
42	Controlled synthesis of poly(3-hexylthiophene) in continuous flow. Beilstein Journal of Organic Chemistry, 2013, 9, 1492-1500.	2.2	34
43	Electrochemically Nanopatterned Conducting Coronas of a Conjugated Polymer Precursor:â€‰ SPM Parameters and Polymer Composition. Langmuir, 2006, 22, 3807-3811.	3.5	28
44	Beyond Fullerenes: Indacenodithiophene-Based Organic Charge-Transport Layer toward Upscaling of Low-Cost Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 22143-22155.	8.0	27
45	Reduced Recombination and Capacitor-like Charge Buildup in an Organic Heterojunction. Journal of the American Chemical Society, 2020, 142, 2562-2571.	13.7	27
46	Benzotriazole-based donorâ€“acceptor conjugated polymers with a broad absorption in the visible range. Polymer Chemistry, 2014, 5, 1258-1263.	3.9	26
47	Combined effects of MoO3 interlayer and PC70BM on polymer photovoltaic device performance. Organic Electronics, 2010, 11, 955-958.	2.6	25
48	Thiazolyl substituted benzodithiophene copolymers: synthesis, properties and photovoltaic applications. Journal of Materials Chemistry C, 2014, 2, 1306-1313.	5.5	25
49	Hydrogen bonding in bulk heterojunction solar cells: A case study. Scientific Reports, 2014, 4, 5701.	3.3	25
50	High performance p-type molecular electron donors for OPV applications via alkylthiophene catenation chromophore extension. Beilstein Journal of Organic Chemistry, 2016, 12, 2298-2314.	2.2	25
51	Efficient Green Solar Cells via a Chemically Polymerizable Donorâ€"Acceptor Heterocyclic Pentamer. ACS Applied Materials & Interfaces, 2009, 1, 1154-1158.	8.0	23
52	Effect of vertical morphology on the performance of silole-containing low-bandgap inverted polymer solar cells. Solar Energy Materials and Solar Cells, 2012, 97, 97-101.	6.2	23
53	Morphological and Device Evaluation of an Amphiphilic Block Copolymer for Organic Photovoltaic Applications. Macromolecules, 2017, 50, 4942-4951.	4.8	22
54	Enhancement of efficiency in organic photovoltaic devices containing self-complementary hydrogen-bonding domains. Beilstein Journal of Organic Chemistry, 2013, 9, 1102-1110.	2.2	20

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55	Understanding the chemical origin of improved thin-film device performance from photodoped ZnO nanoparticles. Solar Energy Materials and Solar Cells, 2014, 124, 211-216.	6.2	20
56	One-pot selective synthesis of a fullerene bisadduct for organic solar cell applications. Chemical Communications, 2015, 51, 9837-9840.	4.1	20
57	Synthesis and Patterning of Luminescent CaCO3 -Poly(p -phenylene) Hybrid Materials and Thin Films. Advanced Functional Materials, 2007, 17, 1698-1704.	14.9	19
58	Easy Writing of Nanopatterns on a Polymer Film Using Electrostatic Nanolithography. Small, 2006, 2, 481-484.	10.0	18
59	Fullerene peapod nanoparticles as an organic semiconductorâ€“electrode interface layer. Chemical Communications, 2016, 52, 3356-3359.	4.1	17
60	Understanding the performance and loss-mechanisms in donorâ€“acceptor polymer based solar cells: Photocurrent generation, charge separation and carrier transport. Solar Energy Materials and Solar Cells, 2011, 95, 2502-2510.	6.2	16
61	Solubilizing core modifications on high-performing benzodithiophene-based molecular semiconductors and their influences on film nanostructure and photovoltaic performance. Journal of Materials Chemistry A, 2019, 7, 6312-6326.	10.3	16
62	Naphthalimide end-capped diphenylacetylene: a versatile organic semiconductor for blue light emitting diodes and a donor or an acceptor for solar cells. New Journal of Chemistry, 2019, 43, 9243-9254.	2.8	15
63	Conformational degree and molecular orientation in rubrene film by in situ x-ray absorption spectroscopy. Journal of Applied Physics, 2007, 102, 063504.	2.5	14
64	Plasma deposition of organic polymer films for solar cell applications. Organic Electronics, 2016, 32, 78-82.	2.6	13
65	Grapheneâ€Based Transparent Conducting Electrodes for High Efficiency Flexible Organic Photovoltaics: Elucidating the Source of the Power Losses. Solar Rrl, 2019, 3, 1900042.	5.8	13
66	Effect of Side-Chain Modification on the Active Layer Morphology and Photovoltaic Performance of Liquid Crystalline Molecular Materials. ACS Applied Materials & Interfaces, 2021, 13, 1086-1093.	8.0	13
67	Bulk Heterojunction Nanomorphology of Fluorenyl Hexa-peri-hexabenzocoroneneâ€“Fullerene Blend Films. ACS Applied Materials & Interfaces, 2013, 5, 11554-11562.	8.0	12
68	Solution Processed Polymer Near-Infrared Photodiode With Electron and Hole Blockers. IEEE Transactions on Electron Devices, 2014, 61, 3852-3857.	3.0	11
69	Synthesis and photovoltaic properties of thieno[3,2-b]thiophenyl substituted benzo[1,2-b:4,5-bâ€²]dithiophene copolymers. Polymer Chemistry, 2014, 5, 6710-6717.	3.9	10
70	A Green Route to Conjugated Polyelectrolyte Interlayers for Highâ€Performance Solar Cells. Angewandte Chemie, 2017, 129, 8551-8554.	2.0	10
71	Phthalimide and naphthalimide: Effect of end-capping groups on molecular properties and photovoltaic performance of 9-fluorenone based acceptors for organic solar cells. Organic Electronics, 2018, 62, 12-20.	2.6	10
72	Morphosynthesis of Mixed Metal Carbonates Using Micellar Aggregation. Crystal Growth and Design, 2006, 6, 1537-1541.	3.0	9

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73	Controlled Synthesis of Wellâ€Defined Semiconducting Brush Polymers. Macromolecular Chemistry and Physics, 2016, 217, 403-413.	2.2	9
74	Pyridine End-Capped Polymer to Stabilize Organic Nanoparticle Dispersions for Solar Cell Fabrication through Reversible Pyridinium Salt Formation. ACS Applied Materials & Interfaces, 2021, 13, 36044-36052.	8.0	7
75	Separation and identification of indeneâ€“C₇₀ bisadduct isomers. Beilstein Journal of Organic Chemistry, 2016, 12, 903-911.	2.2	6
76	Experimental Evidence Relating Charge-Transfer-State Kinetics and Strongly Reduced Bimolecular Recombination in Organic Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 10519-10525.	4.6	6
77	Color Tunable Ï€-Conjugated Polymers for Solar-Cell Applications: Engineering of Bandgap, Interface, and Charge Transport Properties. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1792-1800.	2.9	5
78	Flexible ITOâ€Free Organic Photovoltaics on Ultraâ€Thin Flexible Glass Substrates with High Efficiency and Improved Stability. Solar Rrl, 2019, 3, 1800286.	5.8	5
79	A structural study of p-type Aâ€“Dâ€“A oligothiophenes: effects of regioregular alkyl sidechains on annealing processes and photovoltaic performances. Journal of Materials Chemistry C, 2020, 8, 567-580.	5.5	4
80	Fabrication of Nanostructure on a Polymer Film Using Atomic Force Microscope. Journal of Nanoscience and Nanotechnology, 2007, 7, 2172-2175.	0.9	3
81	Interlayers for Efficient Electron Injection in Polymer LEDs. Journal of Display Technology, 2013, 9, 469-475.	1.2	3
82	A Novel Epigenetic Drug-Eluting Balloon Angioplasty Device: Evaluation in a Large Animal Model of Neointimal Hyperplasia. Cardiovascular Drugs and Therapy, 2019, 33, 687-692.	2.6	3
83	The effect of molybdenum trioxide inter-layer between indium tin oxide (ITO) and organic semiconductor on the energy level alignment. Materials Research Society Symposia Proceedings, 2009, 1212, 1.	0.1	2
84	The effect of molybdenum oxide interlayer on organic photovoltaic cells. , 2009, , .		1
85	Polymer Spraying for Aerosol Jet Etching of Dielectrics for 156-mm Silicon Wafers. Materials Research Society Symposia Proceedings, 2014, 1630, 1.	0.1	1
86	One-Pot Synthesis of Fully Conjugated Amphiphilic Block Copolymers Using Asymmetrically Functionalized Pushâ€“Pull Monomers. Macromolecules, 2022, 55, 2872-2881.	4.8	1
87	Morphology and Polymorph Selectivity Control in Calcium Carbonate Mineralization. Materials Research Society Symposia Proceedings, 2004, 847, 508.	0.1	0
88	Design of Novel Nanocomposites through Interfacial Engineering. Journal of Metastable and Nanocrystalline Materials, 2005, 23, 327-330.	0.1	0
89	Nanolithography of Organic Films Using Scanning Probe Microscopy. , 2010, , 223-254.		0
90	Efficient, square-centimetre inverted organic solar cell using a metal grid coated transparent electrode (Conference Presentation). , 2016, , .		0

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91	High performance molecular donors for organic solar cells, materials design and device optimization. , 2017, , .		0
92	Power losses in conventional and inverted non-polymeric donor:fullerene bulk heterojunction solar cells - The role of vertical phase separation in BQR:PC71BM blends. Organic Electronics, 2022, 108, 106594.	2.6	0