Vellaiappillai Tamilavan

List of Publications by Year
in descending order

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70	1,131	17	30
papers	citations	h-index	g-index
		471509	454955

70	70	70	1401
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Optimization of Phosphatase- and Redox Cycling-Based Immunosensors and Its Application to Ultrasensitive Detection of Troponin I. Analytical Chemistry, 2011, 83, 3926-3933.	6.5	108
2	Hydroquinone Diphosphate as a Phosphatase Substrate in Enzymatic Amplification Combined with Electrochemicalâ€“Chemicalâ€“Chemical Redox Cycling for the Detection of <i>E. coli</i> O157:H7. Analytical Chemistry, 2013, 85, 1631-1636.	6.5	107
3	Synthesis and characterization of indenofluoreneâ€based copolymers containing 2,5â€bis(2â€thienyl)â€<i>N</i>â€arylpyrrole for bulk heterojunction solar cells and polymer lightâ€emitting diodes. Journal of Polymer Science Part A, 2010, 48, 3169-3177.	2.3	68
4	An interference-free and rapid electrochemical lateral-flow immunoassay for one-step ultrasensitive detection with serum. Analyst, The, 2014, 139, 1420-1425.	3.5	53
5	Overcoming Fill Factor Reduction in Ternary Polymer Solar Cells by Matching the Highest Occupied Molecular Orbital Energy Levels of Donor Polymers. Advanced Energy Materials, 2018, 8, 1702251.	19.5	48
6	Highly efficient imide functionalized pyrrolo[3,4-c]pyrrole-1,3-dione-based random copolymer containing thieno[3,4-c]pyrrole-4,6-dione and benzodithiophene for simple structured polymer solar cells. Journal of Materials Chemistry A, 2014, 2, 20126-20132.	10.3	40
7	Synthesis and photovoltaic properties of heteroaromatic low-band gap oligomers for bulk heterojunction solar cells. Synthetic Metals, 2011, 161, 1199-1206.	3.9	32
8	Highly crystalline new benzodithiopheneâ€“benzothiadiazole copolymer for efficient ternary polymer solar cells with an energy conversion efficiency of over 10%. Journal of Materials Chemistry C, 2018, 6, 4281-4289.	5.5	31
9	Synthesis and photovoltaic properties of donorâ€“acceptor polymers incorporating a structurally-novel pyrrole-based imide-functionalized electron acceptor moiety. Polymer, 2013, 54, 6125-6132.	3.8	30
10	Synthesis of polymers containing 1,2,4â€oxadiazole as an electronâ€acceptor moiety in their main chain and their solar cell applications. Journal of Polymer Science Part A, 2013, 51, 2131-2141.	2.3	29
11	Synthesis of three new 1â€(2,6â€diisopropylphenyl)â€2,5â€di(2â€thienyl) pyrroleâ€based donor polymers and their bulk heterojunction solar cell applications. Journal of Polymer Science Part A, 2010, 48, 5514-5521.	2.3	28
12	Synthesis of conjugated polymers with broad absorption bands and photovoltaic properties as bulk heterojuction solar cells. Polymer, 2011, 52, 2384-2390.	3.8	28
13	Benzodithiophene-based polymers containing novel electron accepting selenophene-incorporated pyrrolo[3,4-c]pyrrole-1,3-dione units for highly efficient thin film transistors and polymer solar cells. Synthetic Metals, 2014, 198, 230-238.	3.9	25
14	Synthesis of triphenylamine-based thiophene-(N-aryl)pyrrole-thiophene dyes forÂdye-sensitized solar cell applications. Tetrahedron, 2012, 68, 5890-5897.	1.9	19
15	Synthesis of N-[4-Octylphenyl]dithieno[3,2-b:2â€²,3â€²-d]pyrrole-based broad absorbing polymers and their photovoltaic applications. Polymer, 2013, 54, 3198-3205.	3.8	19
16	Facile electrochemical detection of Escherichia coli using redox cycling of the product generated by the intracellular Î²-d-galactosidase. Sensors and Actuators B: Chemical, 2015, 209, 951-956.	7.8	18
17	Open Atmosphere-Processed Stable Perovskite Solar Cells Using Molecular Engineered, Dopant-Free, Highly Hydrophobic Polymeric Hole-Transporting Materials: Influence of Thiophene and Alkyl Chain on Power Conversion Efficiency. Journal of Physical Chemistry C, 2019, 123, 8560-8568.	3.1	18
18	Synthesis of new near infrared absorption polymers based on thiadiazoloquinoxaline and their solar cell applications. Synthetic Metals, 2012, 162, 1184-1189.	3.9	17

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19	Synthesis and application of low band gap broad absorption oligomers based on 2,5-bis(2-thienyl)-N-arylpyrrole for bulk heterojunction solar cells. Current Applied Physics, 2012, 12, S124-S130.	2.4	15
20	Property modulation of dithienosilole-based polymers via the incorporation of structural isomers of imide- and lactam-functionalized pyrrolo[3,4-c]pyrrole units for polymer solar cells. Polymer, 2015, 65, 243-252.	3.8	15
21	Efficient pyrrolo[3,4-c]pyrrole-1,3-dione-based wide band gap polymer for high-efficiency binary and ternary solar cells. Polymer, 2017, 125, 182-189.	3.8	15
22	Effects of the incorporation of an additional pyrrolo[3,4-c]pyrrole-1,3-dione unit on the repeating unit of highly efficient large band gap polymers containing benzodithiophene and pyrrolo[3,4-c]pyrrole-1,3-dione derivatives. Organic Electronics, 2016, 30, 253-264.	2.6	14
23	Dual-functional light-emitting perovskite solar cells enabled by soft-covered annealing process. Nano Energy, 2019, 61, 251-258.	16.0	14
24	Open atmospheric processed perovskite solar cells using dopant-free, highly hydrophobic hole-transporting materials: Influence of thiophene and selenophene Ï€-spacers on charge transport and recombination properties. Solar Energy Materials and Solar Cells, 2019, 199, 66-74.	6.2	14
25	Synthesis and photovoltaic properties of 1-(2,6-diisopropylphenyl)-2,5-di(2-thienyl)pyrrole-based low-bandgap polymers. Polymer Bulletin, 2012, 69, 439-454.	3.3	13
26	Synthesis of new broad absorption low band gap random copolymers for bulk heterojunction solar cell applications. Macromolecular Research, 2013, 21, 406-413.	2.4	13
27	Property modulation of benzodithiophene-based polymers via the incorporation of a covalently bonded novel 2,1,3-benzothiadiazole-1,2,4-oxadiazole derivative in their main chain for polymer solar cells. Journal of Materials Chemistry C, 2014, 2, 8515-8524.	5.5	13
28	Side-chain influences on the properties of benzodithiophene-alt-di(thiophen-2-yl)quinoxaline polymers for fullerene-free organic solar cells. Polymer, 2019, 172, 305-311.	3.8	13
29	Benzodithiopheneâ€Based Broad Absorbing Random Copolymers Incorporating Weak and Strong Electron Accepting Imide and Lactam Functionalized Pyrrolo[3,4â€c]pyrrole Derivatives for Polymer Solar Cells. Macromolecular Chemistry and Physics, 2015, 216, 996-1007.	2.2	12
30	Tuning the physical properties of pyrrolo[3,4-c]pyrrole-1,3-dione-based highly efficient large band gap polymers via the chemical modification on the polymer backbone for polymer solar cells. RSC Advances, 2015, 5, 99217-99227.	3.6	12
31	Curvature effects of electron-donating polymers on the device performance of non-fullerene organic solar cells. Journal of Power Sources, 2021, 482, 229045.	7.8	12
32	Influences of the electron donor groups on the properties of thiophene-(N-aryl)pyrrole-thiophene-based organic sensitizers. Synthetic Metals, 2012, 162, 2155-2162.	3.9	11
33	Facile synthesis of 1-(2,6-diisopropylphenyl)-2,5-di(2-thienyl)pyrrole-based narrow band gap small molecules for solar cell applications. Synthetic Metals, 2013, 176, 96-103.	3.9	11
34	Enhanced photovoltaic performances of bis(pyrrolo[3,4-c]pyrrole-1,3-dione)-based wide band gap polymer via the incorporation of an appropriate spacer unit between pyrrolo[3,4-c]pyrrole-1,3-dione units. Organic Electronics, 2017, 42, 34-41.	2.6	11
35	Structural optimization of thiophene-(N-aryl)pyrrole-thiophene-based metal-free organic sensitizer for the enhanced dye-sensitized solar cell performance. Tetrahedron, 2014, 70, 371-379.	1.9	10
36	Effects of the incorporation of bithiophene instead of thiophene between the pyrrolo[3,4-c]pyrrole-1,3-dione units of a bis(pyrrolo[3,4-c]pyrrole-1,3-dione)-based polymer for polymer solar cells. New Journal of Chemistry, 2016, 40, 10153-10160.	2.8	10

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37	Solution-processable ambipolar organic field-effect transistors with bilayer transport channels. Polymer Journal, 2020, 52, 581-588.	2.7	10
38	Pyrrolo[3,4-c]pyrrole-1,3-dione-based large band gap polymers containing benzodithiophene derivatives for highly efficient simple structured polymer solar cells. Journal of Polymer Science Part A, 2014, 52, n/a-n/a.	2.3	9
39	Synthesis and optical properties of TDQD and effective CO 2 reduction using a TDQD-photosensitized TiO 2 film. Journal of Photochemistry and Photobiology A: Chemistry, 2016, 330, 30-36.	3.9	9
40	Thiophene and thieno[3,2-b]thiophene Ï€-bridged pyrrolo[3,4-c]pyrrole-1,3-dione-based wide band-gap polymers for fullerene and non-fullerene organic solar cells. Organic Electronics, 2018, 63, 78-85.	2.6	9
41	Influence of thiophene and furan Ï€â€"bridge on the properties of poly(benzodithiophene-alt-bis(Ï€â€"bridge)pyrrolopyrrole-1,3-dione) for organic solar cell applications. Polymer, 2021, 229, 123991.	3.8	9
42	Linkage position influences of anthracene and tricyanovinyl groups on the opto-electrical and photovoltaic properties of anthracene-based organic small molecules. Tetrahedron, 2014, 70, 1176-1186.	1.9	8
43	Modulation of the properties of pyrrolo[3,4-c]pyrrole-1,4-dione based polymers containing 2,5-di(2-thienyl)pyrrole derivatives with different substitutions on the pyrrole unit. New Journal of Chemistry, 2015, 39, 4658-4669.	2.8	8
44	Photocurrent enhancement of an efficient large band gap polymer incorporating benzodithiophene and weak electron accepting pyrrolo[3,4â€c]pyrroleâ€1,3â€dione derivatives via the insertion of a strong electron accepting thieno[3,4â€b]thiophene unit. Polymer, 2015, 80, 95-103.	3.8	8
45	Benzodithiophene based ternary copolymer containing covalently bonded pyrrolo[3,4-c]pyrrole-1,3-dione and benzothiadiazole for efficient polymer solar cells utilizing high energy sunlight. Organic Electronics, 2016, 38, 283-291.	2.6	8
46	Property modulation of ternary copolymer via the diverse arrangements of two different repeating units for polymer solar cells and thin film transistors. Polymer, 2016, 95, 18-25.	3.8	7
47	Enhanced efficiency and stability of polymer solar cells using solution-processed nickel oxide as hole transport material. Current Applied Physics, 2017, 17, 1232-1237.	2.4	7
48	Synthesis and Characterization of 1,2,4-Oxadiazole-Based Deep-Blue and Blue Color Emitting Polymers. Bulletin of the Korean Chemical Society, 2014, 35, 513-517.	1.9	7
49	PyrroleN-alkyl side chain effects on the properties of pyrrolo[3,4-c]pyrrole-1,3-dione-based polymers for polymer solar cells. New Journal of Chemistry, 2018, 42, 12045-12053.	2.8	6
50	Efficient Polymeric Donor for Both Visible and Near-Infrared-Absorbing Organic Solar Cells. ACS Applied Energy Materials, 2019, 2, 4284-4291.	5.1	6
51	Effects of replacing benzodithiophene with a benzothiadiazole derivative on an efficient wide band-gap benzodithiophene-alt-pyrrolo[3,4-c]pyrrole-1,3(2H,5H)-dione copolymer. Journal of Photochemistry and Photobiology A: Chemistry, 2019, 368, 162-167.	3.9	6
52	Enhanced performance of ternary polymer solar cells via property modulation of co-absorbing wide band-gap polymers. Journal of Power Sources, 2020, 471, 228457.	7.8	6
53	Enhanced photovoltaic performance of benzodithiophene-alt-bis(thiophen-2-yl)quinoxaline polymers via Ï€â€"bridge engineering for non-fullerene organic solar cells. Polymer, 2020, 194, 122408.	3.8	6
54	Physical and charge discharge behavior of facile PVDF-HFP nanocomposite microporous polymer electrolyte for lithium ion polymer batteries. Journal of Materials Science: Materials in Electronics, 2022, 33, 8594-8606.	2.2	6

#	ARTICLE	IF	CITATIONS
55	Preparation of Two New Diasteromeric Chiral Stationary Phases Based on (+)-(18-Crown-6)-2,3,11,12-tetracarboxylic Acid and (R)- or (S)-1-(1-Naphthyl)ethylamine and Chiral Tethering Group Effect on the Chiral Recognition. Molecules, 2016, 21, 1051.	3.8	5
56	Successful incorporation of optical spacer and additive solvent for enhancing the photocurrent of polymer solar cell. Solar Energy Materials and Solar Cells, 2016, 153, 131-137.	6.2	5
57	Effects of inserting keto-functionalized side-chains instead of imide-functionalized side-chain on the pyrrole backbone of 2,5-bis(2-thienyl)pyrrole-based polymers for organic solar cells. Journal of Photochemistry and Photobiology A: Chemistry, 2019, 371, 387-394.	3.9	5
58	A Novel Donor-Acceptor-Acceptor-Acceptor Polymer Containing Benzodithiophene and Benzimidazole-Benzothiadiazole-Benzimidazole for PSCs. Bulletin of the Korean Chemical Society, 2014, 35, 1098-1104.	1.9	5
59	A fluorescent chiral chemosensor for the recognition of the two enantiomers of chiral carboxylates. Chirality, 2012, 24, 406-411.	2.6	4
60	N-Aryl group influences on the properties of umbrella-shaped thiophene-(N-aryl)pyrrole-thiophene dyes. Synthetic Metals, 2014, 191, 141-150.	3.9	4
61	Pyrrolo[3,4-c]pyrrole-1,3-dione Based Wide Band Gap Polymers for Polymer Solar Cells. Journal of Nanoscience and Nanotechnology, 2017, 17, 5556-5561.	0.9	4
62	Influence of the Electron Acceptor Group on the Backbone of N-(2,6-Diisopropylphenyl)-2,5-di(2-thienyl)pyrrole-Based Polymer. Bulletin of the Korean Chemical Society, 2012, 33, 3845-3848.	1.9	4
63	Opto-electrical, charge transport and photovoltaic property modulation of 2,5-di(2-thienyl)pyrrole-based polymers via the incorporation of alkyl, aryl and cyano groups on the pyrrole unit. Polymer Bulletin, 2015, 72, 1899-1919.	3.3	3
64	Two new tercopolymers incorporating electron-rich benzodithiophene and electron-accepting pyrrolo[3,4-c]pyrrole-1,3-dione and difluorobenzothiadiazole derivatives for polymer solar cells. Polymer Bulletin, 2018, 75, 239-253.	3.3	3
65	Wide band-gap organic molecules containing benzodithiophene and difluoroquinoxaline derivatives for solar cell applications. Molecular Crystals and Liquid Crystals, 2019, 685, 29-39.	0.9	2
66	Visible to Nearâ€Infraredâ€Absorbing Polymers Containing Bithiazole and 2,3â€Didodecylâ€6,7â€Difluoroquinoxaline Derivatives for Polymer Solar Cells. Bulletin of the Korean Chemical Society, 2019, 40, 686-690.	1.9	2
67	Synthesis and properties of monoâ€•and diâ€fluoroâ€substituted 2,3â€didodecylquinoxalineâ€based polymers for polymer solar cells. Journal of Polymer Science Part A, 2019, 57, 545-552.	2.3	2
68	Thiadiazoloquinoxaline-Based Narrow Energy Gap Molecules for Small Molecule Solar Cell Applications. Bulletin of the Korean Chemical Society, 2013, 34, 661-664.	1.9	2
69	Synthesis of Alkylâ€Substituted Quinoxalineâ€Based Copolymers Along with Photophysical Property Modulation for Polymer Solar Cells. Macromolecular Chemistry and Physics, 2018, 219, 1800117.	2.2	0
70	Thiadiazoloquinoxaline-Based Low Band Gap Polymer for Solar Cell Applications. Bulletin of the Korean Chemical Society, 2013, 34, 2835-2838.	1.9	0