

Scott E Watkins

List of Publications by Year in descending order

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papers

7,701
citations

61945

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60583

81
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all docs

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docs citations

82
times ranked

9849
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#	ARTICLE	IF	CITATIONS
1	Thieno[3,2- <i>b</i>]thiophene-Diketopyrrolopyrrole-Containing Polymers for High-Performance Organic Field-Effect Transistors and Organic Photovoltaic Devices. <i>Journal of the American Chemical Society</i> , 2011, 133, 3272-3275.	6.6	854
2	Toward Large Scale Roll-to-Roll Production of Fully Printed Perovskite Solar Cells. <i>Advanced Materials</i> , 2015, 27, 1241-1247.	11.1	785
3	Size-Dependent Valence and Conduction Band-Edge Energies of Semiconductor Nanocrystals. <i>ACS Nano</i> , 2011, 5, 5888-5902.	7.3	600
4	Indacenodithiophene Semiconducting Polymers for High-Performance, Air-Stable Transistors. <i>Journal of the American Chemical Society</i> , 2010, 132, 11437-11439.	6.6	529
5	Triplet Energy Back Transfer in Conjugated Polymers with Pendant Phosphorescent Iridium Complexes. <i>Journal of the American Chemical Society</i> , 2006, 128, 6647-6656.	6.6	226
6	Effect of Fluorination on the Properties of a Donor-Acceptor Copolymer for Use in Photovoltaic Cells and Transistors. <i>Chemistry of Materials</i> , 2013, 25, 277-285.	3.2	218
7	3D Printer Based Slot-Die Coater as a Lab-Fab Translation Tool for Solution-Processed Solar Cells. <i>Advanced Energy Materials</i> , 2015, 5, 1401539.	10.2	196
8	Systematic Improvement in Charge Carrier Mobility of Air Stable Triarylamine Copolymers. <i>Journal of the American Chemical Society</i> , 2009, 131, 10814-10815.	6.6	186
9	Tailored Donor-Acceptor Polymers with an A ¹ -A ² Structure: Controlling Intermolecular Interactions to Enable Enhanced Polymer Photovoltaic Devices. <i>Journal of the American Chemical Society</i> , 2014, 136, 6049-6055.	6.6	186
10	Silaindacenodithiophene-Based Low Band Gap Polymers - The Effect of Fluorine Substitution on Device Performances and Film Morphologies. <i>Advanced Functional Materials</i> , 2012, 22, 1663-1670.	7.8	177
11	Solution-Processed Sintered Nanocrystal Solar Cells via Layer-by-Layer Assembly. <i>Nano Letters</i> , 2011, 11, 2856-2864.	4.5	169
12	Low band gap selenophene-diketopyrrolopyrrole polymers exhibiting high and balanced ambipolar performance in bottom-gate transistors. <i>Chemical Science</i> , 2012, 3, 181-185.	3.7	169
13	Determination of energy level alignment at interfaces of hybrid and organic solar cells under ambient environment. <i>Journal of Materials Chemistry</i> , 2011, 21, 1721-1729.	6.7	145
14	Polyfluorenes without Monoalkylfluorene Defects. <i>Journal of the American Chemical Society</i> , 2007, 129, 11910-11911.	6.6	140
15	An inter-laboratory stability study of roll-to-roll coated flexible polymer solar modules. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 1398-1416.	3.0	132
16	Layer-by-Layer Assembly of Sintered CdSe _x Te _{1-x} Nanocrystal Solar Cells. <i>ACS Nano</i> , 2012, 6, 5995-6004.	7.3	130
17	Silaindacenodithiophene Semiconducting Polymers for Efficient Solar Cells and High-Mobility Ambipolar Transistors. <i>Chemistry of Materials</i> , 2011, 23, 768-770.	3.2	126
18	Performance, morphology and photophysics of high open-circuit voltage, low band gap all-polymer solar cells. <i>Energy and Environmental Science</i> , 2015, 8, 332-342.	15.6	115

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19	Random benzotrithiophene-based donor-acceptor copolymers for efficient organic photovoltaic devices. <i>Chemical Communications</i> , 2012, 48, 5832.	2.2	111
20	Indan-1,3-dione electron-acceptor small molecules for solution-processable solar cells: a structure-property correlation. <i>Chemical Communications</i> , 2013, 49, 6307.	2.2	106
21	Organic photovoltaic modules fabricated by an industrial gravure printing proofer. <i>Solar Energy Materials and Solar Cells</i> , 2013, 109, 47-55.	3.0	103
22	Cu ₂ ZnSnS ₄ Se ₄ Solar Cells from Polar Nanocrystal Inks. <i>Journal of the American Chemical Society</i> , 2014, 136, 5237-5240.	6.6	102
23	A Hyperbranched Conjugated Polymer as the Cathode Interlayer for High-Performance Polymer Solar Cells. <i>Advanced Materials</i> , 2013, 25, 6889-6894.	11.1	101
24	Blue-to-green electrophosphorescence of iridium-based cyclometallated materials. <i>Chemical Communications</i> , 2005, , 4708.	2.2	98
25	Dibenzo[b,def]chrysene Derivatives: Solution-Processable Small Molecules that Deliver High Power-Conversion Efficiencies in Bulk Heterojunction Solar Cells. <i>Chemistry of Materials</i> , 2009, 21, 5701-5703.	3.2	98
26	A low band gap co-polymer of dithienogermole and 2,1,3-benzothiadiazole by Suzuki polycondensation and its application in transistor and photovoltaic cells. <i>Journal of Materials Chemistry</i> , 2011, 21, 16257.	6.7	91
27	Poly(9,9-dialkyl-3,6-dibenzosilole) a high energy gap host for phosphorescent light emitting devices. <i>Chemical Communications</i> , 2005, , 5766.	2.2	88
28	Influence of the heteroatom on the optoelectronic properties and transistor performance of soluble thiophene-, selenophene- and tellurophene-vinylene copolymers. <i>Chemical Science</i> , 2016, 7, 1093-1099.	3.7	84
29	Thieno[3,2-b]thiophene-diketopyrrolopyrrole Containing Polymers for Inverted Solar Cells Devices with High Short Circuit Currents. <i>Advanced Functional Materials</i> , 2013, 23, 5647-5654.	7.8	78
30	[6,6]-Phenyl-C ₆₁ -Butyric Acid Dimethylamino Ester as a Cathode Buffer Layer for High-Performance Polymer Solar Cells. <i>Advanced Energy Materials</i> , 2013, 3, 1569-1574.	10.2	77
31	Thiophene fluorination to enhance photovoltaic performance in low band gap donor-acceptor polymers. <i>Chemical Communications</i> , 2012, 48, 11130.	2.2	68
32	Absorption enhancement of oligothiophene dyes through the use of a cyanopyridone acceptor group in solution-processed organic solar cells. <i>Chemical Communications</i> , 2012, 48, 1889.	2.2	66
33	Influence of fluorine substituents on the film dielectric constant and open-circuit voltage in organic photovoltaics. <i>Journal of Materials Chemistry C</i> , 2014, 2, 3278-3284.	2.7	64
34	Synthesis of novel thieno[3,2-b]thienobis(silolothiophene) based low bandgap polymers for organic photovoltaics. <i>Chemical Communications</i> , 2012, 48, 7699.	2.2	63
35	Influence of the Electron Deficient Co-Monomer on the Optoelectronic Properties and Photovoltaic Performance of Dithienogermole-based Co-Polymers. <i>Advanced Functional Materials</i> , 2014, 24, 678-687.	7.8	59
36	Benzotrithiophene Co-polymers with High Charge Carrier Mobilities in Field-Effect Transistors. <i>Chemistry of Materials</i> , 2011, 23, 4025-4031.	3.2	56

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37	Isostructural, Deeper Highest Occupied Molecular Orbital Analogues of Poly(3-hexylthiophene) for High-Open Circuit Voltage Organic Solar Cells. <i>Chemistry of Materials</i> , 2013, 25, 4239-4249.	3.2	55
38	Pyrrloindacenodithiophene containing polymers for organic field effect transistors and organic photovoltaics. <i>Journal of Materials Chemistry</i> , 2011, 21, 18744.	6.7	50
39	Synthesis, Characterization, and Field Effect Transistor Properties of Regioregular Poly(3-alkyl-2,5-selenylenevinylene). <i>Macromolecules</i> , 2011, 44, 5194-5199.	2.2	49
40	Synthesis, Photophysical, and Device Properties of Novel Dendrimers Based on a Fluorene-Hexabenzocoronene (FHBC) Core. <i>Organic Letters</i> , 2009, 11, 975-978.	2.4	46
41	The effect of direct amine substituted push-pull oligothiophene chromophores on dye-sensitized and bulk heterojunction solar cells performance. <i>Tetrahedron</i> , 2013, 69, 3584-3592.	1.0	46
42	A benzotrithiophene-based low band gap polymer for polymer solar cells with high open-circuit voltage. <i>Journal of Materials Chemistry</i> , 2011, 21, 17642.	6.7	44
43	Influence of moisture out-gassing from encapsulant materials on the lifetime of organic solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2015, 132, 485-491.	3.0	44
44	Influence of Fluorination and Molecular Weight on the Morphology and Performance of PTB7:PC ₇₁ BM Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014, 118, 9918-9929.	1.5	43
45	Effect of indium and tin contamination on the efficiency and electronic properties of organic bulk hetero-junction solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 3251-3255.	3.0	42
46	Synthesis and Characterization of Fused Pyrrolo[3,2-d:4,5-d']bisthiazole-Containing Polymers. <i>Organic Letters</i> , 2010, 12, 5478-5481.	2.4	40
47	The tuning of the energy levels of dibenzosilole copolymers and applications in organic electronics. <i>Journal of Materials Chemistry</i> , 2011, 21, 11800.	6.7	39
48	Excited State Dynamics of Organo-Lanthanide Electroluminescent Phosphors: The Properties of Tb(tb-pmp) ₃ and Gd(tb-pmp) ₃ . <i>Journal of Physical Chemistry A</i> , 2002, 106, 4014-4021.	1.1	36
49	Efficiency enhancement for bulk heterojunction photovoltaic cells via incorporation of alcohol soluble conjugated polymer interlayer. <i>Applied Physics Letters</i> , 2012, 100, 203304.	1.5	36
50	Copper complexes with ferrocenyl pendants: Evidence for an Fe ^{II} ⇌ Cu ^I ⇌ Fe ^{III} ⇌ Cu ^I electron transfer equilibrium leading to a reaction with dioxygen. <i>Dalton Transactions RSC</i> , 2002, , 983-994.	2.3	35
51	Near Infrared Absorbing Soluble Poly(cyclopenta[2,1-b:3,4-b']dithiophen-4-one)vinylene Polymers Exhibiting High Hole and Electron Mobilities in Ambient Air. <i>Chemistry of Materials</i> , 2013, 25, 59-68.	3.2	35
52	Development of a High-Performance Donor-Acceptor Conjugated Polymer: Synergy in Materials and Device Optimization. <i>Chemistry of Materials</i> , 2016, 28, 3481-3487.	3.2	35
53	Low band gap dithienogermolodithiophene copolymers with tunable acceptors and side-chains for organic solar cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 14973.	5.2	31
54	Benzotrithiophene Copolymers: Influence of Molecular Packing and Energy Levels on Charge Carrier Mobility. <i>Macromolecules</i> , 2014, 47, 2883-2890.	2.2	26

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55	Benzothiadiazole-Containing Pendant Polymers Prepared by RAFT and Their Electro-Optical Properties. <i>Macromolecules</i> , 2010, 43, 7101-7110.	2.2	25
56	<i>N</i> -Acyldithieno[3,2- <i>b</i> :2',3'- <i>d'</i>]pyrrole-Based Low-Band-Gap Conjugated Polymer Solar Cells with Amine-Modified [6,6]-Phenyl-C61-butyric Acid Ester Cathode Interlayers. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 10995-11003.	4.0	25
57	Band-gap tuning of pendant polymers for organic light-emitting devices and photovoltaic applications. <i>Synthetic Metals</i> , 2011, 161, 856-863.	2.1	24
58	Pyrrloindacenodithiophene polymers: the effect of molecular structure on OFET performance. <i>Polymer Chemistry</i> , 2013, 4, 3537.	1.9	23
59	Improved lifetimes of organic solar cells with solution-processed molybdenum oxide anode-modifying layers. <i>Progress in Photovoltaics: Research and Applications</i> , 2015, 23, 989-996.	4.4	22
60	Incorporation of benzocarborane into conjugated polymer systems: synthesis, characterisation and optoelectronic properties. <i>Journal of Materials Chemistry C</i> , 2014, 2, 232-239.	2.7	21
61	Small molecules containing rigidified thiophenes and a cyanopyridone acceptor unit for solution-processable bulk-heterojunction solar cells. <i>Dyes and Pigments</i> , 2015, 119, 122-132.	2.0	21
62	Effect of Annealing Temperature of ZnO on the Energy Level Alignment in Inverted Organic Photovoltaics (OPVs). <i>Energy Technology</i> , 2014, 2, 462-468.	1.8	20
63	Towards co-operative reactivity in conjoint classical-organometallic heterometallic complexes: the co-ordination chemistry of novel ligands with triphenylphosphine and bis(pyridylethyl)amine or triazacyclononane domains. <i>Dalton Transactions RSC</i> , 2002, , 2423.	2.3	19
64	Dihydropyrroloindole-dione-based copolymers for organic electronics. <i>Journal of Materials Chemistry C</i> , 2013, 1, 2711.	2.7	19
65	Solution-processing of ultra-thin CdTe/ZnO nanocrystal solar cells. <i>Thin Solid Films</i> , 2014, 558, 365-373.	0.8	18
66	Aligned carbon nanotube webs as a replacement for indium tin oxide in organic solar cells. <i>Thin Solid Films</i> , 2013, 531, 525-529.	0.8	17
67	A palladium(II) complex of a new iminophosphine ligand derived from diethylenetriamine and 2-(diphenylphosphino)benzaldehyde. <i>Inorganica Chimica Acta</i> , 2000, 307, 134-138.	1.2	15
68	Rhenium(i) phenanthrolines bearing electron withdrawing CF ₃ substituents: synthesis, characterization and biological evaluation. <i>RSC Advances</i> , 2013, 3, 23963.	1.7	13
69	Synthesis and properties of pyrrolo[3,2- <i>b</i>]pyrrole-1,4-diones (isoDPP) derivatives. <i>Journal of Materials Chemistry C</i> , 2014, 2, 4276.	2.7	13
70	Increased performance of single walled carbon nanotube photovoltaic cells through the addition of dibenzo[<i>b,def</i>]chrysene derivative. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2012, 235, 72-76.	2.0	10
71	Intraphase Microstructure—Understanding the Impact on Organic Solar Cell Performance. <i>Advanced Functional Materials</i> , 2013, 23, 5655-5662.	7.8	10
72	Semi-perfluoroalkyl polyfluorene with varying fluorine content: synthesis and photophysical properties. <i>Polymer Chemistry</i> , 2013, 4, 5291.	1.9	8

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73	Aggregation of a Dibenzo[<i>b,h</i>]chrysene Based Organic Photovoltaic Material in Solution. <i>Journal of Physical Chemistry B</i> , 2014, 118, 6839-6849.	1.2	8
74	A new route to (N)n-donor functionalised phosphines; novel homo- and hetero-nuclear complexes of a phosphino-substituted triazacyclononane ligand. <i>Journal of the Chemical Society Dalton Transactions</i> , 1999, , 1539-1540.	1.1	7
75	Synthesis and Processing of Organic Materials in Supercritical Carbon Dioxide. <i>MRS Bulletin</i> , 2009, 34, 108-115.	1.7	7
76	Alkyl side-chain branching point effects in thieno[3,4-c]pyrrole-4,6-dione copolymers. <i>Journal of Organic Semiconductors</i> , 2013, 1, 30-35.	1.2	7
77	Photo-spectroscopic properties of benzothiadiazole-containing pendant polymers for photovoltaic applications. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2011, 220, 102-112.	2.0	5
78	Infrared Sensitizers in Titania-Based Dye-Sensitized Solar Cells using a Dimethylferrocene Electrolyte. <i>ChemSusChem</i> , 2013, 6, 2056-2060.	3.6	5
79	Synthesis, structures and luminescent behaviour of tridentate salicylaldiminato-type borate complexes. <i>Inorganica Chimica Acta</i> , 2010, 363, 1173-1178.	1.2	4
80	Correlation of charge extraction properties and short circuit current in various organic binary and ternary blend photovoltaic devices. <i>Applied Physics A: Materials Science and Processing</i> , 2012, 108, 515-520.	1.1	4
81	Synthesis of host polymers and guests for electrophosphorescence. <i>Macromolecular Research</i> , 2007, 15, 129-133.	1.0	3
82	New Light Emitting Polymers and High Energy Hosts for Triplet Emission. <i>Materials Research Society Symposia Proceedings</i> , 2004, 846, DD7.7.1.	0.1	0