Christopher Groves

List of Publications by Year
in descending order

49 papers	2,189 citations	304368 22 h-index	233125 45 g-index
49 all docs	49 docs citations	49 times ranked	2674 citing authors

#	Article	IF	Citations
1	A microscopic model for the behavior of nanostructured organic photovoltaic devices. Journal of Applied Physics, 2007, 101, 083509.	1.1	215
2	Influence of Nanoscale Phase Separation on the Charge Generation Dynamics and Photovoltaic Performance of Conjugated Polymer Blends:â€‰ Balancing Charge Generation and Separation. Journal of Physical Chemistry C, 2007, 111, 19153-19160.	1.5	209
3	Heterogeneity in Polymer Solar Cells: Local Morphology and Performance in Organic Photovoltaics Studied with Scanning Probe Microscopy. Accounts of Chemical Research, 2010, 43, 612-620.	7.6	179
4	The relative importance of domain size, domain purity and domain interfaces to the performance of bulk-heterojunction organic photovoltaics. Energy and Environmental Science, 2012, 5, 7657.	15.6	158
5	Bimolecular recombination in polymer electronic devices. Physical Review B, 2008, 78, .	1.1	156
6	Monte Carlo modeling of geminate recombination in polymer-polymer photovoltaic devices. Journal of Chemical Physics, 2008, 129, 114903.	1.2	126
7	Suppression of geminate charge recombination in organic photovoltaic devices with a cascaded energy heterojunction. Energy and Environmental Science, 2013, 6, 1546.	15.6	120
8	Influence of Annealing and Interfacial Roughness on the Performance of Bilayer Donor/Acceptor Polymer Photovoltaic Devices. Advanced Functional Materials, 2010, 20, 4329-4337.	7.8	105
9	Developing understanding of organic photovoltaic devices: kinetic Monte Carlo models of geminate and non-geminate recombination, charge transport and charge extraction. Energy and Environmental Science, 2013, 6, 3202.	15.6	83
10	Effect of Charge Trapping on Geminate Recombination and Polymer Solar Cell Performance. Nano Letters, 2010, 10, 1063-1069.	4.5	82
11	Simulating charge transport in organic semiconductors and devices: a review. Reports on Progress in Physics, 2017, 80, 026502.	8.1	56
12	Electron Transport and Recombination in Dye-Sensitized Mesoporous TiO2 Probed by Photoinduced Charge-Conductivity Modulation Spectroscopy with Monte Carlo Modeling. Journal of the American Chemical Society, 2008, 130, 12912-12920.	6.6	55
13	Relating Molecular Morphology to Charge Mobility in Semicrystalline Conjugated Polymers. Journal of Physical Chemistry C, 2016, 120, 4240-4250.	1.5	52
14	Temperature dependence of impact ionization in GaAs. IEEE Transactions on Electron Devices, 2003, 50, 2027-2031.	1.6	50
15	Simulation of loss mechanisms in organic solar cells: A description of the mesoscopic Monte Carlo technique and an evaluation of the first reaction method. Journal of Chemical Physics, 2010, 133, 144110.	1.2	49
16	Electronâ€"Hole Recombination in Uniaxially Aligned Semiconducting Polymers. Advanced Functional Materials, 2008, 18, 3630-3637.	7.8	48
17	The effect of morphology upon mobility: Implications for bulk heterojunction solar cells with nonuniform blend morphology. Journal of Applied Physics, 2009, 105, 094510.	1.1	37
18	The Quantitative Effect of Surface Wetting Layers on the Performance of Organic Bulk Heterojunction Photovoltaic Devices. Journal of Physical Chemistry C, 2011, 115, 22572-22577.	1.5	35

#	Article	IF	Citations
19	Are hot charge transfer states the primary cause of efficient free-charge generation in polymer:fullerene organic photovoltaic devices? A kinetic Monte Carlo study. Physical Chemistry Chemical Physics, 2014, 16, 20310-20320.	1.3	33
20	Spectroscopic Imaging of Photopotentials and Photoinduced Potential Fluctuations in a Bulk Heterojunction Solar Cell Film. ACS Nano, 2012, 6, 9392-9401.	7.3	31
21	New SPM techniques for analyzing OPV materials. Materials Today, 2010, 13, 50-56.	8.3	30
22	Avalanche noise characteristics of single Al/sub x/Ga/sub 1-x/As(0.3<x<0.6)-GaAs heterojunction APDs. IEEE Journal of Quantum Electronics, 2005, 41, 70-75.	1.0	22
23	Stark shift of the spectral response in quantum dots-in-a-well infrared photodetectors. Journal Physics D: Applied Physics, 2007, 40, 5537-5540.	1.3	22
24	Bright design. Nature Materials, 2013, 12, 597-598.	13.3	22
25	Enhanced lifetime of organic photovoltaic diodes utilizing a ternary blend including an insulating polymer. Solar Energy Materials and Solar Cells, 2017, 160, 101-106.	3.0	22
26	Low-Voltage Solution-Processed Hybrid Light-Emitting Transistors. ACS Applied Materials & Interfaces, 2018, 10, 18445-18449.	4.0	22
27	Exponential Time Response in Analogue and Geiger Mode Avalanche Photodiodes. IEEE Transactions on Electron Devices, 2005, 52, 1527-1534.	1.6	20
28	Evolution of Electronic Circuits using Carbon Nanotube Composites. Scientific Reports, 2016, 6, 32197.	1.6	18
29	Monte Carlo Simulation of Geminate Pair Recombination Dynamics in Organic Photovoltaic Devices: Multi-Exponential, Field-Dependent Kinetics and Its Interpretation. Journal of Physical Chemistry C, 2014, 118, 85-91.	1.5	16
30	Modeling of avalanche multiplication and noise in heterojunction avalanche photodiodes. Journal of Applied Physics, 2004, 95, 6245-6251.	1.1	14
31	Monte Carlo Simulations of Organic Photovoltaics. Topics in Current Chemistry, 2013, 352, 257-278.	4.0	13
32	A levelized cost of energy approach to select and optimise emerging PV technologies: The relative impact of degradation, cost and initial efficiency. Applied Energy, 2021, 299, 117302.	5.1	13
33	Efficient and Stable Solution-Processed Organic Light-Emitting Transistors Using a High-<i>k</i> Dielectric. ACS Photonics, 2019, 6, 3159-3165.	3.2	11
34	The effect of ionization threshold softness on the temperature dependence of the impact ionization coefficient. Semiconductor Science and Technology, 2003, 18, 689-692.	1.0	10
35	Temperature dependence of breakdown voltage in AlxGa1â^'xAs. Journal of Applied Physics, 2004, 96, 5017-5019.	1.1	10
36	Effects of Ionization Velocity and Dead Space on Avalanche Photodiode Bit Error Rate. IEEE Transactions on Communications, 2007, 55, 2152-2158.	4.9	6

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37	Plasmon-loss imaging of polymer-methanofullerene bulk heterojunction solar cells. Applied Physics Letters, 2013, 102, .	1.5	6
38	Enhanced lifetime of organic photovoltaic diodes achieved by blending with PMMA: Impact of morphology and Donor:Acceptor combination. Solar Energy Materials and Solar Cells, 2021, 219, 110765.	3.0	6
39	Characterisation of charge conduction networks in poly(3-hexylthiophene)/polystyrene blends using noise spectroscopy. Journal of Materials Chemistry C, 2014, 2, 1742.	2.7	5
40	Training a Carbon-Nanotube/Liquid Crystal Data Classifier Using Evolutionary Algorithms. Lecture Notes in Computer Science, 2016, , 130-141.	1.0	5
41	Examining charge transport networks in organic bulk heterojunction photovoltaic diodes using 1/f noise spectroscopy. Journal of Materials Chemistry C, 2015, 3, 6077-6085.	2.7	4
42	Electrical behaviour and evolutionary computation in thin films of bovine brain microtubules. Scientific Reports, 2021, 11, 10776.	1.6	4
43	Confidence Measures for Carbon-Nanotube / Liquid Crystals Classifiers. , 2018, , .		2
44	Single event burnout sensitivity of SiC and Si. Semiconductor Science and Technology, 0, , .	1.0	2
45	Assessment of Electricity Decarbonization Scenarios for New Zealand and Great Britain using a Plant Dispatch and Electrical Energy Storage Modelling Framework. Energies, 2020, 13, 2799.	1.6	1
46	Differing Impacts of Blended Fullerene Acceptors on the Performance of Ternary Organic Solar Cells. ACS Applied Energy Materials, 2021, 4, 10867-10876.	2.5	1
47	Towards Intelligently Designed Evolvable Processors. Evolutionary Computation, 2022, , 1-23.	2.3	1
48	How Does Location Determine the Economic Competitiveness of Gridâ€Scale Emerging Photovoltaics?. Energy Technology, 2022, 10, .	1.8	1
49	Enhanced methods for Evolution in-Materio Processors. , 2021, , .		1