

Brian A Collins

List of Publications by Year in descending order

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papers

5,485
citations

257101

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docs citations

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times ranked

5946
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural control of mixed ionic and electronic transport in conducting polymers. <i>Nature Communications</i> , 2016, 7, 11287.	5.8	627
2	Absolute Measurement of Domain Composition and Nanoscale Size Distribution Explains Performance in PTB7:PC ₇₁ BM Solar Cells. <i>Advanced Energy Materials</i> , 2013, 3, 65-74.	10.2	605
3	Quantitative relations between interaction parameter, miscibility and function in organic solar cells. <i>Nature Materials</i> , 2018, 17, 253-260.	13.3	556
4	The influence of molecular orientation on organic bulk heterojunction solar cells. <i>Nature Photonics</i> , 2014, 8, 385-391.	15.6	439
5	Soft x-ray scattering facility at the Advanced Light Source with real-time data processing and analysis. <i>Review of Scientific Instruments</i> , 2012, 83, 045110.	0.6	420
6	The Importance of Fullerene Percolation in the Mixed Regions of Polymer/Fullerene Bulk Heterojunction Solar Cells. <i>Advanced Energy Materials</i> , 2013, 3, 364-374.	10.2	412
7	Molecular Miscibility of Polymer/Fullerene Blends. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 3160-3166.	2.1	362
8	Miscibility, Crystallinity, and Phase Development in P3HT/PCBM Solar Cells: Toward an Enlightened Understanding of Device Morphology and Stability. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 3135-3145.	2.1	301
9	Polarized X-ray scattering reveals non-crystalline orientational ordering in organic films. <i>Nature Materials</i> , 2012, 11, 536-543.	13.3	281
10	The Role of Regioregularity, Crystallinity, and Chain Orientation on Electron Transport in a High-Mobility n-Type Copolymer. <i>Journal of the American Chemical Society</i> , 2014, 136, 4245-4256.	6.6	226
11	Miscibility/Function Relations in Organic Solar Cells: Significance of Optimal Miscibility in Relation to Percolation. <i>Advanced Energy Materials</i> , 2018, 8, 1703058.	10.2	223
12	Correlating the Efficiency and Nanomorphology of Polymer Blend Solar Cells Utilizing Resonant Soft X-ray Scattering. <i>ACS Nano</i> , 2012, 6, 677-688.	7.3	149
13	Correlated Donor/Acceptor Crystal Orientation Controls Photocurrent Generation in All-Polymer Solar Cells. <i>Advanced Functional Materials</i> , 2014, 24, 4068-4081.	7.8	144
14	Probing the pathways of free charge generation in organic bulk heterojunction solar cells. <i>Nature Communications</i> , 2018, 9, 2038.	5.8	104
15	Quantitative compositional analysis of organic thin films using transmission NEXAFS spectroscopy in an X-ray microscope. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2012, 185, 119-128.	0.8	64
16	Fullerene-Dependent Miscibility in the Silole-Containing Copolymer PSBTBT-08. <i>Macromolecules</i> , 2011, 44, 9747-9751.	2.2	59
17	Mixed Domains Enhance Charge Generation and Extraction in Bulk Heterojunction Solar Cells with Small Molecule Donors. <i>Advanced Energy Materials</i> , 2018, 8, 1702941.	10.2	43
18	Fullerene-Free Polymer Solar Cells with Highly Reduced Bimolecular Recombination and Field-Independent Charge Carrier Generation. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 2815-2822.	2.1	42

#	ARTICLE	IF	CITATIONS
19	Studying Polymer/Fullerene Intermixing and Miscibility in Laterally Patterned Films with X-ray Spectromicroscopy. <i>Small</i> , 2012, 8, 1920-1927.	5.2	39
20	Molecular and Energetic Order Dominate the Photocurrent Generation Process in Organic Solar Cells with Small Energetic Offsets. <i>ACS Energy Letters</i> , 2020, 5, 589-596.	8.8	36
21	Resonant soft X-ray scattering in polymer science. <i>Journal of Polymer Science</i> , 2022, 60, 1199-1243.	2.0	27
22	Origins of polarization-dependent anisotropic X-ray scattering from organic thin films. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 219-227.	1.0	26
23	Increased charge transfer state separation via reduced mixed phase interface in polymer solar cells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 4536-4548.	5.2	26
24	Spectral Analysis for Resonant Soft X-Ray Scattering Enables Measurement of Interfacial Width in 3D Organic Nanostructures. <i>Physical Review Letters</i> , 2017, 119, 167801.	2.9	25
25	In Situ X-ray Scattering Studies of the Influence of an Additive on the Formation of a Low-Bandgap Bulk Heterojunction. <i>Chemistry of Materials</i> , 2017, 29, 2283-2293.	3.2	23
26	Synthesis, solid state, and charge transport properties of conjugated polythiophene selenodioxides. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 48-56.	2.4	22
27	GIWAXS-SIIRkit: scattering intensity, indexing and refraction calculation toolkit for grazing-incidence wide-angle X-ray scattering of organic materials. <i>Journal of Applied Crystallography</i> , 2020, 53, 1108-1129.	1.9	22
28	Dopant stability and strain states in Co and Mn-doped Ge (001) epitaxial films. <i>Physical Review B</i> , 2008, 77, .	1.1	19
29	Connecting Molecular Conformation to Aggregation in P3HT Using Near Edge X-ray Absorption Fine Structure Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2017, 121, 21720-21728.	1.5	19
30	Study of magnetic anisotropy and magnetization reversal using the quadratic magneto-optical effect in epitaxial CoMnGe (111) films. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 296005.	0.7	14
31	Combinatorial synthesis and characterization of a ternary epitaxial film of Co and Mn doped Ge (001). <i>Applied Surface Science</i> , 2007, 254, 709-713.	3.1	13
32	High Sensitivity of Non-Fullerene Organic Solar Cells Morphology and Performance to a Processing Additive. <i>Small</i> , 2022, 18, e2202411.	5.2	13
33	Anomalous x-ray diffraction study of disorders in epitaxial films of the Heusler alloy Co_2MnGe . <i>Journal of Vacuum Science & Technology B</i> , 2007, 25, 999.	1.3	12
34	Structural and chemical ordering of Heusler Co_2MnGe epitaxial films. <i>Journal of Applied Crystallography</i> , 2010, 43, 1108-1129.	1.1	10
35	On the Interplay between CT and Singlet Exciton Emission in Organic Solar Cells with Small Driving Force and Its Impact on Voltage Loss. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	10
36	Label-free characterization of organic nanocarriers reveals persistent single molecule cores for hydrocarbon sequestration. <i>Nature Communications</i> , 2021, 12, 3123.	5.8	9

#	ARTICLE	IF	CITATIONS
37	Modifications in Morphology Resulting from Nanoimprinting Bulk Heterojunction Blends for Light Trapping Organic Solar Cell Designs. ACS Applied Materials & Interfaces, 2013, 5, 8225-8230.	4.0	8
38	High-resolution X-ray diffraction studies of combinatorial epitaxial Ge (001) thin-films on Ge (001) substrates. Applied Surface Science, 2007, 254, 714-719.	3.1	6
39	A NIST facility for resonant soft x-ray scattering measuring nano-scale soft matter structure at NSLS-II. Journal of Physics Condensed Matter, 2021, 33, 164001.	0.7	6
40	Evidence for Field-Dependent Charge Separation Caused by Mixed Phases in Polymer-Fullerene Organic Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 1847-1853.	2.1	5
41	Electrical edge effect induced photocurrent overestimation in low-light organic photovoltaics. Joule, 2022, 6, 1904-1917.	11.7	5
42	Epitaxial growth of (FeCo) _x Ge _{1-x} (001). Journal of Vacuum Science & Technology B, 2007, 25, 1217.	1.3	4
43	Epitaxial growth of Co _x Mn _{1-x} Si ₂ (111) thin films in the compositional range around the Heusler alloy Co ₂ MnSi. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2011, 29, .	0.6	4
44	Pressure-assisted thermal sterilization of avocado puree in high barrier polymeric packaging. LWT - Food Science and Technology, 2022, 155, 112960.	2.5	4
45	Evidence That Sharp Interfaces Suppress Recombination in Thick Organic Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 56394-56403.	4.0	3