Hiroaki Benten

List of Publications by Year
in descending order

44 papers	2,540 citations	331259 21 h-index	264894 42 g-index
45 all docs	45 docs citations	45 times ranked	3995 citing authors

#	Article	IF	Citations
1	Photovoltaic Performance of Perovskite Solar Cells with Different Grain Sizes. Advanced Materials, 2016, 28, 917-922.	11.1	288
2	Highly efficient charge-carrier generation and collection in polymer/polymer blend solar cells with a power conversion efficiency of 5.7%. Energy and Environmental Science, 2014, 7, 2939.	15.6	265
3	Exciton Diffusion in Conjugated Polymers: From Fundamental Understanding to Improvement in Photovoltaic Conversion Efficiency. Journal of Physical Chemistry Letters, 2015, 6, 3417-3428.	2.1	253
4	Recent research progress of polymer donor/polymer acceptor blend solar cells. Journal of Materials Chemistry A, 2016, 4, 5340-5365.	5.2	248
5	Selective Dye Loading at the Heterojunction in Polymer/Fullerene Solar Cells. Advanced Energy Materials, 2011, 1, 588-598.	10.2	208
6	Lowâ€Bandgap Donor/Acceptor Polymer Blend Solar Cells with Efficiency Exceeding 4%. Advanced Energy Materials, 2014, 4, 1301006.	10.2	168
7	High-performance ternary blend all-polymer solar cells with complementary absorption bands from visible to near-infrared wavelengths. Energy and Environmental Science, 2016, 9, 135-140.	15.6	157
8	Surface segregation at the aluminum interface of poly(3-hexylthiophene)/fullerene solar cells. Applied Physics Letters, 2010, 96, .	1.5	117
9	Polymer/Polymer Blend Solar Cells with 2.0% Efficiency Developed by Thermal Purification of Nanoscale-Phase-Separated Morphology. ACS Applied Materials & Interfaces, 2011, 3, 2924-2927.	4.0	100
10	Molecular Understanding of the Openâ€Circuit Voltage of Polymer:Fullerene Solar Cells. Advanced Energy Materials, 2012, 2, 229-237.	10.2	95
11	One-Dimensional Singlet Exciton Diffusion in Poly(3-hexylthiophene) Crystalline Domains. Journal of Physical Chemistry Letters, 2014, 5, 399-403.	2.1	82
12	Ultrafast Singlet Fission in a Pushâ€"Pull Low-Bandgap Polymer Film. Journal of the American Chemical Society, 2015, 137, 15980-15983.	6.6	77
13	Interface Engineering for Ternary Blend Polymer Solar Cells with a Heterostructured Nearâ€IR Dye. Advanced Materials, 2015, 27, 5868-5874.	11.1	55
14	Transient Absorption Spectroscopy for Polymer Solar Cells. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 100-111.	1.9	35
15	Charge Transport in Intermixed Regions of All-Polymer Solar Cells Studied by Conductive Atomic Force Microscopy. ACS Applied Materials & Interfaces, 2017, 9, 15615-15622.	4.0	31
16	Origin of Open-Circuit Voltage Loss in Polymer Solar Cells and Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 19988-19997.	4.0	30
17	Intramolecular Singlet and Triplet Excimers of Triply Bridged [3.3.<i>n</i>](3,6,9)Carbazolophanes. Journal of Physical Chemistry B, 2007, 111, 10905-10914.	1.2	29
18	Triplet Exciton Dynamics in Fluoreneâ^'Amine Copolymer Films. Chemistry of Materials, 2014, 26, 2733-2742.	3.2	27

#	Article	IF	Citations
19	Morphologyâ€Limited Free Carrier Generation in Donor/Acceptor Polymer Blend Solar Cells Composed of Poly(3â€hexylthiophene) and Fluoreneâ€Based Copolymer. Advanced Energy Materials, 2015, 5, 1500304.	10.2	26
20	Photoinduced electron transfer of carbazoleâ€“acceptor dyads in solution and in a polymer solid. Physical Chemistry Chemical Physics, 2004, 6, 3977-3984.	1.3	24
21	Development of highly conductive nanodomains in poly(3-hexylthiophene) films studied by conductive atomic force microscopy. Polymer, 2013, 54, 3443-3447.	1.8	23
22	Exciton Generation and Diffusion in Multilayered Organic Solar Cells Designed by Layer-by-Layer Assembly of Poly(p-phenylenevinylene). ACS Applied Materials & Interfaces, 2010, 2, 236-245.	4.0	22
23	Intramolecular Excimer Emission of Triply Bridged [3.3.n](3,6,9)Carbazolophanes. Journal of Physical Chemistry B, 2005, 109, 19681-19687.	1.2	20
24	Molecular Design of Near-IR Dyes with Different Surface Energy for Selective Loading to the Heterojunction in Blend Films. Scientific Reports, 2015, 5, 9321.	1.6	20
25	Electron Transport Nanostructures of Conjugated Polymer Films Visualized by Conductive Atomic Force Microscopy. ACS Macro Letters, 2015, 4, 879-885.	2.3	19
26	Intermixed Donor/Acceptor Region in Conjugated Polymer Blends Visualized by Conductive Atomic Force Microscopy. Macromolecules, 2017, 50, 1618-1625.	2.2	18
27	Extreme Orientational Uniformity in Large-Area Floating Films of Semiconducting Polymers for Their Application in Flexible Electronics. ACS Applied Materials & Interfaces, 2021, 13, 38534-38543.	4.0	18
28	Development of Polymer Blend Solar Cells Composed of Conjugated Donor and Acceptor Polymers. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2013, 26, 175-180.	0.1	11
29	Carbon Nanotube/Biomolecule Composite Yarn for Wearable Thermoelectric Applications. ACS Applied Energy Materials, 2022, 5, 3698-3705.	2.5	10
30	Formation Mechanism of Fullerene Cation in Bulk Heterojunction Polymer Solar Cells. Advanced Functional Materials, 2012, 22, 3075-3082.	7.8	9
31	Perfectness of the main-chain alignment in the conjugated polymer films prepared by the floating film transfer method. Applied Physics Letters, 2022, 120, .	1.5	8
32	Nanostructures for Efficient Hole Transport in Poly(3-hexylthiophene) Film: A Study by Conductive Atomic Force Microscopy. Journal of Physical Chemistry C, 2015, 119, 24307-24314.	1.5	7
33	Enhancement of Short-Range Ordering of Low-Bandgap Donorâ€“Acceptor Conjugated Polymer in Polymer/Polymer Blend Films. Macromolecules, 2020, 53, 6630-6639.	2.2	7
34	Assisted alignment of conjugated polymers in floating film transfer method using polymer blend. Thin Solid Films, 2021, 734, 138814.	0.8	6
35	Dye Sensitization in Polymer/ZnO/Dye Ternary Hybrid Solar Cells. Chemistry Letters, 2013, 42, 825-827.	0.7	5
36	Nanoscale Observation of the Influence of Solvent Additives on All-Polymer Blend Solar Cells by Photoconductive Atomic Force Microscopy. ACS Applied Polymer Materials, 2022, 4, 169-178.	2.0	5

#	Article	IF	Citations
37	Photoinduced intramolecular charge separation in a polymer solid below the glass transition temperature. Journal of Chemical Physics, 2005, 123, 084901.	1.2	4
38	Near-IR Sensitization of Polymer Solar Cells Incorporating Low-Bandgap Small Molecule. Transactions of the Materials Research Society of Japan, 2014, 39, 439-442.	0.2	4
39	Enhanced Charge Transport in a Conjugated Polymer Blended with an Insulating Polymer. Chemistry - an Asian Journal, 2020, 15, 796-801.	1.7	3
40	Electron Transport in Thin Films of Polymer and Small-Molecule Acceptors Visualized by Conductive Atomic Force Microscopy. Journal of Physical Chemistry C, 2021, 125, 13741-13748.	1.5	3
41	Near-Infrared Dye Sensitization of Polymer/Polymer Thin-Film Solar Cells. Molecular Crystals and Liquid Crystals, 2013, 578, 19-25.	0.4	2
42	Solution-Processed Multilayered Polymer Solar Cells Designed by Layer-by-Layer Assembly of Poly(<i>p</i>-phenylenevinylene)s with Dimethylsulfoxide. Transactions of the Materials Research Society of Japan, 2010, 35, 31-34.	0.2	1
43	Nanoscale Morphology for Charge Transport of Conjugated Polymer Blend Films Studied by Conductive Atomic Force Microscopy. , 0, , .		0
44	Nanoscale Morphology for Charge Transport of Conjugated Polymer Blend Films Studied by Conductive Atomic Force Microscopy. , 0, , .		0