Hiroaki Benten

List of Publications by Citations

42 papers	2,225 citations	21 h-index	45 g-index
45 ext. papers	2,397 ext. citations	9.4 avg, IF	5.15 L-index

#	Paper	IF	Citations
42	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	35.4	253
41	Photovoltaic Performance of Perovskite Solar Cells with Different Grain Sizes. *Advanced Materials*, **2016**, 28, 917-22	24	239
40	Recent research progress of polymer donor/polymer acceptor blend solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 5340-5365	13	223
39	Exciton Diffusion in Conjugated Polymers: From Fundamental Understanding to Improvement in Photovoltaic Conversion Efficiency. *Journal of Physical Chemistry Letters*, **2015**, 6, 3417-28	6.4	201
38	Selective Dye Loading at the Heterojunction in Polymer/Fullerene Solar Cells. *Advanced Energy Materials*, **2011**, 1, 588-598	21.8	187
37	Low-Bandgap Donor/Acceptor Polymer Blend Solar Cells with Efficiency Exceeding 4%. *Advanced Energy Materials*, **2014**, 4, 1301006	21.8	159
36	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	35.4	141
35	Surface segregation at the aluminum interface of poly(3-hexylthiophene)/fullerene solar cells. *Applied Physics Letters*, **2010**, 96, 043305	3.4	110
34	Polymer/polymer blend solar cells with 2.0% efficiency developed by thermal purification of nanoscale-phase-separated morphology. *ACS Applied Materials & Interfaces*, **2011**, 3, 2924-7	9.5	94
33	Molecular Understanding of the Open-Circuit Voltage of Polymer:Fullerene Solar Cells. *Advanced Energy Materials*, **2012**, 2, 229-237	21.8	89
32	One-Dimensional Singlet Exciton Diffusion in Poly(3-hexylthiophene) Crystalline Domains. *Journal of Physical Chemistry Letters*, **2014**, 5, 399-403	6.4	67
31	Ultrafast Singlet Fission in a Push-Pull Low-Bandgap Polymer Film. *Journal of the American Chemical Society*, **2015**, 137, 15980-3	16.4	61
30	Interface engineering for ternary blend polymer solar cells with a heterostructured near-IR dye. *Advanced Materials*, **2015**, 27, 5868-74	24	51
29	Transient Absorption Spectroscopy for Polymer Solar Cells. *IEEE Journal of Selected Topics in Quantum Electronics*, **2016**, 22, 100-111	3.8	30
28	Intramolecular singlet and triplet excimers of triply bridged [3.3.N](3,6,9)carbazolophanes. *Journal of Physical Chemistry B*, **2007**, 111, 10905-14	3.4	29
27	Charge Transport in Intermixed Regions of All-Polymer Solar Cells Studied by Conductive Atomic Force Microscopy. *ACS Applied Materials & Interfaces*, **2017**, 9, 15615-15622	9.5	27
26	Photoinduced electron transfer of carbazole□cceptor dyads in solution and in a polymer solid. *Physical Chemistry Chemical Physics*, **2004**, 6, 3977-3984	3.6	24

25	Origin of Open-Circuit Voltage Loss in Polymer Solar Cells and Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2017**, 9, 19988-19997	9.5	23
24	Morphology-Limited Free Carrier Generation in Donor/Acceptor Polymer Blend Solar Cells Composed of Poly(3-hexylthiophene) and Fluorene-Based Copolymer. *Advanced Energy Materials*, **2015**, 5, 1500304	21.8	23
23	Development of highly conductive nanodomains in poly(3-hexylthiophene) films studied by conductive atomic force microscopy. *Polymer*, **2013**, 54, 3443-3447	3.9	22
22	Triplet Exciton Dynamics in Fluorene–Amine Copolymer Films. *Chemistry of Materials*, **2014**, 26, 2733-2742	9.6	21
21	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	9.5	21
20	Intramolecular excimer emission of triply bridged [3.3.N](3,6,9)carbazolophanes. *Journal of Physical Chemistry B*, **2005**, 109, 19681-7	3.4	20
19	Molecular design of near-IR dyes with different surface energy for selective loading to the heterojunction in blend films. *Scientific Reports*, **2015**, 5, 9321	4.9	18
18	Intermixed Donor/Acceptor Region in Conjugated Polymer Blends Visualized by Conductive Atomic Force Microscopy. *Macromolecules*, **2017**, 50, 1618-1625	5.5	16
17	Electron Transport Nanostructures of Conjugated Polymer Films Visualized by Conductive Atomic Force Microscopy. *ACS Macro Letters*, **2015**, 4, 879-885	6.6	16
16	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	0.7	11
15	Formation Mechanism of Fullerene Cation in Bulk Heterojunction Polymer Solar Cells. *Advanced Functional Materials*, **2012**, 22, 3075-3082	15.6	9
14	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	3.8	6
13	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	9.5	6
12	Dye Sensitization in Polymer/ZnO/Dye Ternary Hybrid Solar Cells. *Chemistry Letters*, **2013**, 42, 825-827	1.7	5
11	Assisted alignment of conjugated polymers in floating film transfer method using polymer blend. *Thin Solid Films*, **2021**, 734, 138814	2.2	5
10	Photoinduced intramolecular charge separation in a polymer solid below the glass transition temperature. *Journal of Chemical Physics*, **2005**, 123, 084901	3.9	4
9	Enhancement of Short-Range Ordering of Low-Bandgap Donor–Acceptor Conjugated Polymer in Polymer/Polymer Blend Films. *Macromolecules*, **2020**, 53, 6630-6639	5.5	4
8	Enhanced Charge Transport in a Conjugated Polymer Blended with an Insulating Polymer. *Chemistry - an Asian Journal*, **2020**, 15, 796-801	4.5	3

7	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	3
6	Near-Infrared Dye Sensitization of Polymer/Polymer Thin-Film Solar Cells. *Molecular Crystals and Liquid Crystals*, **2013**, 578, 19-25	0.5	2
5	Solution-Processed Multilayered Polymer Solar Cells Designed by Layer-by-Layer Assembly of Poly(p-phenylenevinylene)s with Dimethylsulfoxide. *Transactions of the Materials Research Society of Japan*, **2010**, 35, 31-34	0.2	1
4	Perfectness of the main-chain alignment in the conjugated polymer films prepared by the floating film transfer method. *Applied Physics Letters*, **2022**, 120, 203301	3.4	1
3	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	3.8	0
2	Carbon Nanotube/Biomolecule Composite Yarn for Wearable Thermoelectric Applications. *ACS Applied Energy Materials*, **2022**, 5, 3698-3705	6.1	0
1	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	4.3	0