Jason B Baxter

List of Publications by Year in Descending Order

62 papers	4,286 citations	27 h-index	65 g-index
65 ext. papers	4,625 ext. citations	7.5 avg, IF	5.77 L-index

#	Paper	IF	Citations
62	Predicting Solar Cell Performance from Terahertz and Microwave Spectroscopy. *Advanced Energy Materials*, **2022**, 12, 2102776	21.8	5
61	Distinguishing bulk and surface recombination in CdTe thin films and solar cells using time-resolved terahertz and photoluminescence spectroscopies. *Journal of Applied Physics*, **2021**, 130, 163104	2.5	0
60	Distinguishing Electron and Hole Dynamics in Functionalized CdSe/CdS Core/Shell Quantum Dots Using Complementary Ultrafast Spectroscopies and Kinetic Modeling. *Journal of Physical Chemistry C*, **2021**, 125, 31-41	3.8	4
59	A Noble-Transition Alloy Excels at Hot-Carrier Generation in the Near Infrared. *Advanced Materials*, **2020**, 32, e1906478	24	5
58	Critical Coupling of Visible Light Extends Hot-Electron Lifetimes for HO Synthesis. *ACS Applied Materials & Interfaces*, **2020**, 12, 22778-22788	9.5	3
57	Effects of cation composition on carrier dynamics and photovoltaic performance in Cu2ZnSnSe4 monocrystal solar cells. *Solar Energy Materials and Solar Cells*, **2020**, 205, 110255	6.4	10
56	Nanosecond carrier lifetimes in solution-processed enargite (Cu3AsS4) thin films. *Applied Physics Letters*, **2020**, 117, 162102	3.4	4
55	Environmental Sustainability of Mixed Cation Perovskite Materials in Photovoltaics Manufacturing. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 16537-16548	8.3	6
54	Electron accepting naphthalene bisimide ligand architectures for modulation of □-stacking in nanocrystal hybrid materials. *Nanoscale Horizons*, **2020**, 5, 1509-1514	10.8	2
53	Relating Carrier Dynamics and Photovoltaic Device Performance of Single-Crystalline Cu2ZnSnSe4. *Physical Review Applied*, **2019**, 11,	4.3	10
52	Optoelectronic Characterization of Emerging Solar Absorber Cu3AsS4 **2019**,		1
51	Comparative evaluation of lead emissions and toxicity potential in the life cycle of lead halide perovskite photovoltaics. *Energy*, **2019**, 166, 1089-1096	7.9	53
50	Distinguishing Thermal and Electronic Effects in Ultrafast Optical Spectroscopy Using Oxide Heterostructures. *Journal of Physical Chemistry C*, **2018**, 122, 115-123	3.8	18
49	Passivation and thickness control of highly efficient kesterite solar cells. *Applied Physics Letters*, **2018**, 113, 033903	3.4	6
48	Solution processed CuSbS2 films for solar cell applications. *Thin Solid Films*, **2018**, 646, 180-189	2.2	15
47	Directional Carrier Transfer in Strongly Coupled Binary Nanocrystal Superlattice Films Formed by Assembly and in Situ Ligand Exchange at a Liquid□Air Interface. *Journal of Physical Chemistry C*, **2017**, 121, 4146-4157	3.8	13
46	Energy Level Alignment and Cation Charge States at the LaFeO3/LaMnO3 (001) Heterointerface. *Advanced Materials Interfaces*, **2017**, 4, 1700183	4.6	8

45	Slow Electron□Hole Recombination in Lead Iodide Perovskites Does Not Require a Molecular Dipole. *ACS Energy Letters*, **2017**, 2, 2239-2244	20.1	65
44	Ultrafast Charge Carrier Dynamics in Extremely Thin Absorber (ETA) Solar Cells Consisting of CdSe-Coated ZnO Nanowires. *Journal of Physical Chemistry C*, **2016**, 120, 19504-19512	3.8	9
43	Thin films of copper indium selenide fabricated with high atom economy by electrophoretic deposition of nanocrystals under flow. *Chemical Engineering Science*, **2016**, 154, 128-135	4.4	5
42	Influence of Depletion Width on Charge Transport and Interfacial Recombination in Extremely Thin Absorber Solar Cells. *Journal of the Electrochemical Society*, **2016**, 163, H133-H138	3.9	1
41	Static and Dynamic Optical Properties of La1□SrxFeO3□The Effects of A-Site and Oxygen Stoichiometry. *Chemistry of Materials*, **2016**, 28, 97-105	9.6	25
40	Engineering titania nanostructure to tune and improve its photocatalytic activity. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 3966-71	11.5	86
39	Nanocrystal Size-Dependent Efficiency of Quantum Dot Sensitized Solar Cells in the Strongly Coupled CdSe Nanocrystals/TiO2 System. *ACS Applied Materials & Interfaces*, **2016**, 8, 14692-700	9.5	54
38	Enhanced photoelectrochemical water splitting via SILAR-deposited Ti-doped hematite thin films with an FeOOH overlayer. *Journal of Materials Chemistry A*, **2016**, 4, 6495-6504	13	31
37	Methods of photoelectrode characterization with high spatial and temporal resolution. *Energy and Environmental Science*, **2015**, 8, 2863-2885	35.4	42
36	Dynamic Speciation Modeling to Guide Selection of Complexing Agents for Chemical Bath Deposition: Case Study for ZnS Thin Films. *Crystal Growth and Design*, **2015**, 15, 4893-4900	3.5	11
35	Adherent and Conformal Zn(S,O,OH) Thin Films by Rapid Chemical Bath Deposition with Hexamethylenetetramine Additive. *ACS Applied Materials & Interfaces*, **2015**, 7, 11516-25	9.5	13
34	Visible light carrier generation in co-doped epitaxial titanate films. *Applied Physics Letters*, **2015**, 106, 092901	3.4	10
33	SILAR-Deposited Hematite Films for Photoelectrochemical Water Splitting: Effects of Sn, Ti, Thickness, and Nanostructuring. *Journal of Physical Chemistry C*, **2015**, 119, 4454-4465	3.8	31
32	Lifetime, mobility, and diffusion of photoexcited carriers in ligand-exchanged lead selenide nanocrystal films measured by time-resolved terahertz spectroscopy. *ACS Nano*, **2015**, 9, 1820-8	16.7	53
31	Ultrafast carrier dynamics in nanostructures for solar fuels. *Annual Review of Physical Chemistry*, **2014**, 65, 423-47	15.7	76
30	Relating Deposition Conditions to Zn(S,O,OH) Thin Film Properties for Photovoltaic Buffer Layers Using a Continuous Flow Microreactor. *Chemistry of Materials*, **2014**, 26, 6674-6683	9.6	11
29	Tailoring Absorber Thickness and the Absorber-Scaffold Interface in CdSe-Coated ZnO Nanowire Extremely Thin Absorber Solar Cells. *Electrochimica Acta*, **2014**, 145, 291-299	6.7	10
28	Enhanced charge transfer kinetics of CdSe quantum dot-sensitized solar cell by inorganic ligand exchange treatments. *ACS Applied Materials & Interfaces*, **2014**, 6, 3721-8	9.5	76

27	ZnO Nanowire-Based Solar Cells **2014**, 227-252		
26	Employing time-resolved terahertz spectroscopy to analyze carrier dynamics in thin-film Cu2ZnSn(S,Se)4 absorber layers. *Applied Physics Letters*, **2014**, 104, 253901	3.4	23
25	Microreactor Chemical Bath Deposition of Laterally Graded Cd1−xZnxS Thin Films: A Route to High-Throughput Optimization for Photovoltaic Buffer Layers. *Chemistry of Materials*, **2013**, 25, 297-306	9.6	21
24	Nucleation and Growth of Extremely Thin CdSe Films Electrodeposited from Near-Neutral Electrolytes. *Journal of the Electrochemical Society*, **2012**, 159, D605-D610	3.9	10
23	Commercialization of dye sensitized solar cells: Present status and future research needs to improve efficiency, stability, and manufacturing. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2012**, 30, 020801	2.9	108
22	Microstructural changes in CdSe-coated ZnO nanowires evaluated by in situ annealing in transmission electron microscopy and x-ray diffraction. *Nanotechnology*, **2012**, 23, 265701	3.4	9
21	Chemical bath deposition of ZnO nanowires at near-neutral pH conditions without hexamethylenetetramine (HMTA): understanding the role of HMTA in ZnO nanowire growth. *Langmuir*, **2011**, 27, 3672-7	4	103
20	Terahertz spectroscopy. *Analytical Chemistry*, **2011**, 83, 4342-68	7.8	259
19	Photovoltaic manufacturing: Present status, future prospects, and research needs. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2011**, 29, 030801	2.9	192
18	Electrodeposition of CdSe coatings on ZnO nanowire arrays for extremely thin absorber solar cells. *Electrochimica Acta*, **2011**, 56, 2703-2711	6.7	33
17	In Situ X-ray Absorption Near-Edge Structure Spectroscopy of ZnO Nanowire Growth During Chemical Bath Deposition. *Chemistry of Materials*, **2010**, 22, 6162-6170	9.6	52
16	Carrier dynamics in bulk ZnO. I. Intrinsic conductivity measured by terahertz time-domain spectroscopy. *Physical Review B*, **2009**, 80,	3.3	17
15	Metallorganic Chemical Vapor Deposition of ZnO Nanowires from Zinc Acetylacetonate and Oxygen. *Journal of the Electrochemical Society*, **2009**, 156, H52	3.9	20
14	ZnO Nanowires Grown by Chemical Bath Deposition in a Continuous Flow Microreactor. *Crystal Growth and Design*, **2009**, 9, 4538-4545	3.5	57
13	Microreactor for High-Yield Chemical Bath Deposition of Semiconductor Nanowires: ZnO Nanowire Case Study. *Industrial & Engineering Chemistry Research*, **2009**, 48, 5954-5961	3.9	29
12	Carrier dynamics in bulk ZnO. II. Transient photoconductivity measured by time-resolved terahertz spectroscopy. *Physical Review B*, **2009**, 80,	3.3	14
11	Nanoscale design to enable the revolution in renewable energy. *Energy and Environmental Science*, **2009**, 2, 559	35.4	311
10	Ultrafast Photooxidation of Mn(II)−terpyridine Complexes Covalently Attached to TiO2 Nanoparticles. *Journal of Physical Chemistry C*, **2007**, 111, 11982-11990	3.8	77

9	Conductivity of ZnO nanowires, nanoparticles, and thin films using time-resolved terahertz spectroscopy. *Journal of Physical Chemistry B*, **2006**, 110, 25229-39	3.4	329
8	Effect of Chromium/Gold and Titanium/Titanium Nitride/Platinum/Gold Metallization on Wire/Ribbon Bondability. *IEEE Transactions on Advanced Packaging*, **2006**, 29, 707-713		20
7	Dye-sensitized solar cells based on semiconductor morphologies with ZnO nanowires. *Solar Energy Materials and Solar Cells*, **2006**, 90, 607-622	6.4	317
6	Synthesis and characterization of ZnO nanowires and their integration into dye-sensitized solar cells. *Nanotechnology*, **2006**, 17, S304-S312	3.4	373
5	Infrared detection of hydrogen-generated free carriers in polycrystalline ZnO thin films. *Journal of Applied Physics*, **2005**, 97, 043522	2.5	44
4	Nanowire-based dye-sensitized solar cells. *Applied Physics Letters*, **2005**, 86, 053114	3.4	905
3	Epitaxial growth of ZnO nanowires on a- and c-plane sapphire. *Journal of Crystal Growth*, **2005**, 274, 407-411	1.61	83
2	Growth and Characterization of ZnO Nanowires. *Materials Research Society Symposia Proceedings*, **2003**, 776, 791		1
1	Growth mechanism and characterization of zinc oxide hexagonal columns. *Applied Physics Letters*, **2003**, 83, 3797-3799	3.4	106