John B Asbury

List of Publications by Year
in descending order

100 papers	9,006 citations	61984 43 h-index	43889 91 g-index
102 all docs	102 docs citations	102 times ranked	8800 citing authors

#	Article	IF	Citations
1	Correction to â€œElectron Transfer Going the Distance: Mn-Doped ZnSe as Model Photocatalytic Systemsâ€ Journal of Physical Chemistry C, 2022, 126, 2299-2299.	3.1	0
2	Synthesis and Photoinduced Electron Transfer Studies of Ligand Exchanged Mn-Doped ZnSe Nanocrystals in Water. Journal of Physical Chemistry C, 2022, 126, 4995-5003.	3.1	3
3	Excited-State Dynamics of 5,14- vs 6,13-Bis(trialkylsilylethynyl)-Substituted Pentacenes: Implications for Singlet Fission. Journal of Physical Chemistry C, 2022, 126, 9784-9793.	3.1	9
4	Influence of Dynamic Disorder and Chargeâ€“Lattice Interactions on Optoelectronic Properties of Halide Perovskites. Journal of Physical Chemistry C, 2021, 125, 5427-5435.	3.1	9
5	Reproducibility of cavity-enhanced chemical reaction rates in the vibrational strong coupling regime. Journal of Chemical Physics, 2021, 154, 191103.	3.0	63
6	Characterization of triplet separation and diffusion in amorphous pentacene films via ultrafast infrared spectroscopy. , 2021, , .		0
7	Influence of Ligand Structure on Excited State Surface Chemistry of Lead Sulfide Quantum Dots. Journal of the American Chemical Society, 2021, 143, 13824-13834.	13.7	17
8	Excitonâ€“Phonon Coupling and Carrier Relaxation in PbS Quantum Dots: The Case of Carboxylate Ligands. Journal of Physical Chemistry C, 2021, 125, 22622-22629.	3.1	3
9	Electron Transfer Going the Distance: Mn-Doped ZnSe as a Model Photocatalytic System. Journal of Physical Chemistry C, 2021, 125, 25749-25756.	3.1	2
10	A General Strategy to Enhance Donorâ€Acceptor Molecules Using Solventâ€Excluding Substituents. Angewandte Chemie - International Edition, 2020, 59, 4785-4792.	13.8	34
11	Tuning Triplet-Pair Separation versus Relaxation Using a Diamond Anvil Cell. Cell Reports Physical Science, 2020, 1, 100005.	5.6	7
12	Ultrafast Triplet Pair Separation and Triplet Trapping following Singlet Fission in Amorphous Pentacene Films. Journal of Physical Chemistry C, 2020, 124, 23567-23578.	3.1	15
13	Dynamic Ligand Surface Chemistry of Excited PbS Quantum Dots. Journal of Physical Chemistry Letters, 2020, 11, 2291-2297.	4.6	22
14	Does Dipolar Motion of Organic Cations Affect Polaron Dynamics and Bimolecular Recombination in Halide Perovskites?. Journal of Physical Chemistry Letters, 2020, 11, 3166-3172.	4.6	16
15	A General Strategy to Enhance Donorâ€Acceptor Molecules Using Solventâ€Excluding Substituents. Angewandte Chemie, 2020, 132, 4815-4822.	2.0	3
16	Lattice Anharmonicity: A Double-Edged Sword for 3D Perovskite-Based Optoelectronics. ACS Energy Letters, 2019, 4, 1888-1897.	17.4	34
17	Vibrational probe of the origin of singlet exciton fission in TIPS-pentacene solutions. Journal of Chemical Physics, 2019, 151, 154701.	3.0	18
18	Dynamic Disorder Dominates Delocalization, Transport, and Recombination in Halide Perovskites. CheM, 2019, 5, 2495.	11.7	2

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19	Structural origins of the electronic properties of materials <i>via</i> time-resolved infrared spectroscopy. Journal of Materials Chemistry C, 2019, 7, 5889-5909.	5.5	22
20	Vibrational Probe of the Structural Origins of Slow Recombination in Halide Perovskites. Journal of Physical Chemistry C, 2019, 123, 7061-7073.	3.1	29
21	Conjugated Block Copolymers as Model Systems to Examine Mechanisms of Charge Generation in Donorâ€“Acceptor Materials. Advanced Functional Materials, 2019, 29, 1804858.	14.9	17
22	Direct Observation of Correlated Triplet Pair Dynamics during Singlet Fission Using Ultrafast Mid-IR Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 2012-2022.	3.1	62
23	Charged Polaron Polaritons in an Organic Semiconductor Microcavity. Physical Review Letters, 2018, 120, 017402.	7.8	21
24	Dynamic Disorder Dominates Delocalization, Transport, and Recombination in Halide Perovskites. CheM, 2018, 4, 2826-2843.	11.7	104
25	Revealing the Importance of Energetic and Entropic Contributions to the Driving Force for Charge Photogeneration. ACS Applied Materials & Interfaces, 2018, 10, 39933-39941.	8.0	12
26	Electronâ€“Phonon Coupling and Resonant Relaxation from 1D and 1P States in PbS Quantum Dots. ACS Nano, 2018, 12, 6263-6272.	14.6	22
27	Striking the right balance of intermolecular coupling for high-efficiency singlet fission. Chemical Science, 2018, 9, 6240-6259.	7.4	97
28	Time-Resolved Infrared Spectroscopy Directly Probes Free and Trapped Carriers in Organo-Halide Perovskites. ACS Energy Letters, 2017, 2, 651-658.	17.4	43
29	Mechanisms of Energy Transfer and Enhanced Stability of Carbidonitride Phosphors for Solid-State Lighting. ACS Applied Materials & Interfaces, 2017, 9, 12547-12555.	8.0	6
30	Triplet Transfer Mediates Triplet Pair Separation during Singlet Fission in 6,13â€Bis(triisopropylsilylethynyl)â€Pentacene. Advanced Functional Materials, 2017, 27, 1703929.	14.9	40
31	Solution-processable, crystalline material for quantitative singlet fission. Materials Horizons, 2017, 4, 915-923.	12.2	56
32	Harnessing Molecular Vibrations to Probe Triplet Dynamics During Singlet Fission. Journal of Physical Chemistry Letters, 2017, 8, 5700-5706.	4.6	39
33	Using molecular vibrations to probe exciton delocalization in films of perylene diimides with ultrafast mid-IR spectroscopy. Physical Chemistry Chemical Physics, 2017, 19, 24829-24839.	2.8	35
34	Molecular Origins of Defects in Organohalide Perovskites and Their Influence on Charge Carrier Dynamics. Journal of Physical Chemistry C, 2016, 120, 12392-12402.	3.1	89
35	High Sensitivity Nanosecond Mid-Infrared Transient Absorption Spectrometer Enabling Low Excitation Density Measurements of Electronic Materials. Applied Spectroscopy, 2016, 70, 1726-1732.	2.2	4
36	Dynamic Exchange During Triplet Transport in Nanocrystalline TIPS-Pentacene Films. Journal of the American Chemical Society, 2016, 138, 16069-16080.	13.7	84

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37	Observation of Two Triplet-Pair Intermediates in Singlet Exciton Fission. Journal of Physical Chemistry Letters, 2016, 7, 2370-2375.	4.6	186
38	Molecular Rectification in Conjugated Block Copolymer Photovoltaics. Journal of Physical Chemistry C, 2016, 120, 6978-6988.	3.1	32
39	Approaching Bulk Carrier Dynamics in Organo-Halide Perovskite Nanocrystalline Films by Surface Passivation. Journal of Physical Chemistry Letters, 2016, 7, 1148-1153.	4.6	83
40	Controlling Polymorphism in Poly(3â€Hexylthiophene) through Addition of Ferrocene for Enhanced Charge Mobilities in Thinâ€Film Transistors. Advanced Functional Materials, 2015, 25, 542-551.	14.9	20
41	Solar Cells: Domain Compositions and Fullerene Aggregation Govern Charge Photogeneration in Polymer/Fullerene Solar Cells (Adv. Energy Mater. 11/2014). Advanced Energy Materials, 2014, 4, .	19.5	2
42	Domain Compositions and Fullerene Aggregation Govern Charge Photogeneration in Polymer/Fullerene Solar Cells. Advanced Energy Materials, 2014, 4, 1400116.	19.5	77
43	Probing the Electrostatics of Active Site Microenvironments along the Catalytic Cycle for <i>Escherichia coli</i> Dihydrofolate Reductase. Journal of the American Chemical Society, 2014, 136, 10349-10360.	13.7	85
44	Tuning the Dielectric Properties of Organic Semiconductors via Salt Doping. Journal of Physical Chemistry B, 2013, 117, 15866-15874.	2.6	30
45	Vibrational Spectroscopy of Electronic Processes in Emerging Photovoltaic Materials. Accounts of Chemical Research, 2013, 46, 1538-1547.	15.6	25
46	Influence of Acceptor Structure on Barriers to Charge Separation in Organic Photovoltaic Materials. Journal of Physical Chemistry C, 2012, 116, 4824-4831.	3.1	86
47	Enhanced Mobility-Lifetime Products in PbS Colloidal Quantum Dot Photovoltaics. ACS Nano, 2012, 6, 89-99.	14.6	244
48	Ultrafast probes of charge transfer states in organic photovoltaic materials. Chemical Physics Letters, 2011, 515, 197-205.	2.6	19
49	Colloidal-quantum-dot photovoltaics using atomic-ligand passivation. Nature Materials, 2011, 10, 765-771.	27.5	1,375
50	Ultrafast IR Spectroscopic Study of Free Carrier Formation in OPV Polymer Blends. ACS Symposium Series, 2010, , 53-69.	0.5	0
51	Vibrational Energy Mediates Charge Separation in Organic Photovoltaic Materials. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1776-1783.	2.9	11
52	Beyond the Adiabatic Limit: Charge Photogeneration in Organic Photovoltaic Materials. Journal of Physical Chemistry Letters, 2010, 1, 2255-2263.	4.6	101
53	Temperature-Independent Vibrational Dynamics in an Organic Photovoltaic Material. Journal of Physical Chemistry B, 2010, 114, 12242-12251.	2.6	19
54	Charge Trapping in Organic Photovoltaic Materials Examined with Time-Resolved Vibrational Spectroscopy. Journal of Physical Chemistry C, 2010, 114, 5344-5350.	3.1	31

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55	Vibrational solvatochromism in organic photovoltaic materials: method to distinguish molecules at donor/acceptor interfaces. Physical Chemistry Chemical Physics, 2010, 12, 14144.	2.8	24
56	Barrierless Free Carrier Formation in an Organic Photovoltaic Material Measured with Ultrafast Vibrational Spectroscopy. Journal of the American Chemical Society, 2009, 131, 15986-15987.	13.7	93
57	Ultrafast vibrational spectroscopy of charge-carrier dynamics in organic photovoltaic materials. Physical Chemistry Chemical Physics, 2009, 11, 2575.	2.8	62
58	Excitation Transport and Charge Separation in an Organic Photovoltaic Material:â€‰ Watching Excitations Diffuse to Interfaces. Journal of Physical Chemistry C, 2008, 112, 3926-3934.	3.1	32
59	Interfacial charge separation and trapping in a photovoltaic polymer blend observed with ultrafast vibrational spectroscopy. Proceedings of SPIE, 2008, , .	0.8	0
60	Watching Electrons Move in Real Time:â€‰ Ultrafast Infrared Spectroscopy of a Polymer Blend Photovoltaic Material. Journal of the American Chemical Society, 2007, 129, 15884-15894.	13.7	89
61	Formation and Dissociation of Intraâˆ'Intermolecular Hydrogen-Bonded Soluteâˆ'Solvent Complexes:â€‰ Chemical Exchange Two-Dimensional Infrared Vibrational Echo Spectroscopy. Journal of the American Chemical Society, 2006, 128, 2977-2987.	13.7	75
62	Microscopic Inhomogeneity and Ultrafast Orientational Motion in an Organic Photovoltaic Bulk Heterojunction Thin Film Studied with 2D IR Vibrational Spectroscopy. Journal of Physical Chemistry B, 2006, 110, 24281-24286.	2.6	32
63	Vibrational Echo Correlation Spectroscopy. , 2005, , 167-196.		0
64	Accidental vibrational degeneracy in vibrational excited states observed with ultrafast two-dimensional IR vibrational echo spectroscopy. Journal of Chemical Physics, 2005, 123, 164301.	3.0	13
65	Ultrafast Dynamics of Solute-Solvent Complexation Observed at Thermal Equilibrium in Real Time. Science, 2005, 309, 1338-1343.	12.6	416
66	Dynamics of water probed with vibrational echo correlation spectroscopy. Journal of Chemical Physics, 2004, 121, 12431.	3.0	337
67	Vibrational echo correlation spectroscopy probes of hydrogen bond dynamics in water and methanol. Journal of Luminescence, 2004, 107, 271-286.	3.1	80
68	Water dynamics: dependence on local structure probed with vibrational echo correlation spectroscopy. Chemical Physics Letters, 2004, 386, 295-300.	2.6	131
69	Hydrogen Bond Networks:â€‰ Structure and Evolution after Hydrogen Bond Breaking. Journal of Physical Chemistry B, 2004, 108, 6544-6554.	2.6	94
70	Watching Hydrogen Bonds Break:Â A Transient Absorption Study of Water. Journal of Physical Chemistry A, 2004, 108, 10957-10964.	2.5	264
71	Water Dynamics:â€‰ Vibrational Echo Correlation Spectroscopy and Comparison to Molecular Dynamics Simulations. Journal of Physical Chemistry A, 2004, 108, 1107-1119.	2.5	436
72	Using ultrafast infrared multidimensional correlation spectroscopy to aid in vibrational spectral peak assignments. Chemical Physics Letters, 2003, 381, 139-146.	2.6	36

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73	Ultrafast heterodyne detected infrared multidimensional vibrational stimulated echo studies of hydrogen bond dynamics. Chemical Physics Letters, 2003, 374, 362-371.	2.6	75
74	Parameters Affecting Electron Injection Dynamics from Ruthenium Dyes to Titanium Dioxide Nanocrystalline Thin Filmâ€. Journal of Physical Chemistry B, 2003, 107, 7376-7386.	2.6	226
75	<title>Ultrafast electron transfer dynamics from molecular adsorbate to semiconductor nanoparticles</title>. , 2003, , .		1
76	Hydrogen bond breaking probed with multidimensional stimulated vibrational echo correlation spectroscopy. Journal of Chemical Physics, 2003, 119, 12981-12997.	3.0	67
77	Hydrogen Bond Dynamics Probed with Ultrafast Infrared Heterodyne-Detected Multidimensional Vibrational Stimulated Echoes. Physical Review Letters, 2003, 91, 237402.	7.8	122
78	Time-Dependent Vibration Stokes Shift during Solvation: Experiment and Theory. Bulletin of the Chemical Society of Japan, 2002, 75, 973-983.	3.2	72
79	Effect of Trap States on Interfacial Electron Transfer between Molecular Absorbates and Semiconductor Nanoparticles. Journal of Physical Chemistry B, 2002, 106, 10191-10198.	2.6	119
80	Ultrafast Electron Transfer Dynamics from Molecular Adsorbates to Semiconductor Nanocrystalline Thin Films. Journal of Physical Chemistry B, 2001, 105, 4545-4557.	2.6	594
81	Evidences of hot excited state electron injection from sensitizer molecules to TiO2 nanocrystalline thin films. Research on Chemical Intermediates, 2001, 27, 393-406.	2.7	284
82	Femtosecond IR Study of Ultrafast Electron Injection in Nanocrystalline Thin Film Electrodes. Springer Series in Chemical Physics, 2001, , 450-452.	0.2	1
83	Ultrafast Solute Vibrational Spectral Evolution During the Solvation Process. Springer Series in Chemical Physics, 2001, , 554-556.	0.2	3
84	Mid-IR Detection of a Precursor to the Prehydrated Electron. Springer Series in Chemical Physics, 2001, , 470-472.	0.2	0
85	Ultrafast mid-IR detection of the direct precursor to the presolvated electron following electron ejection from ferrocyanide. Chemical Physics Letters, 2000, 329, 386-392.	2.6	22
86	Back Electron Transfer from TiO2 Nanoparticles to FeIII(CN)63-:â€‰ Origin of Non-Single-Exponential and Particle Size Independent Dynamics. Journal of Physical Chemistry B, 2000, 104, 93-104.	2.6	168
87	Bridge Length-Dependent Ultrafast Electron Transfer from Re Polypyridyl Complexes to Nanocrystalline TiO2 Thin Films Studied by Femtosecond Infrared Spectroscopy. Journal of Physical Chemistry B, 2000, 104, 11957-11964.	2.6	207
88	Direct Observation of a Picosecond Alkane Câ"H Bond Activation Reaction at Iridium. Journal of the American Chemical Society, 2000, 122, 12870-12871.	13.7	37
89	Ultrafast Excited-State Dynamics of Re(CO)3Cl(dcbpy) in Solution and on Nanocrystalline TiO2 and ZrO2 Thin Films. Journal of Physical Chemistry A, 2000, 104, 4291-4299.	2.5	81
90	Observation of competition between ultrafast electron injection and vibrational energy relaxation. , 2000, , .		0

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91	Mid-IR detection of a precursor to the presolvated electron. , 2000, , .		0
92	Femtosecond IR Study of Excited-State Relaxation and Electron-Injection Dynamics of Ru(dcbpy)2(NCS)2in Solution and on Nanocrystalline TiO2and Al2O3Thin Films. Journal of Physical Chemistry B, 1999, 103, 3110-3119.	2.6	385
93	Multiple-Exponential Electron Injection in Ru(dcbpy)2(SCN)2Sensitized ZnO Nanocrystalline Thin Films. Journal of Physical Chemistry B, 1999, 103, 6643-6647.	2.6	103
94	Sub-picosecond Injection of Electrons from Excited [Ru(2,2â€²-bipy-4,4â€²-dicarboxy)₂(SCN)₂] into TiO₂ Using Transient Mid-Infrared Spectroscopy*. Zeitschrift Fur Physikalische Chemie, 1999, 212, 77-84.	2.8	23
95	Direct Observation of Ultrafast Electron Injection from Coumarin 343 to TiO2Nanoparticles by Femtosecond Infrared Spectroscopy. Journal of Physical Chemistry B, 1998, 102, 6482-6486.	2.6	196
96	Dynamics of Electron Injection in Nanocrystalline Titanium Dioxide Films Sensitized with [Ru(4,4â€˜-dicarboxy-2,2â€˜-bipyridine)2(NCS)2] by Infrared Transient Absorption. Journal of Physical Chemistry B, 1998, 102, 6455-6458.	2.6	292
97	Interfacial Electron Transfer between Fe(II)(CN)64-and TiO2Nanoparticles:Â Direct Electron Injection and Nonexponential Recombination. Journal of Physical Chemistry B, 1998, 102, 10208-10215.	2.6	181
98	Sub-Picosecond IR Study of the Reactive Intermediate in an Alkane Câˆ'H Bond Activation Reaction by CpRh(CO)2. Organometallics, 1998, 17, 3417-3419.	2.3	57
99	Femtosecond IR Study of Ru(II)(SCN)2(dcbpy)2 Sensitized Nanocrystalline TiO2 Thin Films: Ultrafast Electron Injection and Relaxation Dynamics. Springer Series in Chemical Physics, 1998, , 639-641.	0.2	4
100	Twisted Aâ€Dâ€A Type Acceptors with Thermallyâ€Activated Delayed Crystallization Behavior for Efficient Nonfullerene Organic Solar Cells. Advanced Energy Materials, 0, , 2103957.	19.5	6