

Charles A Schmuttenmaer

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

86
papers

6,347
citations

39
h-index

79
g-index

102
ext. papers

7,406
ext. citations

9.9
avg, IF

6.04
L-index

#	Paper	IF	Citations
86	Interrogating Light-initiated Dynamics in Metal-Organic Frameworks with Time-resolved Spectroscopy. <i>Chemical Reviews</i> , 2021 ,	68.1	4
85	Nanotechnology for catalysis and solar energy conversion. <i>Nanotechnology</i> , 2021 , 32, 042003	3.4	24
84	Tuning the Conduction Band for Interfacial Electron Transfer: Dye-Sensitized SnxTi1-xO2 Photoanodes for Water Splitting. <i>ACS Applied Energy Materials</i> , 2021 , 4, 4695-4703	6.1	2
83	Nelly: A User-Friendly and Open-Source Implementation of Tree-Based Complex Refractive Index Analysis for Terahertz Spectroscopy. <i>Analytical Chemistry</i> , 2021 , 93, 11243-11250	7.8	1
82	Ultrafast terahertz spectroscopy provides insight into charge transfer efficiency and dynamics in artificial photosynthesis. <i>Photosynthesis Research</i> , 2020 , 1	3.7	0
81	Suspensions of Semiconducting Nanoparticles in Nafion for Transient Spectroscopy and Terahertz Photoconductivity Measurements. <i>Analytical Chemistry</i> , 2020 , 92, 4187-4192	7.8	5
80	Terahertz Spectroscopy and Density Functional Theory Investigation of the Dipeptide L-Carnosine. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2020 , 41, 1366-1377	2.2	7
79	Influence of Dye Sensitizers on Charge Dynamics in SnO2 Nanoparticles Probed with THz Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 3482-3488	3.8	5
78	Single Copper Atoms Enhance Photoconductivity in g-CN. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 8873-8879	6.4	10
77	Direct Evidence of Photoinduced Charge Transport Mechanism in 2D Conductive Metal Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2020 , 142, 21050-21058	16.4	23
76	A conductive metal-organic framework photoanode. <i>Chemical Science</i> , 2020 , 11, 9593-9603	9.4	9
75	Terahertz Spectroscopy of Emerging Materials. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 22335-22346	3.8	19
74	Metal-Organic Framework Photoconductivity via Time-Resolved Terahertz Spectroscopy. <i>Journal of the American Chemical Society</i> , 2019 , 141, 9793-9797	16.4	22
73	Terahertz Spectroscopy of Tetrameric Peptides. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 2624-2628	18.4	28
72	Collaboration between experiment and theory in solar fuels research. <i>Chemical Society Reviews</i> , 2019 , 48, 1865-1873	58.5	11
71	Electronic Tuning of Metal Nanoparticles for Highly Efficient Photocatalytic Hydrogen Peroxide Production. <i>ACS Catalysis</i> , 2019 , 9, 626-631	13.1	47
70	Highly Active NiO Photocathodes for H ₂ O Production Enabled via Outer-Sphere Electron Transfer. <i>Journal of the American Chemical Society</i> , 2018 , 140, 4079-4084	16.4	50

69	Direct Interfacial Electron Transfer from High-Potential Porphyrins into Semiconductor Surfaces: A Comparison of Linkers and Anchoring Groups. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 13529-13539	3.8	25
68	A Terahertz-Transparent Electrochemical Cell for In Situ Terahertz Spectroelectrochemistry. <i>Analytical Chemistry</i> , 2018 , 90, 4389-4396	7.8	14
67	Terahertz Spectroscopy and Density Functional Theory Calculations of dl-Norleucine and dl-Methionine. <i>Journal of Physical Chemistry A</i> , 2018 , 122, 5978-5982	2.8	19
66	Identifying Peptide Structures with THz Spectroscopy 2018 ,		1
65	Tutorial: An introduction to terahertz time domain spectroscopy (THz-TDS). <i>Journal of Applied Physics</i> , 2018 , 124, 231101	2.5	144
64	Applicability of the thin-film approximation in terahertz photoconductivity measurements. <i>Applied Physics Letters</i> , 2018 , 113, 233901	3.4	20
63	Single-Atom Pt Catalyst for Effective C-H Bond Activation via Hydrodefluorination. <i>ACS Catalysis</i> , 2018 , 8, 9353-9358	13.1	41
62	Ultrafast proton-assisted tunneling through ZrO in dye-sensitized SnO-core/ZrO-shell films. <i>Chemical Communications</i> , 2018 , 54, 7971-7974	5.8	3
61	Frequency-Dependent Terahertz Transient Photoconductivity of Mesoporous SnO ₂ Films. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 15949-15956	3.8	18
60	Solvent Dependence of Lateral Charge Transfer in a Porphyrin Monolayer. <i>ACS Energy Letters</i> , 2017 , 2, 168-173	20.1	11
59	The 2017 terahertz science and technology roadmap. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 043001		724
58	Linker Length-Dependent Electron-Injection Dynamics of Trimesitylporphyrins on SnO ₂ Films. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 22690-22699	3.8	10
57	Optimization of Photoanodes for Photocatalytic Water Oxidation by Combining a Heterogenized Iridium Water-Oxidation Catalyst with a High-Potential Porphyrin Photosensitizer. <i>ChemSusChem</i> , 2017 , 10, 4526-4534	8.3	25
56	Optimization of Terahertz Metamaterials for Near-Field Sensing of Chiral Substances. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2017 , 7, 755-764	3.4	7
55	Exploring the solid state phase transition in dl-norvaline with terahertz spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2017 , 20, 276-283	3.6	18
54	Controlling the rectification properties of molecular junctions through molecule-electrode coupling. <i>Nanoscale</i> , 2016 , 8, 16357-16362	7.7	28
53	Rutile TiO ₂ as an Anode Material for Water-Splitting Dye-Sensitized Photoelectrochemical Cells. <i>ACS Energy Letters</i> , 2016 , 1, 603-606	20.1	51
52	Dynamics of Electron Injection in SnO ₂ /TiO ₂ Core/Shell Electrodes for Water-Splitting Dye-Sensitized Photoelectrochemical Cells. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 2930-4	6.4	49

51	Terahertz spectroscopic polarimetry of generalized anisotropic media composed of Archimedean spiral arrays: Experiments and simulations. <i>Journal of Chemical Physics</i> , 2016 , 144, 174705	3.9	6
50	Size-Dependent Ultrafast Charge Carrier Dynamics of WO ₃ for Photoelectrochemical Cells. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 14926-14933	3.8	28
49	Proton-Induced Trap States, Injection and Recombination Dynamics in Water-Splitting Dye-Sensitized Photoelectrochemical Cells. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 16727-35	9.5	29
48	Surface-Induced Deprotection of THP-Protected Hydroxamic Acids on Titanium Dioxide. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 12495-12502	3.8	9
47	Molecular design of light-harvesting photosensitizers: effect of varied linker conjugation on interfacial electron transfer. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 18678-82	3.6	17
46	Structure-function relationships in single molecule rectification by N-phenylbenzamide derivatives. <i>New Journal of Chemistry</i> , 2016 , 40, 7373-7378	3.6	6
45	Ultrafast Electron Injection Dynamics of Photoanodes for Water-Splitting Dye-Sensitized Photoelectrochemical Cells. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 5940-5948	3.8	44
44	High-Potential Porphyrins Supported on SnO ₂ and TiO ₂ Surfaces for Photoelectrochemical Applications. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 28971-28982	3.8	21
43	Photocurrent Enhancement from Solid-State Triplet-Triplet Annihilation Upconversion of Low-Intensity, Low-Energy Photons. <i>ACS Photonics</i> , 2016 , 3, 784-790	6.3	56
42	A molecular catalyst for water oxidation that binds to metal oxide surfaces. <i>Nature Communications</i> , 2015 , 6, 6469	17.4	218
41	Functioning Photoelectrochemical Devices Studied with Time-Resolved Terahertz Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 3257-3262	6.4	17
40	Interfacial electron transfer in photoanodes based on phosphorus(V) porphyrin sensitizers co-deposited on SnO ₂ with the Ir(III)Cp* water oxidation precatalyst. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 3868-3879	13	35
39	Electron injection dynamics in high-potential porphyrin photoanodes. <i>Accounts of Chemical Research</i> , 2015 , 48, 1423-31	24.3	32
38	Computational Design of Intrinsic Molecular Rectifiers Based on Asymmetric Functionalization of N-Phenylbenzamide. <i>Journal of Chemical Theory and Computation</i> , 2015 , 11, 5888-96	6.4	29
37	Facet-dependent photoelectrochemical performance of TiO ₂ nanostructures: an experimental and computational study. <i>Journal of the American Chemical Society</i> , 2015 , 137, 1520-9	16.4	205
36	Ultrafast carrier dynamics in nanostructures for solar fuels. <i>Annual Review of Physical Chemistry</i> , 2014 , 65, 423-47	15.7	76
35	Linker rectifiers for covalent attachment of transition-metal catalysts to metal-oxide surfaces. <i>ChemPhysChem</i> , 2014 , 15, 1138-47	3.2	18
34	Modular Assembly of High-Potential Zinc Porphyrin Photosensitizers Attached to TiO ₂ with a Series of Anchoring Groups. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 14526-14533	3.8	82

33	Electron Injection Dynamics from Photoexcited Porphyrin Dyes into SnO ₂ and TiO ₂ Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 21662-21670	3.8	51
32	Efficiency of Interfacial Electron Transfer from Zn-Porphyrin Dyes into TiO ₂ Correlated to the Linker Single Molecule Conductance. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 24462-24470	3.8	48
31	Plasmonic Enhancement of Dye-Sensitized Solar Cells Using Core-Shell-Shell Nanostructures. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 927-934	3.8	102
30	Hydroxamate anchors for improved photoconversion in dye-sensitized solar cells. <i>Inorganic Chemistry</i> , 2013 , 52, 6752-64	5.1	89
29	Intermolecular vibrations in hydrophobic amino acid crystals: experiments and calculations. <i>Journal of Physical Chemistry B</i> , 2013 , 117, 10444-61	3.4	59
28	Light-driven water oxidation for solar fuels. <i>Coordination Chemistry Reviews</i> , 2012 , 256, 2503-2520	23.2	307
27	Bioinspired High-Potential Porphyrin Photoanodes. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 4892-4903	3.8	61
26	Efficient measurement of broadband terahertz optical activity. <i>Applied Physics Letters</i> , 2012 , 100, 241114	11.4	25
25	A visible light water-splitting cell with a photoanode formed by codeposition of a high-potential porphyrin and an iridium water-oxidation catalyst. <i>Energy and Environmental Science</i> , 2011 , 4, 2389	35.4	237
24	Terahertz Spectroscopy of Histidine Enantiomers and Polymorphs. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2011 , 32, 691-698	2.2	22
23	Terahertz spectroscopy of enantiopure and racemic polycrystalline valine. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 11719-30	3.6	53
22	Fluctuation-Induced Tunneling Conductivity in Nanoporous TiO ₂ Thin Films. <i>Journal of Physical Chemistry Letters</i> , 2011 , 2, 1931-1936	6.4	16
21	Exciton-like trap states limit electron mobility in TiO ₂ nanotubes. <i>Nature Nanotechnology</i> , 2010 , 5, 769-728	28.7	214
20	Water-stable, hydroxamate anchors for functionalization of TiO ₂ surfaces with ultrafast interfacial electron transfer. <i>Energy and Environmental Science</i> , 2010 , 3, 917	35.4	94
19	Carrier dynamics in bulk ZnO. I. Intrinsic conductivity measured by terahertz time-domain spectroscopy. <i>Physical Review B</i> , 2009 , 80,	3.3	17
18	Synergistic effect between anatase and rutile TiO ₂ nanoparticles in dye-sensitized solar cells. <i>Dalton Transactions</i> , 2009 , 10078-85	4.3	178
17	Carrier dynamics in bulk ZnO. II. Transient photoconductivity measured by time-resolved terahertz spectroscopy. <i>Physical Review B</i> , 2009 , 80,	3.3	14
16	Hydroxamate anchors for water-stable attachment to TiO ₂ nanoparticles. <i>Energy and Environmental Science</i> , 2009 , 2, 1173	35.4	82

15	Acetylacetonate anchors for robust functionalization of TiO ₂ nanoparticles with Mn(II)-terpyridine complexes. <i>Journal of the American Chemical Society</i> , 2008 , 130, 14329-38	16.4	137
14	Ultrafast Photooxidation of Mn(II)Terpyridine Complexes Covalently Attached to TiO ₂ Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 11982-11990	3.8	77
13	Antenna-Coupled Niobium Bolometers for Terahertz Spectroscopy. <i>IEEE Transactions on Applied Superconductivity</i> , 2007 , 17, 412-415	1.8	20
12	Conductivity of ZnO nanowires, nanoparticles, and thin films using time-resolved terahertz spectroscopy. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 25229-39	3.4	329
11	Exploring dynamics in the far-infrared with terahertz spectroscopy. <i>Chemical Reviews</i> , 2004 , 104, 1759-788.1	48.1	472
10	Carrier Localization and Cooling in Dye-Sensitized Nanocrystalline Titanium Dioxide. <i>Journal of Physical Chemistry B</i> , 2002 , 106, 11716-11719	3.4	188
9	Size-Dependent Photoconductivity in CdSe Nanoparticles as Measured by Time-Resolved Terahertz Spectroscopy. <i>Nano Letters</i> , 2002 , 2, 983-987	11.5	113
8	A new method for measuring intramolecular charge transfer. <i>Science Progress</i> , 2002 , 85, 175-97	1.1	1
7	Using the finite-difference time-domain pulse propagation method to simulate time-resolved THz experiments. <i>Journal of Chemical Physics</i> , 2001 , 114, 2903-2909	3.9	52
6	Subpicosecond carrier dynamics in low-temperature grown GaAs as measured by time-resolved terahertz spectroscopy. <i>Journal of Applied Physics</i> , 2001 , 90, 5915-5923	2.5	171
5	Structure and dynamics of nonaqueous mixtures of dipolar liquids. II. Molecular dynamics simulations. <i>Journal of Chemical Physics</i> , 2000 , 113, 3249-3260	3.9	47
4	Spectroscopy and dynamics of mixtures of water with acetone, acetonitrile, and methanol. <i>Journal of Chemical Physics</i> , 2000 , 113, 11222-11236	3.9	168
3	Transient photoconductivity in GaAs as measured by time-resolved terahertz spectroscopy. <i>Physical Review B</i> , 2000 , 62, 15764-15777	3.3	379
2	Structure and dynamics of nonaqueous mixtures of dipolar liquids. I. Infrared and far-infrared spectroscopy. <i>Journal of Chemical Physics</i> , 2000 , 113, 3243-3248	3.9	49
1	Theory for determination of the low-frequency time-dependent response function in liquids using time-resolved terahertz pulse spectroscopy. <i>Journal of Chemical Physics</i> , 1999 , 110, 8589-8596	3.9	70