

Villy Sundström

List of Publications by Year in descending order

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83
papers

7,813
citations

53660

45
h-index

69108

77
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85
all docs

85
docs citations

85
times ranked

7620
citing authors

#	ARTICLE	IF	CITATIONS
1	Photosynthetic Light-Harvesting: Reconciling Dynamics and Structure of Purple Bacterial LH2 Reveals Function of Photosynthetic Unit. <i>Journal of Physical Chemistry B</i> , 1999, 103, 2327-2346.	1.2	768
2	Photosynthetic Light-Harvesting Pigment-Protein Complexes: Toward Understanding How and Why. <i>Accounts of Chemical Research</i> , 1996, 29, 381-389.	7.6	554
3	Biomimetic and Microbial Approaches to Solar Fuel Generation. <i>Accounts of Chemical Research</i> , 2009, 42, 1899-1909.	7.6	403
4	Exciton Delocalization Length in the B850 Antenna of <i>Rhodobacter sphaeroides</i> . <i>The Journal of Physical Chemistry</i> , 1996, 100, 10787-10792.	2.9	303
5	A low-spin Fe(III) complex with 100-ps ligand-to-metal charge transfer photoluminescence. <i>Nature</i> , 2017, 543, 695-699.	13.7	287
6	Ultrafast Electron Dynamics in Solar Energy Conversion. <i>Chemical Reviews</i> , 2017, 117, 10940-11024.	23.0	266
7	Luminescence and reactivity of a charge-transfer excited iron complex with nanosecond lifetime. <i>Science</i> , 2019, 363, 249-253.	6.0	249
8	Towards longer-lived metal-to-ligand charge transfer states of iron(II) complexes: an N-heterocyclic carbene approach. <i>Chemical Communications</i> , 2013, 49, 6412.	2.2	217
9	Effect of a conjugated carbonyl group on the photophysical properties of carotenoids. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 3009-3016.	1.3	215
10	Dynamics of Electron Injection and Recombination of Dye-Sensitized TiO ₂ Particles. <i>Journal of Physical Chemistry B</i> , 1998, 102, 10505-10514.	1.2	205
11	Intrinsic femtosecond charge generation dynamics in single crystal CH ₃ NH ₃ PbI ₃ . <i>Energy and Environmental Science</i> , 2015, 8, 3700-3707.	15.6	203
12	Fe(II)-Heterocyclic Carbene Complexes as Promising Photosensitizers. <i>Accounts of Chemical Research</i> , 2016, 49, 1477-1485.	7.6	197
13	Iron sensitizer converts light to electrons with 92% yield. <i>Nature Chemistry</i> , 2015, 7, 883-889.	6.6	193
14	Pump-probe spectroscopy of dissipative energy transfer dynamics in photosynthetic antenna complexes: A density matrix approach. <i>Journal of Chemical Physics</i> , 1997, 107, 4154-4164.	1.2	174
15	Temperature Dependence of Excitation Transfer in LH2 of <i>Rhodobacter sphaeroides</i> . <i>Journal of Physical Chemistry B</i> , 1997, 101, 10560-10567.	1.2	156
16	Fe(II)-Hexa(II)-Heterocyclic Carbene Complex with a 528 ps Metal-to-Ligand Charge-Transfer Excited-State Lifetime. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 459-463.	2.1	151
17	Femtobiology. <i>Annual Review of Physical Chemistry</i> , 2008, 59, 53-77.	4.8	139
18	Dynamics of Excited States of the Carotenoid Peridinin in Polar Solvents: Dependence on Excitation Wavelength, Viscosity, and Temperature. <i>Journal of Physical Chemistry B</i> , 2003, 107, 5339-5348.	1.2	138

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19	Role of Adsorption Structures of Zn-Porphyrin on TiO ₂ in Dye-Sensitized Solar Cells Studied by Sum Frequency Generation Vibrational Spectroscopy and Ultrafast Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2013, 117, 6066-6080.	1.5	137
20	Visualizing the non-equilibrium dynamics of photoinduced intramolecular electron transfer with femtosecond X-ray pulses. <i>Nature Communications</i> , 2015, 6, 6359.	5.8	134
21	A Heteroleptic Ferrous Complex with Mesoionic Bis(1,2,3-triazol-5-ylidene) Ligands: Taming the MLCT Excited State of Iron(II). <i>Chemistry - A European Journal</i> , 2015, 21, 3628-3639.	1.7	132
22	Exceptional Excited-State Lifetime of an Iron(II)-Heterocyclic Carbene Complex Explained. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 2066-2071.	2.1	125
23	Far-infrared response of free charge carriers localized in semiconductor nanoparticles. <i>Physical Review B</i> , 2009, 79, .	1.1	114
24	Manipulating charge transfer excited state relaxation and spin crossover in iron coordination complexes with ligand substitution. <i>Chemical Science</i> , 2017, 8, 515-523.	3.7	102
25	Mechanism of Charge Transfer and Recombination Dynamics in Organo Metal Halide Perovskites and Organic Electrodes, PCBM, and Spiro-OMeTAD: Role of Dark Carriers. <i>Journal of the American Chemical Society</i> , 2015, 137, 16043-16048.	6.6	101
26	Ultrafast Dynamics of Hole Injection and Recombination in Organometal Halide Perovskite Using Nickel Oxide as p-Type Contact Electrode. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1096-1101.	2.1	97
27	Supertrap at Work: Extremely Efficient Nonradiative Recombination Channels in MAPbI ₃ Perovskites Revealed by Luminescence Super-Resolution Imaging and Spectroscopy. <i>ACS Nano</i> , 2017, 11, 5391-5404.	7.3	92
28	Finding intersections between electronic excited state potential energy surfaces with simultaneous ultrafast X-ray scattering and spectroscopy. <i>Chemical Science</i> , 2019, 10, 5749-5760.	3.7	90
29	Spin-state studies with XES and RIXS: From static to ultrafast. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2013, 188, 166-171.	0.8	87
30	Femtosecond X-Ray Scattering Study of Ultrafast Photoinduced Structural Dynamics in Solvated [Co(terpy)] ²⁺ . <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1096-1101.	2.9	86
31	Observing Solvation Dynamics with Simultaneous Femtosecond X-ray Emission Spectroscopy and X-ray Scattering. <i>Journal of Physical Chemistry B</i> , 2016, 120, 1158-1168.	1.2	85
32	Vibrational wavepacket dynamics in Fe carbene photosensitizer determined with femtosecond X-ray emission and scattering. <i>Nature Communications</i> , 2020, 11, 634.	5.8	75
33	Atomistic characterization of the active-site solvation dynamics of a model photocatalyst. <i>Nature Communications</i> , 2016, 7, 13678.	5.8	74
34	Tuning proton coupled electron transfer from tyrosine: A competition between concerted and step-wise mechanisms. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 4851-4858.	1.3	72
35	Detailed Characterization of a Nanosecond-Lived Excited State: X-ray and Theoretical Investigation of the Quintet State in Photoexcited [Fe(terpy)] ²⁺ . <i>Journal of Physical Chemistry C</i> , 2015, 119, 5888-5902.	1.5	72
36	Unraveling Charge Carriers Generation, Diffusion, and Recombination in Formamidinium Lead Triiodide Perovskite Polycrystalline Thin Film. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 204-210.	2.1	67

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37	Coherent nuclear motions in light-harvesting pigments and dye molecules, probed by ultrafast spectroscopy. <i>Journal of Raman Spectroscopy</i> , 1995, 26, 513-522.	1.2	65
38	Visible light-driven water oxidation with a subporphyrin sensitizer and a water oxidation catalyst. <i>Chemical Communications</i> , 2016, 52, 13702-13705.	2.2	61
39	Photochemistry of Diiodomethane in Solution Studied by Femtosecond and Nanosecond Laser Photolysis. Formation and Dark Reactions of the CH ₂ I [•] Isomer Photoproduct and Its Role in Cyclopropanation of Olefins. <i>Journal of Physical Chemistry A</i> , 2004, 108, 237-249.	1.1	57
40	Ultrafast dynamics of singlet-singlet and singlet-triplet exciton annihilation in poly(3-(methylthio)thiophene) films. <i>Physical Review B</i> , 2007, 75, 044407.	1.1	57
41	Solvent control of charge transfer excited state relaxation pathways in [Fe(2,2'-bipyridine)(CN) ₄] ²⁺ . <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 4238-4249.	1.3	52
42	Photophysics and Photochemistry of Iron Carbene Complexes for Solar Energy Conversion and Photocatalysis. <i>Catalysts</i> , 2020, 10, 315.	1.6	52
43	Short-Range Exciton Couplings in LH2 Photosynthetic Antenna Proteins Studied by High Hydrostatic Pressure Absorption Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2001, 105, 8436-8444.	1.2	49
44	Toward Highlighting the Ultrafast Electron Transfer Dynamics at the Optically Dark Sites of Photocatalysts. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 1972-1976.	2.1	49
45	Tracking the picosecond deactivation dynamics of a photoexcited iron carbene complex by time-resolved X-ray scattering. <i>Chemical Science</i> , 2018, 9, 405-414.	3.7	49
46	Probing the Anisotropic Distortion of Photoexcited Spin Crossover Complexes with Picosecond X-ray Absorption Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2014, 118, 4536-4545.	1.5	44
47	Photofunctionality of iron(III) N-heterocyclic carbenes and related d transition metal complexes. <i>Coordination Chemistry Reviews</i> , 2021, 426, 213517.	9.5	44
48	Photodissociation Dynamics of Iodoform in Solution. <i>Journal of Physical Chemistry A</i> , 2003, 107, 211-217.	1.1	42
49	Ligand manipulation of charge transfer excited state relaxation and spin crossover in [Fe(2,2'-bipyridine) ₂ (CN) ₂]. <i>Structural Dynamics</i> , 2017, 4, 044030.	0.9	41
50	Hot Branching Dynamics in a Light-Harvesting Iron Carbene Complex Revealed by Ultrafast X-ray Emission Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 364-372.	7.2	41
51	Influence of the Protein Binding Site on the Excited States of Bacteriochlorophyll: DFT Calculations of B800 in LH2. <i>Journal of Physical Chemistry B</i> , 2002, 106, 11606-11612.	1.2	39
52	Ultrafast Study of the Photodissociation of Bromiodomethane in Acetonitrile upon 266 nm Excitation. <i>Journal of Physical Chemistry A</i> , 2002, 106, 5999-6005.	1.1	39
53	Excited-State Proton-Transfer Processes of DHICA Resolved: From Sub-Picoseconds to Nanoseconds. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 1383-1388.	2.1	37
54	Molecular and Interfacial Calculations of Iron(II) Light Harvesters. <i>ChemSusChem</i> , 2016, 9, 667-675.	3.6	36

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55	Ultrafast light-induced charge pair formation dynamics in poly[3-(2-ethoxy-5-octylphenyl)thiophene]. <i>Physical Review B</i> , 2004, 70, .	1.1	32
56	Ultrafast conductivity in a low-band-gap polyphenylene and fullerene blend studied by terahertz spectroscopy. <i>Physical Review B</i> , 2009, 79, .	1.1	32
57	Electron and Hole Contributions to the Terahertz Photoconductivity of a Conjugated Polymer: Fullerene Blend Identified. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 2442-2446.	2.1	32
58	Stepwise Charge Separation from a Ruthenium-Tyrosine Complex to a Nanocrystalline TiO ₂ Film. <i>Journal of Physical Chemistry B</i> , 2004, 108, 12904-12910.	1.2	28
59	Insights into the Charge Carrier Terahertz Mobility in Polyfluorenes from Large-Scale Atomistic Simulations and Time-Resolved Terahertz Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2012, 116, 19665-19672.	1.5	26
60	Sequential Proton-Coupled Electron Transfer Mediates Excited-State Deactivation of a Eumelanin Building Block. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1004-1008.	2.1	26
61	Photodissociation of CH ₂ ICH ₂ I, CF ₂ ICF ₂ I, and CF ₂ BrCF ₂ I in Solution. <i>Journal of Physical Chemistry A</i> , 2002, 106, 7090-7098.	1.1	23
62	The tunneling contributions to optical coherence in femtosecond pump-probe spectroscopy of a three level system. <i>Journal of Chemical Physics</i> , 1996, 104, 5734-5744.	1.2	21
63	Charge Separation and Recombination in a Photoconducting Polymer with Electron Donor-Acceptor Complexes. <i>Journal of Physical Chemistry B</i> , 1998, 102, 7365-7370.	1.2	21
64	Resolving the Turnover of Temperature Dependence of the Reaction Rate in Barrierless Isomerization. <i>Journal of Physical Chemistry B</i> , 1998, 102, 7651-7658.	1.2	19
65	Effects of Immersion Solvent on Photovoltaic and Photophysical Properties of Porphyrin-Sensitized Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 18689-18696.	4.0	18
66	Intermolecular hydrogen bonding between carotenoid and bacteriochlorophyll in LH2. <i>FEBS Letters</i> , 2001, 496, 36-39.	1.3	17
67	Photochemistry of Pheomelanin Building Blocks and Model Chromophores: Excited-State Intra- and Intermolecular Proton Transfer. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 2094-2100.	2.1	17
68	Laser generated 300 keV electron beams from water. <i>Laser and Particle Beams</i> , 2011, 29, 415-424.	0.4	15
69	Electronic structure and excited state properties of iron carbene photosensitizers – A combined X-ray absorption and quantum chemical investigation. <i>Chemical Physics Letters</i> , 2017, 683, 559-566.	1.2	14
70	Hot Branching Dynamics in a Light-Harvesting Iron Carbene Complex Revealed by Ultrafast X-ray Emission Spectroscopy. <i>Angewandte Chemie</i> , 2020, 132, 372-380.	1.6	14
71	Band-selective dynamics in charge-transfer excited iron carbene complexes. <i>Faraday Discussions</i> , 2019, 216, 191-210.	1.6	12
72	An ultrafast time-resolved anisotropy study of bacteriochlorophyll a in pyridine. <i>FEBS Letters</i> , 2000, 465, 107-109.	1.3	8

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73	Investigating ultrafast carrier dynamics in perovskite solar cells with an extended π -conjugated polymeric diketopyrrolopyrrole layer for hole transportation. RSC Advances, 2020, 10, 6618-6624.	1.7	7
74	Ultrafast Formation of Trinitromethanide (C(NO ₂) ₃ -) by Photoinduced Dissociative Electron Transfer and Subsequent Ion Pair Coupling Reaction in Acetonitrile and Dichloromethane. Journal of Physical Chemistry B, 2001, 105, 2027-2035.	1.2	5
75	DYNAMICS OF EXCITATION ENERGY TRANSFER IN MOLECULAR AGGREGATES OF CHEMICAL AND BIOLOGICAL RELEVANCE. , 1996, , 199-208.		3
76	Beating Darwin-Bragg losses in lab-based ultrafast x-ray experiments. Structural Dynamics, 2017, 4, 044011.	0.9	3
77	LIQUID PHASE PHOTOCHEMISTRY OF THE DI- AND POLYHALOGENATED ALKANES CONTAINING IODINE: FEMTOSECOND TRANSIENT ABSORPTION STUDY OF THE PHOTODISSOCIATION AND IN-CAGE ISOMERIZATION. , 2002, , .		3
78	Inside Back Cover: A Heteroleptic Ferrous Complex with Mesoionic Bis(1,2,3-triazol-5-ylidene) Ligands: Taming the MLCT Excited State of Iron(II) (Chem. Eur. J. 9/2015). Chemistry - A European Journal, 2015, 21, 3831-3831.	1.7	1
79	Understanding charge carrier dynamics in solar cell materials using time resolved terahertz spectroscopy. , 2015, , .		1
80	Molecular and Interfacial Calculations of Iron(II) Light Harvesters. ChemSusChem, 2016, 9, 652-652.	3.6	1
81	Ultrafast transport in dye sensitized ZnO nanotips investigated by terahertz spectroscopy. , 2008, , .		0
82	Charge carrier dynamics of quantum dot-sensitized ZnO nanowires probed by time resolved terahertz spectroscopy. , 2011, , .		0
83	LIGHT DRIVEN MULTISTEP ELECTRON TRANSFER IN A TYROSINE-RUTHENIUM-COMPLEX ANCHORED TO TiO ₂ NANOPARTICLES. , 2002, , .		0