Takashi Tachikawa

List of Publications by Citations

68 papers	3,973 citations	29 h-index	63 g-index
76 ext. papers	4,373 ext. citations	8.4 avg, IF	5.81 L-index

#	Paper	IF	Citations
68	Au/TiO2 superstructure-based plasmonic photocatalysts exhibiting efficient charge separation and unprecedented activity. *Journal of the American Chemical Society*, **2014**, 136, 458-65	16.4	566
67	Mechanistic Insight into the TiO2 Photocatalytic Reactions: Design of New Photocatalysts. *Journal of Physical Chemistry C*, **2007**, 111, 5259-5275	3.8	552
66	Evidence for crystal-face-dependent TiO2 photocatalysis from single-molecule imaging and kinetic analysis. *Journal of the American Chemical Society*, **2011**, 133, 7197-204	16.4	511
65	Single-molecule, single-particle fluorescence imaging of TiO2-based photocatalytic reactions. *Chemical Society Reviews*, **2010**, 39, 4802-19	58.5	142
64	Photocatalysis of Dye-Sensitized TiO2 Nanoparticles with Thin Overcoat of Al2O3: Enhanced Activity for H2 Production and Dechlorination of CCl4. *Journal of Physical Chemistry C*, **2009**, 113, 10603-10609	3.8	129
63	Superstructure of TiO2 Crystalline Nanoparticles Yields Effective Conduction Pathways for Photogenerated Charges. *Journal of Physical Chemistry Letters*, **2012**, 3, 1422-7	6.4	123
62	Superior Electron Transport and Photocatalytic Abilities of Metal-Nanoparticle-Loaded TiO2Superstructures. *Journal of Physical Chemistry C*, **2012**, 116, 25444-25453	3.8	119
61	A nanocomposite superstructure of metal oxides with effective charge transfer interfaces. *Nature Communications*, **2014**, 5, 3038	17.4	113
60	Photoinduced charge separation in titania nanotubes. *Journal of Physical Chemistry B*, **2006**, 110, 14055-9	3.4	110
59	Crystal-Face-Dependent Charge Dynamics on a BiVO4 Photocatalyst Revealed by Single-Particle Spectroelectrochemistry. *ACS Catalysis*, **2016**, 6, 2250-2256	13.1	100
58	Surface Charge Trapping in Organolead Halide Perovskites Explored by Single-Particle Photoluminescence Imaging. *Journal of Physical Chemistry Letters*, **2015**, 6, 3195-3201	6.4	95
57	Europium-based metal-organic framework as a photocatalyst for the one-electron oxidation of organic compounds. *Langmuir*, **2010**, 26, 10437-43	4	91
56	Role of Interparticle Charge Transfers in Agglomerated Photocatalyst Nanoparticles: Demonstration in Aqueous Suspension of Dye-Sensitized TiO2. *Journal of Physical Chemistry Letters* , **2013**, 4, 189-94	6.4	87
55	Exploring the spatial distribution and transport behavior of charge carriers in a single titania nanowire. *Journal of the American Chemical Society*, **2009**, 131, 8485-95	16.4	82
54	Single-molecule observation of photocatalytic reaction in TiO2 nanotube: importance of molecular transport through porous structures. *Journal of the American Chemical Society*, **2009**, 131, 934-6	16.4	78
53	Metal oxide mesocrystals with tailored structures and properties for energy conversion and storage applications. *NPG Asia Materials*, **2014**, 6, e100-e100	10.3	77
52	Real-Time Single-Molecule Imaging of the Spatial and Temporal Distribution of Reactive Oxygen Species with Fluorescent Probes: Applications to TiO2 Photocatalysts. *Journal of Physical Chemistry C*, **2008**, 112, 1048-1059	3.8	77

51	Topotactic Epitaxy of SrTiO Mesocrystal Superstructures with Anisotropic Construction for Efficient Overall Water Splitting. *Angewandte Chemie - International Edition*, **2017**, 56, 5299-5303	16.4	74
50	Super-resolution mapping of reactive sites on titania-based nanoparticles with water-soluble fluorogenic probes. *ACS Nano*, **2013**, 7, 263-75	16.7	70
49	Efficient charge separation on 3D architectures of TiO2 mesocrystals packed with a chemically exfoliated MoS2 shell in synergetic hydrogen evolution. *Chemical Communications*, **2015**, 51, 7187-90	5.8	68
48	Single-molecule detection of airborne singlet oxygen. *Journal of the American Chemical Society*, **2006**, 128, 16430-1	16.4	62
47	Interfacial oxygen vacancies yielding long-lived holes in hematite mesocrystal-based photoanodes. *Nature Communications*, **2019**, 10, 4832	17.4	61
46	Efficient charge separation and photooxidation on cobalt phosphate-loaded TiO2 mesocrystal superstructures. *Journal of Materials Chemistry A*, **2014**, 2, 3381-3388	13	46
45	In Situ Fluorine Doping of TiO2 Superstructures for Efficient Visible-Light Driven Hydrogen Generation. *ChemSusChem*, **2016**, 9, 617-23	8.3	46
44	Singlet-Fission-Born Quintet State: Sublevel Selections and Trapping by Multiexciton Thermodynamics. *Journal of Physical Chemistry Letters*, **2018**, 9, 5855-5861	6.4	39
43	Geometries, Electronic Couplings, and Hole Dissociation Dynamics of Photoinduced Electron-Hole Pairs in Polyhexylthiophene-Fullerene Dyads Rigidly Linked by Oligophenylenes. *Journal of the American Chemical Society*, **2016**, 138, 5879-85	16.4	37
42	Photocatalytic oxidation surfaces on anatase TiO2 crystals revealed by single-particle chemiluminescence imaging. *Chemical Communications*, **2012**, 48, 3300-2	5.8	34
41	Efficient and versatile mechanochromic luminescence of phenanthroimidazolylbenzothiadiazoles: tricolor switching and directional control over the chromism. *Journal of Materials Chemistry C*, **2019**, 7, 4988-4998	7.1	29
40	Single-molecule, single-particle approaches for exploring the structure and kinetics of nanocatalysts. *Langmuir*, **2012**, 28, 8933-43	4	29
39	Single-molecule fluorescence imaging of the remote TiO2 photocatalytic oxidation. *Journal of Physical Chemistry B*, **2005**, 109, 23138-40	3.4	29
38	Selective photoredox activity on specific facet-dominated TiO2 mesocrystal superstructures incubated with directed nanocrystals. *Applied Catalysis B: Environmental*, **2015**, 176-177, 678-686	21.8	26
37	Ultra-Narrow Depletion Layers in a Hematite Mesocrystal-Based Photoanode for Boosting Multihole Water Oxidation. *Angewandte Chemie - International Edition*, **2020**, 59, 9047-9054	16.4	26
36	The Development of Functional Mesocrystals for Energy Harvesting, Storage, and Conversion. *Chemistry - A European Journal*, **2018**, 24, 6295-6307	4.8	22
35	Molecular-Level Understanding of the Photocatalytic Activity Difference between Anatase and Rutile Nanoparticles. *Angewandte Chemie*, **2014**, 126, 14260-14265	3.6	22
34	Direct Observation of Charge Collection at Nanometer-Scale Iodide-Rich Perovskites during Halide Exchange Reaction on CHNHPbBr. *Journal of Physical Chemistry Letters*, **2017**, 8, 1724-1728	6.4	21

33	Plasmon-induced spatial electron transfer between single Au nanorods and ALD-coated TiO2: dependence on TiO2 thickness. *Chemical Communications*, **2015**, 51, 14373-6	5.8	16
32	Atomic Layer Deposition-Confined Nonstoichiometric TiO2 Nanocrystals with Tunneling Effects for Solar Driven Hydrogen Evolution. *Journal of Physical Chemistry Letters*, **2016**, 7, 1173-9	6.4	15
31	Transient Electron Spin Polarization Imaging of Heterogeneous Charge-Separation Geometries at Bulk-Heterojunction Interfaces in Organic Solar Cells. *Journal of Physical Chemistry C*, **2019**, 123, 13472-13481	3.8	14
30	Spatial control of protein binding on lipid bimembrane using photoeliminative linker. *Langmuir*, **2008**, 24, 6425-8	4	14
29	Regulated Electron Tunneling of Photoinduced Primary Charge-Separated State in the Photosystem II Reaction Center. *Journal of Physical Chemistry Letters*, **2017**, 8, 1179-1184	6.4	12
28	Controlled Synthesis of Gold Nanoparticles on Fluorescent Nanodiamond via Electron-Beam-Induced Reduction Method for Dual-Modal Optical and Electron Bioimaging. *ACS Applied Nano Materials*, **2018**, 1, 355-363	5.6	12
27	Charge-Transfer Character Drives Möbius Antiaromaticity in the Excited Triplet State of Twisted [28]Hexaphyrin. *Journal of Physical Chemistry Letters*, **2018**, 9, 2685-2690	6.4	12
26	Topotactic Epitaxy of SrTiO3 Mesocrystal Superstructures with Anisotropic Construction for Efficient Overall Water Splitting. *Angewandte Chemie*, **2017**, 129, 5383-5387	3.6	11
25	Rapid formation of small mixed-valence luminescent silver clusters via cation-coupled electron-transfer in a redox-active porous ionic crystal based on dodecamolybdophosphate. *Nanoscale*, **2019**, 11, 5460-5466	7.7	8
24	Charge Carrier Dynamics in Sr-Doped NaTaO3 Photocatalysts Revealed by Deep Ultraviolet Single-Particle Microspectroscopy. *Journal of Physical Chemistry C*, **2019**,	3.8	6
23	TiO superstructures with oriented nanospaces: a strategy for efficient and selective photocatalysis. *Nanoscale*, **2020**, 12, 6420-6428	7.7	6
22	Multi-color mechanochromic luminescence of three polymorphic crystals of a donor–acceptor-type benzothiadiazole derivative. *CrystEngComm*, **2021**, 23, 5899-5907	3.3	5
21	Several Orders of Magnitude Difference in Charge-Transfer Kinetics Induced by Localized Trapped Charges on Mixed-Halide Perovskites. *ACS Applied Materials & Interfaces*, **2018**, 10, 37057-37066	9.5	5
20	In Situ Exploration of Stimulus-Induced Emission Changes in Mechanochromic Dyes. *Journal of Physical Chemistry Letters*, **2021**, 12, 7826-7831	6.4	5
19	Mechanochromic Luminescence (MCL) of Purely Organic Two-Component Dyes: Wide-Range MCL over 300 nm and Two-Step MCL by Charge-Transfer Complexation. *Chemistry - A European Journal*, **2021**, 27, 13982-13990	4.8	5
18	Mechanistic Insights into Photochemical Reactions on CH3NH3PbBr3 Perovskite Nanoparticles from Single-Particle Photoluminescence Spectroscopy. *ChemNanoMat*, **2019**, 5, 340-345	3.5	4
17	Manipulation of charge carrier flow in BiNbOCl nanoplate photocatalyst with metal loading.. *Chemical Science*, **2022**, 13, 3118-3128	9.4	4
16	Organic photostimulated luminescence associated with persistent spin-correlated radical pairs. *Communications Materials*, **2021**, 2,	6	4

15	Mechanochromic Luminescence and Solid-State Circularly Polarized Luminescence of a Chiral Diamine-Linked Bispyrene. *ChemPhotoChem*,	3.3	3
14	Time Resolved EPR Study on the Photoinduced Long-Range Charge-Separated State in Protein: Electron Tunneling Mediated by Arginine Residue in Human Serum Albumin. *Journal of Physical Chemistry B*, **2016**, 120, 4365-72	3.4	3
13	Formation of Mixed-Valence Luminescent Silver Clusters via Cation-Coupled Electron-Transfer in a Redox-Active Ionic Crystal Based on a Dawson-type Polyoxometalate with Closed Pores. *European Journal of Inorganic Chemistry*, **2021**, 2021, 1531-1535	2.3	3
12	Structural Dynamics of Lipid Bilayer Membranes Explored by Magnetic Field Effect Based Fluorescence Microscopy. *Journal of Physical Chemistry B*, **2019**, 123, 10896-10902	3.4	2
11	In Situ Exploration of the Structural Transition during Morphology- and Efficiency-Conserving Halide Exchange on a Single Perovskite Nanocrystal. *Angewandte Chemie - International Edition*, **2021**, 60, 2548-2553	16.4	2
10	Binary dopant segregation enables hematite-based heterostructures for highly efficient solar HO synthesis.. *Nature Communications*, **2022**, 13, 1499	17.4	2
9	Terahertz Spectroscopic Measurements and Solid-State Density Functional Calculations on CH3NH3PbBr3 Perovskites: Short-Range Order of Methylammonium. *Journal of Physical Chemistry C*, **2022**, 126, 339-348	3.8	2
8	Mechano- and Thermo-responsive Luminescence of Crystalline Thienylbenzothiadiazole Derivatives: Stepwise Hypsochromic Switching of Near-Infrared Emission. *Crystal Growth and Design* , **2022**, 22, 547-558	3.5	2
7	Ultra-Narrow Depletion Layers in a Hematite Mesocrystal-Based Photoanode for Boosting Multihole Water Oxidation. *Angewandte Chemie*, **2020**, 132, 9132-9139	3.6	1
6	In Situ Exploration of the Structural Transition during Morphology- and Efficiency-Conserving Halide Exchange on a Single Perovskite Nanocrystal. *Angewandte Chemie*, **2021**, 133, 2578-2583	3.6	1
5	Time-Resolved EPR Study on Singlet-Fission Induced Quintet Generation and Subsequent Triplet Dissociation in TIPS-Phenyl-Tetracene Aggregates. *Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi]*, **2018**, 31, 163-167	0.7	1
4	Dynamic Symmetry Conversion in Mixed-Halide Hybrid Perovskite upon Illumination. *ACS Energy Letters*,3858-3863	20.1	0
3	Innentitelbild: Ultra-Narrow Depletion Layers in a Hematite Mesocrystal-Based Photoanode for Boosting Multihole Water Oxidation (Angew. Chem. 23/2020). *Angewandte Chemie*, **2020**, 132, 8810-8810	3.6	
2	Unraveling Hidden Correlations between Molecular Diffusivity and Reactivity in Ruthenium Complex-Modified Mesoporous Silica. *Journal of Physical Chemistry C*, **2020**, 124, 21502-21511	3.8	
1	Mechanochromic Luminescence and Solid-State Circularly Polarized Luminescence of a Chiral Diamine-Linked Bispyrene. *ChemPhotoChem*, **2021**, 5, 878	3.3	