Partha Maity

List of Publications by Year in descending order

81 papers	3,945 citations	136950 32 h-index	128289 60 g-index
82 all docs	82 docs citations	82 times ranked	5543 citing authors

#	Article	IF	Citations
1	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. Nature Energy, 2020, 5, 131-140.	39.5	894
2	High-speed colour-converting photodetector with all-inorganic CsPbBr3 perovskite nanocrystals for ultraviolet light communication. Light: Science and Applications, 2019, 8, 94.	16.6	225
3	Molecular behavior of zero-dimensional perovskites. Science Advances, 2017, 3, e1701793.	10.3	187
4	Low-Temperature Crystallization Enables 21.9% Efficient Single-Crystal MAPbI₃ Inverted Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 657-662.	17.4	171
5	Extremely reduced dielectric confinement in two-dimensional hybrid perovskites with large polar organics. Communications Physics, 2018, 1, .	5.3	135
6	Assembly of Atomically Precise Silver Nanoclusters into Nanocluster-Based Frameworks. Journal of the American Chemical Society, 2019, 141, 9585-9592.	13.7	132
7	Tuning Hot Carrier Cooling Dynamics by Dielectric Confinement in Two-Dimensional Hybrid Perovskite Crystals. ACS Nano, 2019, 13, 12621-12629.	14.6	96
8	Layer-Dependent Rashba Band Splitting in 2D Hybrid Perovskites. Chemistry of Materials, 2018, 30, 8538-8545.	6.7	92
9	CsMnBr₃: Lead-Free Nanocrystals with High Photoluminescence Quantum Yield and Picosecond Radiative Lifetime. , 2021, 3, 290-297.		86
10	A Titanium Metalâ€“Organic Framework with Visibleâ€Lightâ€Responsive Photocatalytic Activity. Angewandte Chemie - International Edition, 2020, 59, 13468-13472.	13.8	84
11	Linked Nickel Oxide/Perovskite Interface Passivation for Highâ€Performance Textured Monolithic Tandem Solar Cells. Advanced Energy Materials, 2021, 11, 2101662.	19.5	77
12	Study of the Bulk Charge Carrier Dynamics in Anatase and Rutile TiO₂ Single Crystals by Femtosecond Time-Resolved Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 8925-8932.	3.1	68
13	Ultrafast Charge Carrier Delocalization in CdSe/CdS Quasi-Type II and CdS/CdSe Inverted Type I Coreâ€“Shell: A Structural Analysis through Carrier-Quenching Study. Journal of Physical Chemistry C, 2015, 119, 26202-26211.	3.1	62
14	Efficient Visibleâ€Light Driven Photothermal Conversion of CO₂ to Methane by Nickel Nanoparticles Supported on Barium Titanate. Advanced Functional Materials, 2021, 31, 2008244.	14.9	60
15	Lecithin Capping Ligands Enable Ultrastable Perovskite-Phase CsPbI₃ Quantum Dots for Rec. 2020 Bright-Red Light-Emitting Diodes. Journal of the American Chemical Society, 2022, 144, 13302-13310.	13.7	59
16	Electron Trap to Electron Storage Center in Specially Aligned Mn-Doped CdSe d-Dot: A Step Forward in the Design of Higher Efficient Quantum-Dot Solar Cell. Journal of Physical Chemistry Letters, 2014, 5, 2836-2842.	4.6	58
17	Why are Hot Holes Easier to Extract than Hot Electrons from Methylammonium Lead Iodide Perovskite?. Advanced Energy Materials, 2019, 9, 1900084.	19.5	54
18	Ultrafast Hole- and Electron-Transfer Dynamics in CdSâ€“Dibromofluorescein (DBF) Supersensitized Quantum Dot Solar Cell Materials. Journal of Physical Chemistry Letters, 2013, 4, 4020-4025.	4.6	53

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19	Cascading electron and hole transfer dynamics in a CdS/CdTe coreâ€“shell sensitized with bromo-pyrogallol red (Br-PGR): slow charge recombination in type II regime. Nanoscale, 2015, 7, 2698-2707.	5.6	51
20	Multiple Charge Transfer Dynamics in Colloidal CsPbBr₃ Perovskite Quantum Dots Sensitized Molecular Adsorbate. Journal of Physical Chemistry C, 2016, 120, 18348-18354.	3.1	51
21	Dark Self-Healing-Mediated Negative Photoconductivity of a Lead-Free Cs₃Bi₂Cl₉ Perovskite Single Crystal. Journal of Physical Chemistry Letters, 2021, 12, 2286-2292.	4.6	51
22	[Cu₁₅(PPh₃)₆(PET)₁₃]²⁺: a Copper Nanocluster with Crystallization Enhanced Photoluminescence. Small, 2021, 17, e2006839.	10.0	50
23	Subpicosecond Exciton Dynamics and Biexcitonic Feature in Colloidal CuInS₂ Nanocrystals: Role of Inâ€“Cu Antisite Defects. Journal of Physical Chemistry Letters, 2015, 6, 3458-3465.	4.6	45
24	Sunlight-Driven Biomass Photorefinery for Coproduction of Sustainable Hydrogen and Value-Added Biochemicals. ACS Sustainable Chemistry and Engineering, 2020, 8, 15772-15781.	6.7	43
25	Slow Electron Cooling Dynamics Mediated by Electronâ€“Hole Decoupling in Highly Luminescent CdS_xSe_{1â€“x} Alloy Quantum Dots. Journal of Physical Chemistry C, 2015, 119, 10785-10792.	3.1	41
26	[Cu₂₃(PhSe)₁₆(Ph₃P)₈(H)₆]Â·BF₄: Atomic-Level Insights into Cuboidal Polyhydrido Copper Nanoclusters and Their Quasi-simple Cubic Self-Assembly. , 2021, 3, 90-99.		41
27	Manipulation of hot carrier cooling dynamics in two-dimensional Dionâ€“Jacobson hybrid perovskites via Rashba band splitting. Nature Communications, 2021, 12, 3995.	12.8	41
28	Twisted BODIPY derivative: intersystem crossing, electron spin polarization and application as a novel photodynamic therapy reagent. Physical Chemistry Chemical Physics, 2021, 23, 8641-8652.	2.8	40
29	Comprehensive Study of All-Solid-State Z-Scheme Photocatalytic Systems of ZnO/Pt/CdZnS. ACS Omega, 2017, 2, 4828-4837.	3.5	38
30	Layer-Dependent Coherent Acoustic Phonons in Two-Dimensional Ruddlesdenâ€“Popper Perovskite Crystals. Journal of Physical Chemistry Letters, 2019, 10, 5259-5264.	4.6	38
31	Hot-electron transfer from the semiconductor domain to the metal domain in CdSe@CdS{Au} nano-heterostructures. Nanoscale, 2017, 9, 9723-9731.	5.6	37
32	Visible-Light Copper Nanocluster Catalysis for the Câ€“N Coupling of Aryl Chlorides at Room Temperature. Journal of the American Chemical Society, 2022, 144, 12052-12061.	13.7	37
33	Lattice-Strain-Induced Slow Electron Cooling Due to Quasi-Type-II Behavior in Type-I CdTe/ZnS Nanocrystals. Journal of Physical Chemistry C, 2015, 119, 8410-8416.	3.1	36
34	Observation of Negative Photoconductivity in Lead-Free Cs₃Bi₂Br₉Perovskite Single Crystal. ACS Photonics, 2021, 8, 2473-2480.	6.6	36
35	Extensive Reduction in Back Electron Transfer in Twisted Intramolecular Chargeâ€Transfer (TICT) Coumarinâ€Dyeâ€Sensitized TiO₂ Nanoparticles/Film: A Femtosecond Transient Absorption Study. Chemistry - A European Journal, 2014, 20, 3510-3519.	3.3	34
36	Surface Effect on 2D Hybrid Perovskite Crystals: Perovskites Using an Ethanolamine Organic Layer as an Example. Advanced Materials, 2018, 30, e1804372.	21.0	34

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37	Impressive near-infrared brightness and singlet oxygen generation from strategic lanthanideâ€“porphyrin double-decker complexes in aqueous solution. Light: Science and Applications, 2019, 8, 46.	16.6	33
38	Concurrent Ultrafast Electron- and Hole-Transfer Dynamics in CsPbBr₃ Perovskite and Quantum Dots. ACS Omega, 2018, 3, 2706-2714.	3.5	32
39	There is plenty of room at the top: generation of hot charge carriers and their applications in perovskite and other semiconductor-based optoelectronic devices. Light: Science and Applications, 2021, 10, 174.	16.6	32
40	A Titanium Metalâ€“Organic Framework with Visibleâ€Lightâ€Responsive Photocatalytic Activity. Angewandte Chemie, 2020, 132, 13570-13574.	2.0	28
41	Exciton Separation in CdS Supraparticles upon Conjugation with Graphene Sheets. Journal of Physical Chemistry C, 2017, 121, 6581-6588.	3.1	27
42	Perovskite-Based Artificial Multiple Quantum Wells. Nano Letters, 2019, 19, 3535-3542.	9.1	27
43	Super Sensitization: Grand Charge (Hole/Electron) Separation in ATC Dye Sensitized CdSe, CdSe/ZnS Typeâ€I, and CdSe/CdTe Typeâ€II Coreâ€“Shell Quantum Dots. Chemistry - A European Journal, 2014, 20, 13305-13313.	3.3	26
44	Enhanced Charge Separation in an Epitaxial Metalâ€“Semiconductor Nanohybrid Material Anchored with an Organic Molecule. Journal of Physical Chemistry C, 2015, 119, 22181-22189.	3.1	26
45	Intraband Electron Cooling Mediated Unprecedented Photocurrent Conversion Efficiency of CdS_xSe_{1â€“x} Alloy QDs: Direct Correlation between Electron Cooling and Efficiency. Journal of Physical Chemistry C, 2016, 120, 21309-21316.	3.1	25
46	Electron Transfer of the Metal/Semiconductor System in Photocatalysis. Journal of Physical Chemistry C, 2018, 122, 16779-16787.	3.1	24
47	Ultrafast Electron Injection, Hole Transfer, and Charge Recombination Dynamics in CdSe QD Super-Sensitized Re(I)â€“Polypyridyl Complexes with Catechol and Resorcinol Moiety: Effect of Coupling. Journal of Physical Chemistry C, 2015, 119, 3522-3529.	3.1	21
48	Air-Resistant Lead Halide Perovskite Nanocrystals Embedded into Polyimide of Intrinsic Microporosity. Energy Material Advances, 2021, 2021, .	11.0	21
49	Ultrafast Electron-Transfer and -Trapping Dynamics in the Inter-Band-Gap States of ZrO₂ Nanoparticles Sensitized by Baicalein. Journal of Physical Chemistry C, 2013, 117, 17531-17539.	3.1	17
50	Charge Delocalization in the Cascade Band Structure CdS/CdSe and CdS/CdTe Coreâ€“Shell Sensitized with Re(I)â€“Polypyridyl Complex. Journal of Physical Chemistry C, 2016, 120, 10051-10061.	3.1	17
51	Tuning the Charge Carrier Dynamics via Interfacial Alloying in Core/Shell CdTe/ZnSe NCs. Journal of Physical Chemistry C, 2016, 120, 1918-1925.	3.1	17
52	Restriction of Molecular Rotation and Intramolecular Charge Distribution in the Photoexcited State of Coumarin Dyes on Gold Nanoparticle Surface. Journal of Physical Chemistry C, 2015, 119, 2046-2052.	3.1	16
53	[Ag₉(1,2-BDT)₆]^{3â€“}: How Square-Pyramidal Building Blocks Self-Assemble into the Smallest Silver Nanocluster. Inorganic Chemistry, 2021, 60, 4306-4312.	4.0	16
54	Chromophore Orientation-Dependent Photophysical Properties of Pyreneâ€“Naphthalimide Compact Electron Donorâ€“Acceptor Dyads: Electron Transfer and Intersystem Crossing. Journal of Physical Chemistry B, 2021, 125, 9244-9259.	2.6	16

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55	Tunable Selectivity in CO₂ Photoâ€Thermal Reduction by Perovskiteâ€Supported Pd Nanoparticles. ChemSusChem, 2021, 14, 5525-5533.	6.8	15
56	Ultrafast transient infrared spectroscopy for probing trapping states in hybrid perovskite films. Communications Chemistry, 2022, 5, .	4.5	14
57	Metalâ€“Ligand Complexâ€Induced Ultrafast Chargeâ€Carrier Relaxation and Chargeâ€Transfer Dynamics in CdX (X=S, Se, Te) Quantum Dots Sensitized with Nitrocatechol. Chemistry - A European Journal, 2017, 23, 10590-10596.	3.3	13
58	Cascade Electron Transfer Induces Slow Hot Carrier Relaxation in CsPbBr₃ Asymmetric Quantum Wells. ACS Energy Letters, 2021, 6, 2602-2609.	17.4	13
59	Demonstrating the role of anchoring functionality in interfacial electron transfer dynamics in the newly synthesized BODIPYâ€“TiO₂ nanostructure composite. New Journal of Chemistry, 2017, 41, 5215-5224.	2.8	12
60	Engineering Bandâ€Type Alignment in CsPbBr₃ Perovskiteâ€Based Artificial Multiple Quantum Wells. Advanced Materials, 2021, 33, e2005166.	21.0	12
61	Phonon-Mediated Slow Hot Carrier Dynamics in Lead-Free Cs₃Bi₂I₉ Perovskite Single Crystal. Journal of Physical Chemistry Letters, 2022, 13, 5260-5266.	4.6	12
62	Protonâ€Coupled Electronâ€Transfer Processes in Ultrafast Time Domain: Evidence for Effects of Hydrogenâ€Bond Stabilization on Photoinduced Electron Transfer. Chemistry - A European Journal, 2017, 23, 3455-3465.	3.3	11
63	Controllable Charge-Transfer Mechanism at Pushâ€“Pull Porphyrin/Nanocarbon Interfaces. Journal of Physical Chemistry C, 2019, 123, 14283-14291.	3.1	10
64	Insight into the role of reduced graphene oxide in enhancing photocatalytic hydrogen evolution in disordered carbon nitride. Physical Chemistry Chemical Physics, 2022, 24, 11213-11221.	2.8	9
65	Restriction of Molecular Twisting on a Gold Nanoparticle Surface. Chemistry - A European Journal, 2015, 21, 5704-5708.	3.3	8
66	The impact of Au doping on the charge carrier dynamics at the interfaces between cationic porphyrin and silver nanoclusters. Chemical Physics Letters, 2017, 683, 393-397.	2.6	8
67	Ultrathinâ€Film Titania Photocatalyst on Nanocavity for CO 2 Reduction with Boosted Catalytic Efficiencies. Global Challenges, 2018, 2, 1800032.	3.6	7
68	Impact of FRET between Molecular Aggregates and Quantum Dots. Chemistry - an Asian Journal, 2019, 14, 597-605.	3.3	7
69	Strategies for extending charge separation in colloidal nanostructured quantum dot materials. Physical Chemistry Chemical Physics, 2019, 21, 23283-23300.	2.8	5
70	Interface Engineering of Biâ€Fluorescence Molecules for Highâ€Performance Data Encryption and Ultralow UVâ€Light Detection. Advanced Optical Materials, 2022, 10, .	7.3	5
71	S2 and mixed aggregate state emission of thiophene-BODIPY. Journal of Photochemistry and Photobiology A: Chemistry, 2019, 368, 147-152.	3.9	4
72	Effect of Molecular Coupling on Ultrafast Electronâ€Transfer and Chargeâ€Recombination Dynamics in a Wideâ€Gap ZnS Nanoaggregate Sensitized by Triphenyl Methane Dyes. ChemPhysChem, 2016, 17, 724-730.	2.1	3

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73	2D Layered Perovskites: Surface Effect on 2D Hybrid Perovskite Crystals: Perovskites Using an Ethanolamine Organic Layer as an Example (Adv. Mater. 46/2018). Advanced Materials, 2018, 30, 1870351.	21.0	3
74	Impact of the chemical nature and position of spacers on controlling the optical properties of silicon quantum dots. Physical Chemistry Chemical Physics, 2019, 21, 17096-17108.	2.8	3
75	Relationship between the Photocatalytic Hydrogen Ion Reduction and Charge Carrier Dynamics of Pt/Cd_{1â€“x}Ni_xS Catalysts. Journal of Physical Chemistry C, 2019, 123, 24051-24061.	3.1	3
76	Impact of one step alloying on the carrier relaxation and charge separation dynamics of CdxZn1-xSe graded nanocrystals. Journal of Photochemistry and Photobiology A: Chemistry, 2020, 388, 112131.	3.9	3
77	Photothermal Catalysis: Efficient Visibleâ€Light Driven Photothermal Conversion of CO₂ to Methane by Nickel Nanoparticles Supported on Barium Titanate (Adv. Funct. Mater. 8/2021). Advanced Functional Materials, 2021, 31, 2170053.	14.9	3
78	Linked Nickel Oxide/Perovskite Interface Passivation for Highâ€Performance Textured Monolithic Tandem Solar Cells (Adv. Energy Mater. 40/2021). Advanced Energy Materials, 2021, 11, 2170160.	19.5	2
79	Slow Electron Cooling Dynamics of Highly Luminescent CdSxSe1-x Alloy Quantum Dot. Springer Proceedings in Physics, 2015, , 275-278.	0.2	1
80	High-Speed Ultraviolet-C Photodetector Based on Frequency Down-Converting CsPbBr3 Perovskite Nanocrystals on Silicon Platform. , 2019, , .		1
81	Boosted CO2 reduction using ultra-thin TiO2 photocatalyst films on nanocavities. , 2019, , .		0