

Pawan Kumar

List of Publications by Year in descending order

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86
papers

4,107
citations

94269

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118652

62
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90
all docs

90
docs citations

90
times ranked

5378
citing authors

#	ARTICLE	IF	CITATIONS
1	C ₃ N ₅ : A Low Bandgap Semiconductor Containing an Azo-Linked Carbon Nitride Framework for Photocatalytic, Photovoltaic and Adsorbent Applications. Journal of the American Chemical Society, 2019, 141, 5415-5436.	6.6	464
2	Reduced graphene oxide@CuO nanocomposites for photocatalytic conversion of CO ₂ into methanol under visible light irradiation. Applied Catalysis B: Environmental, 2016, 181, 352-362.	10.8	286
3	Sunlight-driven water-splitting using two-dimensional carbon based semiconductors. Journal of Materials Chemistry A, 2018, 6, 12876-12931.	5.2	215
4	Mixed-Valence Single-Atom Catalyst Derived from Functionalized Graphene. Advanced Materials, 2019, 31, e1900323.	11.1	129
5	Cobalt Phthalocyanine Immobilized on Graphene Oxide: An Efficient Visible-Active Catalyst for the Photoreduction of Carbon Dioxide. Chemistry - A European Journal, 2014, 20, 6154-6161.	1.7	126
6	High rate CO ₂ photoreduction using flame annealed TiO ₂ nanotubes. Applied Catalysis B: Environmental, 2019, 243, 522-536.	10.8	123
7	Nickel Decorated on Phosphorous-Doped Carbon Nitride as an Efficient Photocatalyst for Reduction of Nitrobenzenes. Nanomaterials, 2016, 6, 59.	1.9	121
8	Enhanced charge separation in g-C ₃ N ₄ @BiOI heterostructures for visible light driven photoelectrochemical water splitting. Nanoscale Advances, 2019, 1, 1460-1471.	2.2	115
9	Core-shell structured reduced graphene oxide wrapped magnetically separable rGO@CuZnO@Fe ₃ O ₄ microspheres as superior photocatalyst for CO ₂ reduction under visible light. Applied Catalysis B: Environmental, 2017, 205, 654-665.	10.8	111
10	Optical control of selectivity of high rate CO ₂ photoreduction via interband- or hot electron Z-scheme reaction pathways in Au-TiO ₂ plasmonic photonic crystal photocatalyst. Applied Catalysis B: Environmental, 2020, 267, 118644.	10.8	92
11	Boosting Photocatalytic Activity Using Carbon Nitride Based 2D/2D van der Waals Heterojunctions. Chemistry of Materials, 2021, 33, 9012-9092.	3.2	88
12	PEGylated magnetic nanoparticles (PEG@Fe ₃ O ₄) as cost effective alternative for oxidative cyanation of tertiary amines via C-H activation. Applied Catalysis A: General, 2015, 498, 25-31.	2.2	81
13	A [Fe(bpy) ₃] ²⁺ grafted graphitic carbon nitride hybrid for visible light assisted oxidative coupling of benzylamines under mild reaction conditions. Green Chemistry, 2016, 18, 2514-2521.	4.6	78
14	Photocatalytic reduction of carbon dioxide to methanol using a ruthenium trinuclear polyazine complex immobilized on graphene oxide under visible light irradiation. Journal of Materials Chemistry A, 2014, 2, 11246.	5.2	74
15	Visible light assisted photocatalytic reduction of CO ₂ using a graphene oxide supported heteroleptic ruthenium complex. Green Chemistry, 2015, 17, 1605-1609.	4.6	74
16	Metal-organic hybrid: Photoreduction of CO ₂ using graphitic carbon nitride supported heteroleptic iridium complex under visible light irradiation. Carbon, 2017, 123, 371-379.	5.4	74
17	Arrays of TiO ₂ nanorods embedded with fluorine doped carbon nitride quantum dots (CNFQDs) for visible light driven water splitting. Carbon, 2018, 137, 174-187.	5.4	70
18	Hexamolybdenum clusters supported on graphene oxide: Visible-light induced photocatalytic reduction of carbon dioxide into methanol. Carbon, 2015, 94, 91-100.	5.4	69

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19	Visible light driven photocatalytic oxidation of thiols to disulfides using iron phthalocyanine immobilized on graphene oxide as a catalyst under alkali free conditions. RSC Advances, 2014, 4, 50331-50337.	1.7	66
20	Coproduction of hydrogen and lactic acid from glucose photocatalysis on band-engineered Zn _{1-x} Cd _x S homojunction. IScience, 2021, 24, 102109.	1.9	61
21	Visible Light Assisted Photocatalytic [3 + 2] Azide-Alkyne "Click" Reaction for the Synthesis of 1,4-Substituted 1,2,3-Triazoles Using a Novel Bimetallic Ru-Mn Complex. ACS Sustainable Chemistry and Engineering, 2016, 4, 69-75.	3.2	56
22	A novel Ru/TiO ₂ hybrid nanocomposite catalyzed photoreduction of CO ₂ to methanol under visible light. Nanoscale, 2015, 7, 15258-15267.	2.8	55
23	Photoreduction of CO ₂ to methanol with hexanuclear molybdenum [Mo ₆ Br ₁₄] ²⁺ cluster units under visible light irradiation. RSC Advances, 2014, 4, 10420.	1.7	50
24	Visible light-induced surface initiated atom transfer radical polymerization of methyl methacrylate on titania/reduced graphene oxide nanocomposite. RSC Advances, 2015, 5, 21189-21196.	1.7	49
25	Consistently High V_{oc} Values in p-i-n Type Perovskite Solar Cells Using Ni ³⁺ -Doped NiO Nanomesh as the Hole Transporting Layer. ACS Applied Materials & Interfaces, 2020, 12, 11467-11478.	4.0	48
26	Noble Metal Free, Visible Light Driven Photocatalysis Using TiO ₂ Nanotube Arrays Sensitized by P-Doped C ₃ N ₄ Quantum Dots. Advanced Optical Materials, 2020, 8, 1901275.	3.6	48
27	Photocatalytic Mechanism Control and Study of Carrier Dynamics in CdS@C ₃ N ₅ Core-Shell Nanowires. ACS Applied Materials & Interfaces, 2021, 13, 47418-47439.	4.0	48
28	Single Atom Catalysts for Selective Methane Oxidation to Oxygenates. ACS Nano, 2022, 16, 8557-8618.	7.3	48
29	Nitrogen-doped graphene-supported copper complex: a novel photocatalyst for CO ₂ reduction under visible light irradiation. RSC Advances, 2015, 5, 54929-54935.	1.7	47
30	Cobalt-entrenched N-, O-, and S-tridoped carbons as efficient multifunctional sustainable catalysts for base-free selective oxidative esterification of alcohols. Green Chemistry, 2018, 20, 3542-3556.	4.6	47
31	Synthesis of flower-like magnetite nanoassembly: Application in the efficient reduction of nitroarenes. Scientific Reports, 2017, 7, 11585.	1.6	44
32	Robust Polymer Nanocomposite Membranes Incorporating Discrete TiO ₂ Nanotubes for Water Treatment. Nanomaterials, 2019, 9, 1186.	1.9	43
33	A TiO ₂ immobilized Ru(II) polyazine complex: a visible-light active photoredox catalyst for oxidative cyanation of tertiary amines. Journal of Materials Chemistry A, 2014, 2, 4514.	5.2	42
34	Magnetic Fe ₃ O ₄ @MgAl-LDH composite grafted with cobalt phthalocyanine as an efficient heterogeneous catalyst for the oxidation of mercaptans. Journal of Molecular Catalysis A, 2015, 401, 48-54.	4.8	42
35	Sustainable Synthesis of Nanoscale Zerovalent Iron Particles for Environmental Remediation. ChemSusChem, 2020, 13, 3288-3305.	3.6	42
36	Visible light assisted reduction of nitrobenzenes using Fe(bpy) ₃ ²⁺ /rGO nanocomposite as photocatalyst. Applied Surface Science, 2016, 386, 103-114.	3.1	40

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37	Seven-coordinated chiral uranyl(VI) salen complex as effective catalyst for C-H bond activation of dialkylanilines under visible light. <i>Polyhedron</i> , 2017, 124, 177-183.	1.0	40
38	Asymmetric Multipole Plasmon-Mediated Catalysis Shifts the Product Selectivity of CO ₂ Photoreduction toward C ₂₊ Products. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 7248-7258.	4.0	40
39	Polymeric carbon nitride-based photocatalysts for photoreforming of biomass derivatives. <i>Green Chemistry</i> , 2021, 23, 7435-7457.	4.6	39
40	Flexible and Ultrasoft Inorganic 1D Semiconductor and Heterostructure Systems Based on SnIP. <i>Advanced Functional Materials</i> , 2019, 29, 1900233.	7.8	37
41	Graphene oxide immobilized copper phthalocyanine tetrasulphonamide: the first heterogenized homogeneous catalyst for dimethylcarbonate synthesis from CO ₂ and methanol. <i>Journal of Materials Chemistry A</i> , 2014, 2, 18861-18866.	5.2	35
42	Organic inorganic hybrid cobalt phthalocyanine/polyaniline as efficient catalyst for aerobic oxidation of alcohols in liquid phase. <i>Tetrahedron Letters</i> , 2015, 56, 3948-3953.	0.7	33
43	Heterostructured nanocomposite tin phthalocyanine@mesoporous ceria (SnPc@CeO ₂) for photoreduction of CO ₂ in visible light. <i>RSC Advances</i> , 2015, 5, 42414-42421.	1.7	33
44	Air- and water-stable halide perovskite nanocrystals protected with nearly-monolayer carbon nitride for CO ₂ photoreduction and water splitting. <i>Applied Surface Science</i> , 2022, 592, 153276.	3.1	31
45	Vapor Deposition of Semiconducting Phosphorus Allotropes into TiO ₂ Nanotube Arrays for Photoelectrocatalytic Water Splitting. <i>ACS Applied Nano Materials</i> , 2019, 2, 3358-3367.	2.4	30
46	A surface plasmon laser. <i>Journal of Applied Physics</i> , 2008, 104, .	1.1	28
47	Graphene oxide grafted with iridium complex as a superior heterogeneous catalyst for chemical fixation of carbon dioxide to dimethylformamide. <i>Carbon</i> , 2016, 100, 632-640.	5.4	27
48	The effect of oxygen flow rate on metal-insulator transition (MIT) characteristics of vanadium dioxide (VO ₂) thin films by pulsed laser deposition (PLD). <i>Applied Surface Science</i> , 2020, 529, 146995.	3.1	25
49	A Prussian blue/carbon dot nanocomposite as an efficient visible light active photocatalyst for C-H activation of amines. <i>Photochemical and Photobiological Sciences</i> , 2016, 15, 1282-1288.	1.6	24
50	Harvesting Hot Holes in Plasmon-Coupled Ultrathin Photoanodes for High-Performance Photoelectrochemical Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 42741-42752.	4.0	24
51	Light-induced controlled free radical polymerization of methacrylates using iron-based photocatalyst in visible light. <i>Journal of Polymer Science Part A</i> , 2015, 53, 2739-2746.	2.5	23
52	Heterojunctions of halogen-doped carbon nitride nanosheets and BiOI for sunlight-driven water-splitting. <i>Nanotechnology</i> , 2020, 31, 084001.	1.3	23
53	Carbon Nitride Grafted Cobalt Complex (Co@npg-C ₃ N ₄) for Visible Light-Assisted Esterification of Aldehydes. <i>ChemistrySelect</i> , 2017, 2, 3437-3443.	0.7	22
54	Octahedral rhenium K ₄ [Re ₆ S ₈ (CN) ₆] and Cu(OH) ₂ cluster modified TiO ₂ for the photoreduction of CO ₂ under visible light irradiation. <i>Applied Catalysis A: General</i> , 2015, 499, 32-38.	2.2	21

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55	A ruthenium-carbamato-complex derived from a siloxylated amine and carbon dioxide for the oxidative \pm -cyanation of aromatic and cyclic tertiary amines. RSC Advances, 2013, 3, 24013.	1.7	20
56	Resistance of Superhydrophobic Surface-Functionalized TiO ₂ Nanotubes to Corrosion and Intense Cavitation. Nanomaterials, 2018, 8, 783.	1.9	18
57	Microfabrication of the Ammonia Plasma-Activated Nickel Nitride–Nickel Thin Film for Overall Water Splitting in the Microfluidic Membraneless Electrolyzer. ACS Applied Energy Materials, 2021, 4, 9639-9652.	2.5	18
58	A bridged ruthenium dimer (Ru–Ru) for photoreduction of CO ₂ under visible light irradiation. Journal of Industrial and Engineering Chemistry, 2018, 61, 381-387.	2.9	17
59	Nanophotonic enhancement and improved electron extraction in perovskite solar cells using near-horizontally aligned TiO ₂ nanorods. Journal of Power Sources, 2019, 417, 176-187.	4.0	17
60	Photo-induced reduction of CO ₂ using a magnetically separable Ru-CoPc@TiO ₂ @SiO ₂ @Fe ₃ O ₄ catalyst under visible light irradiation. Dalton Transactions, 2015, 44, 4546-4553.	1.6	16
61	Remarkable self-organization and unusual conductivity behavior in cellulose nanocrystal-PEDOT: PSS nanocomposites. Journal of Materials Science: Materials in Electronics, 2019, 30, 1390-1399.	1.1	16
62	Synthesis and Characterization of Zinc Phthalocyanine-Cellulose Nanocrystal (CNC) Conjugates: Toward Highly Functional CNCs. ACS Applied Materials & Interfaces, 2020, 12, 43992-44006.	4.0	16
63	Visible light assisted hydrogen generation from complete decomposition of hydrous hydrazine using rhodium modified TiO ₂ photocatalysts. Photochemical and Photobiological Sciences, 2017, 16, 1036-1042.	1.6	15
64	Threshold hydrophobicity for inhibition of salt scale formation on SAM-modified titania nanotube arrays. Applied Surface Science, 2019, 473, 282-290.	3.1	15
65	Photo-assisted oxidation of thiols to disulfides using cobalt –Nanorust– under visible light. New Journal of Chemistry, 2015, 39, 6193-6200.	1.4	13
66	Water-splitting photoelectrodes consisting of heterojunctions of carbon nitride with a p-type low bandgap double perovskite oxide. Nanotechnology, 2021, 32, 485407.	1.3	13
67	CVD grown nitrogen doped graphene is an exceptional visible-light driven photocatalyst for surface catalytic reactions. 2D Materials, 2020, 7, 015002.	2.0	12
68	Vapor growth of binary and ternary phosphorus-based semiconductors into TiO ₂ nanotube arrays and application in visible light driven water splitting. Nanoscale Advances, 2019, 1, 2881-2890.	2.2	11
69	Metal-Free Sulfonate/Sulfate-Functionalized Carbon Nitride for Direct Conversion of Glucose to Levulinic Acid. ACS Sustainable Chemistry and Engineering, 2022, 10, 6230-6243.	3.2	10
70	Mapping the surface potential, charge density and adhesion of cellulose nanocrystals using advanced scanning probe microscopy. Carbohydrate Polymers, 2020, 246, 116393.	5.1	9
71	Single-Atom Catalysis: Mixed-Valence Single-Atom Catalyst Derived from Functionalized Graphene (Adv.) Tj ETOq1 1 0.784314 ngB	11.1	8
72	TiO ₂ -HfN Radial Nano-Heterojunction: A Hot Carrier Photoanode for Sunlight-Driven Water-Splitting. Catalysts, 2021, 11, 1374.	1.6	8

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73	Effect of morphology on the photoelectrochemical performance of nanostructured Cu ₂ O photocathodes. <i>Nanotechnology</i> , 2021, 32, 374001.	1.3	7
74	Revealing and Attenuating the Electrostatic Properties of Tubulin and Its Polymers. <i>Small</i> , 2021, 17, 2003560.	5.2	7
75	Zinc phthalocyanine conjugated cellulose nanocrystals for memory device applications. <i>Nanotechnology</i> , 2022, 33, 055703.	1.3	7
76	Hot hole transfer from Ag nanoparticles to multiferroic YMn ₂ O ₅ nanowires enables superior photocatalytic activity. <i>Journal of Materials Chemistry C</i> , 2022, 10, 4128-4139.	2.7	7
77	Microwave-assisted synthesis, characterization, and antimicrobial activity of some odorant Schiff bases derived from naturally occurring carbonyl compounds and anthranilic acid. <i>Synthetic Communications</i> , 2016, 46, 2053-2062.	1.1	6
78	A graphene/hemin hybrid material as an efficient green catalyst for stereoselective olefination of aldehydes. <i>RSC Advances</i> , 2015, 5, 100011-100017.	1.7	5
79	Single-atom catalysts for biomass-derived drop-in chemicals. , 2022, , 63-100.		4
80	Kinetics and feasibility studies of thiol oxidation using magnetically separable Mg-Al layered double hydroxide supported cobalt phthalocyanine catalyst. <i>Fuel Processing Technology</i> , 2017, 162, 135-146.	3.7	3
81	Nanostructured Composite Materials for CO ₂ Activation. , 2019, , 174-200.		2
82	Hot carrier photocatalysis using bimetallic Au@Pt hemispherical core-shell nanoislands. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 18134-18155.	1.1	2
83	All-solid-state formation of titania nanotube arrays and their application in photoelectrochemical water splitting. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 16590-16597.	1.1	1
84	Rapid and Efficient Synthesis, Characterization and Antimicrobial Activity of Some Methylantranilate Derived Odorant Schiff Bases. <i>Letters in Organic Chemistry</i> , 2018, 15, 620-626.	0.2	1
85	Hybrid Materials: Flexible and Ultrasoft Inorganic 1D Semiconductor and Heterostructure Systems Based on SnIP (Adv. Funct. Mater. 18/2019). <i>Advanced Functional Materials</i> , 2019, 29, 1970120.	7.8	0
86	Revealing and Attenuating the Electrostatic Properties of Tubulin and Microtubules. <i>Biophysical Journal</i> , 2020, 118, 622a.	0.2	0