

# Ujjal K Gautam

## List of Publications by Year in descending order

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83  
papers

7,051  
citations

101543

36  
h-index

54911

84  
g-index

84  
all docs

84  
docs citations

84  
times ranked

9030  
citing authors

#	ARTICLE	IF	CITATIONS
1	ZnS nanostructures: From synthesis to applications. <i>Progress in Materials Science</i> , 2011, 56, 175-287.	32.8	1,134
2	Inorganic semiconductor nanostructures and their field-emission applications. <i>Journal of Materials Chemistry</i> , 2008, 18, 509-522.	6.7	586
3	Single-crystalline ZnS Nanobelts as Ultraviolet Light Sensors. <i>Advanced Materials</i> , 2009, 21, 2034-2039.	21.0	537
4	ZnO and ZnS Nanostructures: Ultraviolet-Light Emitters, Lasers, and Sensors. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2009, 34, 190-223.	12.3	306
5	Highly efficient photocatalytic hydrogen generation by solution-processed ZnO/Pt/CdS, ZnO/Pt/CdS <sub>1-x</sub> Zn <sub>x</sub> S and ZnO/Pt/CdS <sub>1-x</sub> Se <sub>x</sub> hybrid nanostructures. <i>Energy and Environmental Science</i> , 2013, 6, 3589.	30.8	225
6	Template Deformation Tailored ZnO Nanorod/Nanowire Arrays: Full Growth Control and Optimization of Field Emission. <i>Advanced Functional Materials</i> , 2009, 19, 3165-3172.	14.9	224
7	An Efficient Way to Assemble ZnS Nanobelts as Ultraviolet Light Sensors with Enhanced Photocurrent and Stability. <i>Advanced Functional Materials</i> , 2010, 20, 500-508.	14.9	222
8	High Performance Blue/Ultraviolet Light Sensitive ZnSe Nanobelt Photodetectors. <i>Advanced Materials</i> , 2009, 21, 5016-5021.	21.0	217
9	Deep-ultraviolet solar-blind photoconductivity of individual gallium oxide nanobelts. <i>Nanoscale</i> , 2011, 3, 1120.	5.6	210
10	Controlled synthesis of crystalline tellurium nanorods, nanowires, nanobelts and related structures by a self-seeding solution process. <i>Journal of Materials Chemistry</i> , 2004, 14, 2530.	6.7	192
11	Synthesis, Structure, and Multiply Enhanced Field-Emission Properties of Branched ZnS Nanotube-In Nanowire Core-Shell Heterostructures. <i>ACS Nano</i> , 2008, 2, 1015-1021.	14.6	187
12	Structure and Cathodoluminescence of Individual ZnS/ZnO Biaxial Nanobelt Heterostructures. <i>Nano Letters</i> , 2008, 8, 2794-2799.	9.1	185
13	N-Doped Graphene <sup>VO<sub>2</sub></sup> Nanosheet-Built 3D Flower Hybrid for Lithium Ion Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2013, 5, 2708-2714.	8.0	172
14	Electrical Transport and High Performance Photoconductivity in Individual ZrS <sub>2</sub> Nanobelts. <i>Advanced Materials</i> , 2010, 22, 4151-4156.	21.0	169
15	Rapid and Direct Conversion of Graphite Crystals into High Yielding, Good Quality Graphene by Supercritical Fluid Exfoliation. <i>Chemistry - A European Journal</i> , 2010, 16, 6488-6494.	3.3	167
16	Solvothermal Synthesis, Cathodoluminescence, and Field Emission Properties of Pure and N-Doped ZnO Nanobullets. <i>Advanced Functional Materials</i> , 2009, 19, 131-140.	14.9	153
17	Soya derived heteroatom doped carbon as a promising platform for oxygen reduction, supercapacitor and CO <sub>2</sub> capture. <i>Carbon</i> , 2017, 114, 679-689.	10.3	134
18	Cobalt Hydroxide/Oxide Hexagonal Ring-Graphene Hybrids through Chemical Etching of Metal Hydroxide Platelets by Graphene Oxide: Energy Storage Applications. <i>ACS Nano</i> , 2014, 8, 2755-2765.	14.6	120

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19	Use of the liquid-liquid interface for generating ultrathin nanocrystalline films of metals, chalcogenides, and oxides. <i>Journal of Colloid and Interface Science</i> , 2005, 289, 305-318.	9.4	118
20	Generation of Onions and Nanotubes of GaS and GaSe through Laser and Thermally Induced Exfoliation. <i>Journal of the American Chemical Society</i> , 2005, 127, 3658-3659.	13.7	103
21	Multiangular Branched ZnS Nanostructures with Needle-Shaped Tips: Potential Luminescent and Field-Emitter Nanomaterial. <i>Journal of Physical Chemistry C</i> , 2008, 112, 4735-4742.	3.1	89
22	Ultra Narrow PbS Nanorods with Intense Fluorescence. <i>Journal of the American Chemical Society</i> , 2008, 130, 4594-4595.	13.7	83
23	Template-Free Chemical Route to Ultrathin Single-Crystalline Films of CuS and CuO Employing the Liquid-Liquid Interface. <i>Langmuir</i> , 2004, 20, 10775-10778.	3.5	78
24	New strategies for the synthesis of t-selenium nanorods and nanowires. <i>Journal of Materials Chemistry</i> , 2003, 13, 2845.	6.7	74
25	Heterostructures and superlattices in one-dimensional nanoscale semiconductors. <i>Journal of Materials Chemistry</i> , 2009, 19, 5683.	6.7	68
26	A solvothermal route to capped CdSe nanoparticles. <i>Chemical Communications</i> , 2001, , 629-630.	4.1	58
27	Emerging Materials in Heterogeneous Electrocatalysis Involving Oxygen for Energy Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 33737-33767.	8.0	52
28	Mechanochemical Synthesis of Free-Standing Platinum Nanosheets and Their Electrocatalytic Properties. <i>Advanced Materials</i> , 2015, 27, 4430-4437.	21.0	50
29	A strategy for the synthesis of nanocrystal films of metal chalcogenides and oxides by employing the liquid-liquid interface. <i>Chemical Physics Letters</i> , 2003, 381, 1-6.	2.6	48
30	A simple synthesis and characterization of CuS nanocrystals. <i>Bulletin of Materials Science</i> , 2006, 29, 1-5.	1.7	47
31	Unipolar assembly of zinc oxide rods manifesting polarity-driven collective luminescence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 13588-13592.	7.1	44
32	Nanomaterial Engineering and Property Studies in a Transmission Electron Microscope. <i>Advanced Materials</i> , 2012, 24, 177-194.	21.0	43
33	Confinement Matters: Stabilization of CdS Nanoparticles inside a Postmodified MOF toward Photocatalytic Hydrogen Evolution. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 25220-25231.	8.0	41
34	Preparation of PbS and PbSe nanocrystals by a new solvothermal route. <i>Materials Research Bulletin</i> , 2004, 39, 669-676.	5.2	40
35	GaS and GaSe nanowalls and their transformation to Ga <sub>2</sub> O <sub>3</sub> and GaN nanowalls. <i>Chemical Communications</i> , 2005, , 3995.	4.1	40
36	Ultrathin Twisty PdNi Alloy Nanowires as Highly Active ORR Electrocatalysts Exhibiting Morphology-Induced Durability over 200 K Cycles. <i>Nano Letters</i> , 2022, 22, 246-254.	9.1	40

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37	A solvothermal route to CdS nanocrystals. <i>Chemical Physics Letters</i> , 2003, 375, 560-564.	2.6	38
38	Facile transfer of excited electrons in Au/SnS <sub>2</sub> nanosheets for efficient solar-driven selective organic transformations. <i>Applied Catalysis B: Environmental</i> , 2021, 286, 119927.	20.2	38
39	Synthesis of chemically bonded CNT-graphene heterostructure arrays. <i>RSC Advances</i> , 2012, 2, 8250.	3.6	37
40	Pd-Pt alloys nanowires as support-less electrocatalyst with high synergistic enhancement in efficiency for methanol oxidation in acidic medium. <i>Journal of Colloid and Interface Science</i> , 2016, 463, 99-106.	9.4	32
41	Ni-Fe-layered double hydroxide/N-doped graphene oxide nanocomposite for the highly efficient removal of Pb(II) and Cd(II) ions from water. <i>Journal of Solid State Chemistry</i> , 2019, 280, 120963.	2.9	32
42	Defect-rich, negatively-charged SnS <sub>2</sub> nanosheets for efficient photocatalytic Cr(VI) reduction and organic dye adsorption in water. <i>Journal of Colloid and Interface Science</i> , 2021, 603, 110-119.	9.4	31
43	Light-Induced Hypoxia in Carbon Quantum Dots and Ultrahigh Photocatalytic Efficiency. <i>Journal of the American Chemical Society</i> , 2022, 144, 2580-2589.	13.7	31
44	High-Yield Synthesis of Sub-10 nm Pt Nanotetrahedra with Bare {111} Facets for Efficient Electrocatalytic Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 4998-5005.	8.0	30
45	N- and S-doped high surface area carbon derived from soya chunks as scalable and efficient electrocatalysts for oxygen reduction. <i>Science and Technology of Advanced Materials</i> , 2015, 16, 014803.	6.1	28
46	Soft chemical approaches to inorganic nanostructures. <i>Pure and Applied Chemistry</i> , 2006, 78, 1619-1650.	1.9	26
47	Effect of crystalline filling on the mechanical response of carbon nanotubes. <i>Carbon</i> , 2009, 47, 541-544.	10.3	26
48	Solvothermal routes to capped oxide and chalcogenide nanoparticles. <i>Pure and Applied Chemistry</i> , 2002, 74, 1643-1649.	1.9	25
49	Asymmetric tungsten oxide nanobrushes via oriented attachment and Ostwald ripening. <i>CrystEngComm</i> , 2011, 13, 4074.	2.6	24
50	C <sub>60</sub> -Mediated Molecular Shape Sorting: Separation and Purification of Geometrical Isomers. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 13523-13527.	13.8	23
51	Ultra-Thin Crystalline Films of CdSe and CuSe Formed at the Organic-Aqueous Interface. <i>Journal of Nanoscience and Nanotechnology</i> , 2007, 7, 1916-1922.	0.9	21
52	Kinetically stabilized C <sub>60</sub> -toluene solvate nanostructures with a discrete absorption edge enabling supramolecular topotactic molecular exchange. <i>Carbon</i> , 2014, 74, 44-53.	10.3	21
53	Boosting Bifunctional Oxygen Reduction and Methanol Oxidation Electrocatalytic Activity with 2D Superlattice-Forming Pd Nanocubes Generated by Precise Acid Etching. <i>ACS Applied Nano Materials</i> , 2020, 3, 8117-8125.	5.0	21
54	Magnetic and transport properties, and electronic structure of the layered chalcogenide AgCrSe <sub>2</sub> . <i>Solid State Communications</i> , 2002, 122, 607-612.	1.9	20

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55	Synthesis of Bi <sub>3</sub> TaO <sub>7</sub> –Bi <sub>4</sub> TaO <sub>8</sub> Br composites in ambient air and their high photocatalytic activity upon metal loading. Dalton Transactions, 2019, 48, 7110-7116.	3.3	20
56	Autophagy™ and unique aerial oxygen harvesting properties exhibited by highly photocatalytic carbon quantum dots. Carbon, 2021, 181, 16-27.	10.3	19
57	Wavelength dependent luminescence decay kinetics in quantum-confined g-C <sub>3</sub> N <sub>4</sub> nanosheets exhibiting high photocatalytic efficiency upon plasmonic coupling. Journal of Materials Chemistry A, 2020, 8, 20581-20592.	10.3	16
58	The mechanical response of turbostratic carbon nanotubes filled with Ga-doped ZnS: I. Data processing for the extraction of the elastic modulus. Nanotechnology, 2009, 20, 405706.	2.6	15
59	High and reversible oxygen uptake in carbon dot solutions generated from polyethylene facilitating reactant-enhanced solar light harvesting. Nanoscale, 2020, 12, 10480-10490.	5.6	15
60	Unravelling charge-transfer in Pd to pyrrolic-N bond for superior electrocatalytic performance. Journal of Materials Chemistry A, 2021, 9, 10966-10978.	10.3	15
61	Synthesis of metal–semiconductor heterojunctions inside carbon nanotubes. Journal of Materials Chemistry, 2009, 19, 4414.	6.7	14
62	The electrical delivery of a sublimable II–VI compound by vapor transport in carbon nanotubes. Carbon, 2011, 49, 3747-3754.	10.3	14
63	3D Porous Polymeric-Foam-Supported Pd Nanocrystal as a Highly Efficient and Recyclable Catalyst for Organic Transformations. ACS Applied Materials & Interfaces, 2021, 13, 10120-10130.	8.0	14
64	Synthesis and thermal decomposition of metal hydroxide intercalated saponite. Applied Clay Science, 2014, 87, 163-169.	5.2	13
65	Self-immobilized Pd nanowires as an excellent platform for a continuous flow reactor: efficiency, stability and regeneration. Nanoscale, 2018, 10, 21396-21405.	5.6	13
66	Comparative study of the stability of sulfide materials encapsulated in and expelled from multi-walled carbon nanotube capsules. Carbon, 2011, 49, 342-346.	10.3	12
67	Facile d-band tailoring in Sub-10 nm Pd cubes by in-situ grafting on nitrogen-doped graphene for highly efficient organic transformations. Journal of Colloid and Interface Science, 2021, 590, 175-185.	9.4	12
68	Soft chemical routes to semiconductor nanostructures. Pramana - Journal of Physics, 2005, 65, 549-564.	1.8	11
69	The mechanical response of turbostratic carbon nanotubes filled with Ga-doped ZnS: II. Slenderness ratio and crystalline filling effects. Nanotechnology, 2009, 20, 405707.	2.6	11
70	Nanocrystalline Ag <sub>3</sub> PO <sub>4</sub> for Sunlight- and Ambient Air-Driven Oxidation of Amines: High Photocatalytic Efficiency and a Facile Catalyst Regeneration Strategy. ACS Applied Materials & Interfaces, 2020, 12, 29324-29334.	8.0	11
71	Oxidation of Toluene and Other Examples of C–H Bond Activation by CdO <sub>2</sub> and ZnO <sub>2</sub> Nanoparticles. ChemPlusChem, 2013, 78, 837-842.	2.8	9
72	Dimension switchable auto-fluorescent peptide-based 1D and 2D nano-assemblies and their self-influence on intracellular fate and drug delivery. Nanoscale, 2022, 14, 715-735.	5.6	8

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73	Single-step insertion of M-Nx moieties in commercial carbon for sustainable bifunctional electrocatalysis: Mapping insertion capacity, mass loss, and carbon reconstruction. Carbon, 2022, 196, 1001-1011.	10.3	8
74	Inorganically filled carbon nanotubes: Synthesis and properties. Pure and Applied Chemistry, 2010, 82, 2097-2109.	1.9	7
75	Compressive strain induced by multiple phase distribution and atomic ordering in PdCu nanoparticles to enhanced ethanol oxidation reaction performance. Journal of Power Sources, 2021, 506, 230168.	7.8	7
76	Fabrication of Luminescent Silver Doped PbS Nanowires in Polymer. Journal of Nanoscience and Nanotechnology, 2011, 11, 10234-10239.	0.9	5
77	Room temperature conversion of metal oxides (MO, M = Zn, Cd and Mg) to peroxides: insight into a novel, scalable and recyclable synthesis leading to their lowest decomposition temperatures. CrystEngComm, 2014, 16, 1050-1055.	2.6	5
78	Pre-optimization of the solvent of nanoparticle synthesis for superior catalytic efficiency: a case study with Pd nanocrystals. Nanoscale Advances, 2021, 3, 2366-2376.	4.6	3
79	A self-activating Bi <sub>3</sub> TaO <sub>7</sub> Bi <sub>4</sub> TaO <sub>8</sub> Br photocatalyst and its use in the sustainable production of pro-fluorophoric rhodamine-110. Green Chemistry, 2022, 24, 5514-5523.	9.0	3
80	Scanning tunneling microscopy and spectroscopy of Se and Te nanorods. Solid State Communications, 2005, 136, 169-172.	1.9	2
81	Tuning the Oxygen Release Temperature of Metal Peroxides over a Wide Range by Formation of Solid Solutions. Chemistry of Materials, 2014, 26, 2720-2725.	6.7	2
82	Graphene Ingestion and Regrowth on Carbon-Starved Metal Electrodes. ACS Nano, 2017, 11, 10575-10582.	14.6	2
83	Prospects in Engineering Congested Molecular Diffusion at the Stabilizer Layer of Metal Nanocrystals for Ultrahigh Catalytic Activity. Journal of Physical Chemistry C, 2021, 125, 9827-9838.	3.1	1