

# Mohan Singh Mehata

## List of Publications by Year in descending order

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78  
papers

2,407  
citations

257450

24  
h-index

223800

46  
g-index

82  
all docs

82  
docs citations

82  
times ranked

2539  
citing authors

#	ARTICLE	IF	CITATIONS
1	Medicinal Plant Leaf Extract and Pure Flavonoid Mediated Green Synthesis of Silver Nanoparticles and their Enhanced Antibacterial Property. Scientific Reports, 2017, 7, 15867.	3.3	497
2	Controllable synthesis of silver nanoparticles using Neem leaves and their antimicrobial activity. Journal of Radiation Research and Applied Sciences, 2016, 9, 109-115.	1.2	311
3	Fluorescence Studies of Salicylic Acid Doped Poly(vinyl alcohol) Film as a Water/Humidity Sensor. Journal of Physical Chemistry A, 2004, 108, 2346-2352.	2.5	97
4	Wavefunction Engineering of Type-I/Type-II Excitons of CdSe/CdS Core-Shell Quantum Dots. Scientific Reports, 2019, 9, 2.	3.3	89
5	Excited-State Proton Transfer via Hydrogen-Bonded Acetic Acid (AcOH) Wire for 6-Hydroxyquinoline. Journal of Physical Chemistry A, 2011, 115, 19-24.	2.5	68
6	Green route synthesis of silver nanoparticles using plants/ginger extracts with enhanced surface plasmon resonance and degradation of textile dye. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 273, 115418.	3.5	64
7	Rapid sensing of lead metal ions in an aqueous medium by MoS <sub>2</sub> quantum dots fluorescence turn-off. Materials Research Bulletin, 2020, 131, 110978.	5.2	58
8	Phase-dependent optical and photocatalytic performance of synthesized titanium dioxide (TiO <sub>2</sub> ) nanoparticles. Optik, 2019, 193, 163011.	2.9	54
9	Fluorescence quenching of 6-methoxyquinoline: an indicator for sensing chloride ion in aqueous media. Journal of Luminescence, 2002, 99, 47-52.	3.1	50
10	Investigation of biocompatible and protein sensitive highly luminescent quantum dots/nanocrystals of CdSe, CdSe/ZnS and CdSe/CdS. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 179, 201-210.	3.9	47
11	Green synthesis of silver nanoparticles using Kalanchoe pinnata leaves (life plant) and their antibacterial and photocatalytic activities. Chemical Physics Letters, 2021, 778, 138760.	2.6	46
12	TDDFT study of the polarity controlled ion-pair separation in an excited-state proton transfer reaction. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2014, 128, 280-284.	3.9	43
13	Excited-state intermolecular proton transfer reaction of 6-hydroxyquinoline in protic polar medium. Chemical Physics Letters, 2002, 359, 314-320.	2.6	41
14	Synthesis and optical properties of core-multi-shell CdSe/CdS/ZnS quantum dots: Surface modifications. Optical Materials, 2017, 64, 250-256.	3.6	38
15	Enhancement of Charge Transfer and Quenching of Photoluminescence of Capped CdS Quantum Dots. Scientific Reports, 2015, 5, 12056.	3.3	37
16	Enhanced photoinduced catalytic activity of transition metal ions incorporated TiO <sub>2</sub> nanoparticles for degradation of organic dye: Absorption and photoluminescence spectroscopy. Optical Materials, 2020, 109, 110309.	3.6	37
17	External Electric Field Effects on Optical Property and Excitation Dynamics of Capped CdS Quantum Dots Embedded in a Polymer Film. Journal of Physical Chemistry C, 2010, 114, 15594-15601.	3.1	34
18	Synthesis of photoactivated highly fluorescent Mn <sup>2+</sup> -doped ZnSe quantum dots as effective lead sensor in drinking water. Materials Research Bulletin, 2021, 134, 111121.	5.2	34

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19	Colloidal MoS <sub>2</sub> quantum dots based optical sensor for detection of 2,4,6-TNP explosive in an aqueous medium. <i>Optical Materials</i> , 2020, 100, 109646.	3.6	32
20	Studies on the adsorption of peptides of glycine/alanine on montmorillonite clay with or without co-ordinated divalent cations. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2003, 212, 43-50.	4.7	31
21	Spin mixed charge transfer states of iridium complex Ir(ppy) <sub>3</sub> : transient absorption and time-resolved photoluminescence. <i>RSC Advances</i> , 2015, 5, 34094-34099.	3.6	30
22	Luminescence properties and exciton dynamics of core-shell multi-shell semiconductor quantum dots leading to QLEDs. <i>Dalton Transactions</i> , 2019, 48, 7619-7631.	3.3	30
23	Controlled synthesis and optical properties of tunable CdSe quantum dots and effect of pH. <i>AIP Advances</i> , 2015, 5, .	1.3	29
24	Rapid optical sensor for recognition of explosive 2,4,6-TNP traces in water through fluorescent ZnSe quantum dots. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021, 260, 119937.	3.9	25
25	Photoinduced excited state proton rearrangement of 6-hydroxyquinoline along a hydrogen-bonded acetic acid wire. <i>Chemical Physics Letters</i> , 2007, 436, 357-361.	2.6	24
26	Proton Translocation and Electronic Relaxation along a Hydrogen-Bonded Molecular Wire in a 6-Hydroxyquinoline/Acetic Acid Complex. <i>Journal of Physical Chemistry B</i> , 2008, 112, 8383-8386.	2.6	24
27	Electric Field Effects on Photoluminescence of Polyfluorene Thin Films: Dependence on Excitation Wavelength, Field Strength, and Temperature. <i>Journal of Physical Chemistry C</i> , 2009, 113, 11907-11915.	3.1	24
28	Sunlight-driven MoS <sub>2</sub> nanosheets mediated degradation of dye (crystal violet) for wastewater treatment. <i>Journal of Molecular Structure</i> , 2022, 1249, 131651.	3.6	23
29	Electroabsorption Spectroscopy of 6-Hydroxyquinoline Doped in Polymer Films: Stark Shifts and Orientational Effects. <i>Journal of Physical Chemistry A</i> , 2006, 110, 10985-10991.	2.5	22
30	Surface plasmon resonance allied applications of silver nanoflowers synthesized from <i>Breynia vitis-idaea</i> leaf extract. <i>Dalton Transactions</i> , 2022, 51, 2726-2736.	3.3	21
31	Edge excitation red shift and charge transfer study of 6-methoxyquinoline in polymer matrices. <i>Journal of Luminescence</i> , 2001, 93, 275-280.	3.1	19
32	Steady state and time-resolved spectroscopic studies of 7-hydroxyquinoline in various polymeric matrices. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2002, 58, 1589-1598.	3.9	19
33	Efficient fluorescence quenching of 5-aminoquinoline: Silver ion recognition study. <i>Journal of Luminescence</i> , 2019, 205, 475-481.	3.1	18
34	Flavones Fluorescence-Based Dual Response Chemosensor for Metal Ions in Aqueous Media and Fluorescence Recovery. <i>Journal of Fluorescence</i> , 2020, 30, 759-772.	2.5	18
35	Structural, Electronic and NLO Properties of 6-aminoquinoline: A DFT/TD-DFT Study. <i>Journal of Fluorescence</i> , 2021, 31, 1719-1729.	2.5	18
36	Synthesis of fluorescent graphene quantum dots from graphene oxide and their application in fabrication of QGDs@AgNPs nanohybrids and sensing of H <sub>2</sub> O <sub>2</sub> . <i>Ceramics International</i> , 2021, 47, 19063-19072.	4.8	17

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37	Exploration of grown cobalt-doped zinc oxide nanoparticles and photodegradation of industrial dye. <i>Materials Research Bulletin</i> , 2022, 150, 111795.	5.2	17
38	Complexation of 6-hydroxyquinoline with trimethylamine in polar and non-polar solvents. <i>Chemical Physics Letters</i> , 2002, 366, 628-635.	2.6	16
39	An efficient excited-state proton transfer fluorescence quenching based probe (7-hydroxyquinoline) for sensing trivalent cations in aqueous environment. <i>Journal of Molecular Liquids</i> , 2021, 326, 115379.	4.9	16
40	Investigation of charge-separation/change in dipole moment of 7-azaindole: Quantitative measurement using solvatochromic shifts and computational approaches. <i>Journal of Molecular Liquids</i> , 2017, 231, 39-44.	4.9	15
41	Electric-Field-Induced Enhancement/Quenching of Photoluminescence of $\text{I}^{\text{r}}$ -Conjugated Polymer S3-PPV: Excitation Energy Dependence. <i>Journal of Physical Chemistry B</i> , 2010, 114, 6258-6265.	2.6	14
42	Modulation of Fluorescence properties of 5-Aminoquinoline by $\text{Ag}^+$ in aqueous media via charge transfer. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2020, 396, 112549.	3.9	14
43	Fluorescence characteristics of protonated form of 6-hydroxyquinoline in Nafion <sup>®</sup> film. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2003, 59, 559-567.	3.9	13
44	A 2 B corroles: Fluorescence signaling systems for sensing fluoride ions. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018, 202, 207-213.	3.9	13
45	Heat-initiated prebiotic formation of peptides from glycine/aspartic acid and glycine/valine in aqueous environment and clay suspension. <i>International Journal of Astrobiology</i> , 2009, 8, 107-115.	1.6	11
46	Stark shifts and exciton dissociation in CdSe nanoparticle grafted conjugated polymer. <i>Applied Physics Letters</i> , 2012, 100, 151908.	3.3	11
47	Experimental and theoretical study of hydroxyquinolines: hydroxyl group position dependent dipole moment and charge-separation in the photoexcited state leading to fluorescence. <i>Methods and Applications in Fluorescence</i> , 2016, 4, 045004.	2.3	11
48	Tunable single and double emission semiconductor nanocrystal quantum dots: a multianalyte sensor. <i>Methods and Applications in Fluorescence</i> , 2018, 6, 035006.	2.3	11
49	Temperature-dependent photoluminescence and decay times of different phases of grown $\text{TiO}_2$ nanoparticles: Carrier dynamics and trap states. <i>Ceramics International</i> , 2021, 47, 32534-32544.	4.8	11
50	Investigation of grown ZnS film on HgCdTe substrate for passivation of infrared photodetector. <i>Thin Solid Films</i> , 2021, 731, 138751.	1.8	11
51	Solvatochromism and estimation of ground and excited state dipole moments of 6-aminoquinoline. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2022, 267, 120498.	3.9	11
52	A parallel investigation of un-doped and manganese ion-doped zinc selenide quantum dots at cryogenic temperature and application as an optical temperature sensor. <i>Materials Chemistry and Physics</i> , 2022, 276, 125349.	4.0	11
53	Electric-field-induced changes in fluorescence decay and spectrum of tris(8-hydroxyquinoline)aluminum in a polymer film. <i>Chemical Physics Letters</i> , 2008, 457, 62-65.	2.6	10
54	Electroabsorption and Electrophotoluminescence of Poly(2,3-diphenyl-5-hexyl-p-phenylene vinylene). <i>Journal of Physical Chemistry C</i> , 2012, 116, 14789-14795.	3.1	10

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55	Synthesis, characterization and fluorescence turn-on behavior of new porphyrin analogue: meta-benziporphodimethenes. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2016, 169, 58-65.	3.9	10
56	Steady state and time-resolved fluorescence study of 7,8-benzoquinoline: Reinvestigation of excited state protonation. <i>Journal of Molecular Structure</i> , 2019, 1180, 855-860.	3.6	10
57	Experimental and theoretical interpretations of spectral behavior of 6-methoxyflavone. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2021, 404, 112945.	3.9	9
58	Electric field effects on state energy and molecular orientation of 2-hydroxyquinoline in solid polymer films. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2009, 204, 39-45.	3.9	8
59	Surface Interaction of L-alanine on Hematite: An Astrobiological Implication. <i>Origins of Life and Evolution of Biospheres</i> , 2013, 43, 331-339.	1.9	8
60	Photo- and field-induced charge-separation and phosphorescence quenching in organometallic complex Ir(ppy) <sub>3</sub> . <i>Applied Physics Letters</i> , 2011, 98, .	3.3	7
61	meta-Benziporphodimethenes: New Cell Imaging Porphyrin Analogue Molecules. <i>ChemistrySelect</i> , 2016, 1, 3502-3509.	1.5	6
62	Spectral and time-resolved properties of photoinduced hydroxyquinolines doped thin polymer films. <i>Optical Materials</i> , 2018, 75, 751-756.	3.6	6
63	Catalytic activity of silver nanoparticles synthesized using <i>Crinum asiaticum</i> (Sudarshan) leaf extract. <i>Materials Today: Proceedings</i> , 2022, 56, 3714-3720.	1.8	6
64	Thermally grown indium (In) thin-film for creating ohmic contact and In-bumps for HgCdTe-based IR detectors. <i>Applied Surface Science</i> , 2022, 596, 153501.	6.1	6
65	Temperature-Dependent Electric Field-Induced Optical Transitions of 2D Molybdenum Disulfide (MoS <sub>2</sub> ) Thin Films: Temperature-Dependent Electroabsorption and Absorption. <i>Journal of Physical Chemistry C</i> , 0, .	3.1	5
66	Affinity of Smectite and Divalent Metal Ions (Mg <sup>2+</sup> , Ca <sup>2+</sup> , Cu <sup>2+</sup> ) with L-leucine: An Experimental and Theoretical Approach Relevant to Astrobiology. <i>Origins of Life and Evolution of Biospheres</i> , 2015, 45, 411-426.	1.9	4
67	Bright red emission from doubly doped YAG:Pr/Sm nanophosphor and color modulation. <i>Optical Materials</i> , 2020, 107, 110106.	3.6	4
68	Reinvestigation of the photophysics of 3-aminobenzoic acid in neat and mixed binary solvents. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021, 247, 119100.	3.9	4
69	Spectroscopic Studies of 8-Hydroxyquinoline (8-HQ) Doped in Polymeric Matrices. <i>Journal of Optics (India)</i> , 2002, 31, 1-7.	1.7	3
70	Revisiting the photochemistry 2,5-dihydroxy benzoic acid (gentisic acid): Solvent and pH effect. <i>Journal of Physical Organic Chemistry</i> , 2021, 34, e4168.	1.9	3
71	Photoluminescence turn-off based dual analytes (Hg <sup>2+</sup> and Pb <sup>2+</sup> ) sensor in aqueous medium using 3-mercaptopropionic acid protected Mn <sup>2+</sup> doped ZnSe quantum dots. <i>Chemical Physics Letters</i> , 2022, 787, 139270.	2.6	2
72	Reinvestigation on Photoluminescence of 7-Hydroxyflavone in aqueous medium: Proficient fluorescence enhancement. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2022, , 114014.	3.9	2

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73	Synthesis and characterization of thermally-evaporated CdS thin-films. Materials Today: Proceedings, 2022, 67, 643-647.	1.8	2
74	Probing Charge-Transfer and Short-Lived Triplet States of a Biosensitive Molecule, 2,6-ANS: Transient Absorption and Time-Resolved Spectroscopy. ACS Omega, 2017, 2, 6782-6785.	3.5	1
75	Facile Synthesis of Semiconducting Ultrathin Layer of Molybdenum Disulfide. Journal of Nanoscience and Nanotechnology, 2018, 18, 614-622.	0.9	1
76	Green Synthesis of Silver Nanoparticles Using Abutilon theophrasti Leaves and their Photocatalytic Activity for Water Treatment. Springer Proceedings in Physics, 2022, , 63-73.	0.2	1
77	Effect of halide ions on the fluorescence properties of 3-aminquinoline in aqueous medium. Luminescence, 2023, 38, 1192-1198.	2.9	1
78	Interaction between Picric Acid and 5-aminoquinoline: A Theoretical Study. , 2021, 8, 63-69.		0