

# Hemant Mittal

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

60  
papers

2,518  
citations

34  
h-index

50  
g-index

61  
ext. papers

3,154  
ext. citations

5.4  
avg, IF

6.05  
L-index

#	Paper	IF	Citations
60	Capturing water vapors from atmospheric air using superporous gels.. <i>Scientific Reports</i> , <b>2022</b> , 12, 5626	4.9	0
59	Hybrid super-porous hydrogel composites with high water vapor adsorption capacity [Adsorption isotherm and kinetics studies. <i>Journal of Environmental Chemical Engineering</i> , <b>2021</b> , 9, 106611	6.8	3
58	Facile synthesis of 2D nanoflakes and 3D nanosponge-like Ni <sub>10</sub> O via direct calcination of Ni (II) coordination compounds of imidazole and 4-nitrobenzoate: Adsorptive separation kinetics and photocatalytic removal of Amaranth dye contaminated wastewater. <i>Journal of Molecular Liquids</i> , <b>2021</b> , 325, 115037	6	7
57	GO crosslinked hydrogel nanocomposites of chitosan/carboxymethyl cellulose - A versatile adsorbent for the treatment of dyes contaminated wastewater. <i>International Journal of Biological Macromolecules</i> , <b>2021</b> , 167, 1248-1261	7.9	34
56	Graphene oxide crosslinked hydrogel nanocomposites of xanthan gum for the adsorption of crystal violet dye. <i>Journal of Molecular Liquids</i> , <b>2021</b> , 323, 115034	6	66
55	Water vapor adsorption on metal-exchanged hierarchical porous zeolite-Y. <i>Microporous and Mesoporous Materials</i> , <b>2021</b> , 326, 111380	5.3	1
54	Crosslinked hydrogels of polyethylenimine and graphene oxide to treat Cr(VI) contaminated wastewater. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2021</b> , 630, 127533	5.1	2
53	Low-Temperature Synthesis of Magnetic Carbonaceous Materials Coated with Nanosilica for Rapid Adsorption of Methylene Blue. <i>ACS Omega</i> , <b>2020</b> , 5, 6100-6112	3.9	12
52	Adsorption isotherm and kinetics of water vapors on novel superporous hydrogel composites. <i>Microporous and Mesoporous Materials</i> , <b>2020</b> , 299, 110106	5.3	41
51	In-Situ Synthesis of ZnO Nanoparticles using Gum Arabic Based Hydrogels as a Self-template for Effective Malachite Green Dye Adsorption. <i>Journal of Polymers and the Environment</i> , <b>2020</b> , 28, 1637-1653	4.5	59
50	Solid polymer desiccants based on poly(acrylic acid-co-acrylamide) and Laponite RD: Adsorption isotherm and kinetics studies. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2020</b> , 599, 124813	5.1	30
49	Zeolite-Y incorporated karaya gum hydrogel composites for highly effective removal of cationic dyes. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2020</b> , 586, 124161	5.1	51
48	Super porous TiO photocatalyst: Tailoring the agglomerate porosity into robust structural mesoporosity with enhanced surface area for efficient remediation of azo dye polluted waste water. <i>Journal of Environmental Management</i> , <b>2020</b> , 258, 110029	7.9	29
47	Utilization of gum xanthan based superporous hydrogels for the effective removal of methyl violet from aqueous solution. <i>International Journal of Biological Macromolecules</i> , <b>2020</b> , 143, 413-423	7.9	38
46	High efficiency removal of methylene blue dye using Earrageenan-poly(acrylamide-co-methacrylic acid)/AQSOA-Z05 zeolite hydrogel composites. <i>Cellulose</i> , <b>2020</b> , 27, 8269-8285	5.5	34
45	Mercury removal by porous sulfur copolymers: Adsorption isotherm and kinetics studies. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2020</b> , 606, 125333	5.1	7
44	Biodegradable hydrogels of tragacanth gum polysaccharide to improve water retention capacity of soil and environment-friendly controlled release of agrochemicals. <i>International Journal of Biological Macromolecules</i> , <b>2019</b> , 132, 1252-1261	7.9	45

43	Experimental assessment of the utilization of a novel interpenetrating polymer network in different processes in the agricultural sector. <i>Journal of Applied Polymer Science</i> , <b>2019</b> , 136, 47739	2.9	6
42	Advanced TiO-SiO-Sulfur (Ti-Si-S) Nanohybrid Materials: Potential Adsorbent for the Remediation of Contaminated Wastewater. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 30247-30258	9.5	20
41	Sustained delivery of atenolol drug using gum dammar crosslinked polyacrylamide and zirconium based biodegradable hydrogel composites. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2019</b> , 562, 136-145	5.1	25
40	Modification of gum ghatti via grafting with acrylamide and analysis of its flocculation, adsorption, and biodegradation properties. <i>International Journal of Biological Macromolecules</i> , <b>2018</b> , 114, 283-294	7.9	50
39	Efficient organic dye removal from wastewater by magnetic carbonaceous adsorbent prepared from corn starch. <i>Journal of Environmental Chemical Engineering</i> , <b>2018</b> , 6, 7119-7131	6.8	61
38	Recent progress in the structural modification of chitosan for applications in diversified biomedical fields. <i>European Polymer Journal</i> , <b>2018</b> , 109, 402-434	5.2	93
37	Bionanocomposite Hydrogel for the Adsorption of Dye and Reusability of Generated Waste for the Photodegradation of Ciprofloxacin: A Demonstration of the Circularity Concept for Water Purification. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 17011-17025	8.3	68
36	Thermodynamic properties and adsorption behaviour of hydrogel nanocomposites for cadmium removal from mine effluents. <i>Journal of Industrial and Engineering Chemistry</i> , <b>2017</b> , 48, 151-161	6.3	79
35	Gum karaya based hydrogel nanocomposites for the effective removal of cationic dyes from aqueous solutions. <i>Applied Surface Science</i> , <b>2016</b> , 364, 917-930	6.7	79
34	Preparation and characterization of gum karaya hydrogel nanocomposite flocculant for metal ions removal from mine effluents. <i>International Journal of Environmental Science and Technology</i> , <b>2016</b> , 13, 711-724	3.3	41
33	A study on the adsorption of methylene blue onto gum ghatti/TiO <sub>2</sub> nanoparticles-based hydrogel nanocomposite. <i>International Journal of Biological Macromolecules</i> , <b>2016</b> , 88, 66-80	7.9	83
32	Efficient removal of rhodamine 6G dye from aqueous solution using nickel sulphide incorporated polyacrylamide grafted gum karaya bionanocomposite hydrogel. <i>RSC Advances</i> , <b>2016</b> , 6, 21929-21939	3.7	80
31	Recent Progress on the Design and Applications of Polysaccharide-Based Graft Copolymer Hydrogels as Adsorbents for Wastewater Purification. <i>Macromolecular Materials and Engineering</i> , <b>2016</b> , 301, 496-522	3.9	79
30	Adsorption of methyl violet from aqueous solution using gum xanthan/Fe <sub>3</sub> O <sub>4</sub> based nanocomposite hydrogel. <i>International Journal of Biological Macromolecules</i> , <b>2016</b> , 89, 1-11	7.9	106
29	A comparative study on the effect of different reaction conditions on graft co-polymerization, swelling, and thermal properties of Gum ghatti-based hydrogels. <i>Journal of Thermal Analysis and Calorimetry</i> , <b>2015</b> , 119, 131-144	4.1	17
28	Gum ghatti and poly(acrylamide-co-acrylic acid) based biodegradable hydrogel-evaluation of the flocculation and adsorption properties. <i>Polymer Degradation and Stability</i> , <b>2015</b> , 120, 42-52	4.7	45
27	Synthesis of co-polymer-grafted gum karaya and silica hybrid organic/inorganic hydrogel nanocomposite for the highly effective removal of methylene blue. <i>Chemical Engineering Journal</i> , <b>2015</b> , 279, 166-179	14.7	132
26	Effective removal of cationic dyes from aqueous solution using gum ghatti-based biodegradable hydrogel. <i>International Journal of Biological Macromolecules</i> , <b>2015</b> , 79, 8-20	7.9	77

25	Morphogenesis of ZnO nanostructures: role of acetate (COOH) and nitrate (NO <sub>3</sub> ) ligand donors from zinc salt precursors in synthesis and morphology dependent photocatalytic properties. <i>RSC Advances</i> , <b>2015</b> , 5, 38801-38809	3.7	54
24	Gum ghatti and acrylic acid based biodegradable hydrogels for the effective adsorption of cationic dyes. <i>Journal of Industrial and Engineering Chemistry</i> , <b>2015</b> , 22, 171-178	6.3	83
23	Flocculation and adsorption properties of biodegradable gum-ghatti-grafted poly(acrylamide-co-methacrylic acid) hydrogels. <i>Carbohydrate Polymers</i> , <b>2015</b> , 115, 617-28	10.3	68
22	The adsorption of Pb <sup>2+</sup> and Cu <sup>2+</sup> onto gum ghatti-grafted poly(acrylamide-co-acrylonitrile) biodegradable hydrogel: isotherms and kinetic models. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 2026-34	3.4	91
21	Gum ghatti and Fe <sub>3</sub> O <sub>4</sub> magnetic nanoparticles based nanocomposites for the effective adsorption of methylene blue from aqueous solution. <i>Journal of Industrial and Engineering Chemistry</i> , <b>2014</b> , 20, 2184-2192	6.3	50
20	Fabrication of photocatalyst based on Eu <sup>3+</sup> -doped ZnS-SiO <sub>2</sub> and sodium alginate core shell nanocomposite. <i>International Journal of Biological Macromolecules</i> , <b>2014</b> , 70, 143-9	7.9	22
19	Synthesis and flocculation properties of gum ghatti and poly(acrylamide-co-acrylonitrile) based biodegradable hydrogels. <i>Carbohydrate Polymers</i> , <b>2014</b> , 114, 321-329	10.3	46
18	Gum ghatti and Fe <sub>3</sub> O <sub>4</sub> magnetic nanoparticles based nanocomposites for the effective adsorption of rhodamine B. <i>Carbohydrate Polymers</i> , <b>2014</b> , 101, 1255-64	10.3	133
17	Synthesis, characterization and photoluminescence properties of Ce <sup>3+</sup> -doped ZnO-nanophosphors. <i>Chemical Papers</i> , <b>2014</b> , 68,	1.9	32
16	Effect of functionalization on the adsorption capacity of cellulose for the removal of methyl violet. <i>International Journal of Biological Macromolecules</i> , <b>2014</b> , 65, 389-97	7.9	50
15	Water-Soluble Carbon Nanotubes from Bitumen Waste: Synthesis, Functionalisation and Derivatisation for its Use as Superabsorbent. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , <b>2013</b> , 23, 1128-1137	3.2	3
14	Biosorption potential of Gum ghatti-g-poly(acrylic acid) and susceptibility to biodegradation by <i>B. subtilis</i> . <i>International Journal of Biological Macromolecules</i> , <b>2013</b> , 62, 370-8	7.9	36
13	Peroxide Treatment of Soy Protein Fibers Followed by Grafting of Poly(methyl acrylate) and Copolymers. <i>Journal of Renewable Materials</i> , <b>2013</b> , 1, 302-310	2.4	1
12	Preparation of poly(acrylamide-co-acrylic acid)-grafted gum and its flocculation and biodegradation studies. <i>Carbohydrate Polymers</i> , <b>2013</b> , 98, 397-404	10.3	52
11	Flocculation characteristics and biodegradation studies of Gum ghatti based hydrogels. <i>International Journal of Biological Macromolecules</i> , <b>2013</b> , 58, 37-46	7.9	47
10	Surface Functionalization of Sisal Fibers Using Peroxide Treatment Followed by Grafting of Poly(ethyl acrylate) and Copolymers. <i>International Journal of Polymer Analysis and Characterization</i> , <b>2013</b> , 18, 596-607	1.7	5
9	In Vacuo Synthesis of Xanthan-gum-based Hydrogels with Different Vinyl Monomer Mixtures and their Swelling Behaviour in Response to External Environmental Conditions. <i>Polymers From Renewable Resources</i> , <b>2013</b> , 4, 19-34	0.4	6
8	Surface Modification Of Ramie Fibers Using Microwave Assisted Graft Copolymerization Followed By <i>Brevibacillus Parabrevis</i> Pretreatment. <i>Advanced Materials Letters</i> , <b>2013</b> , 4, 742-748	2.4	8

7	A study on effect of different reaction conditions on grafting of psyllium and acrylic acid-based hydrogels. <i>Journal of Applied Polymer Science</i> , <b>2012</b> , 123, 1874-1883	2.9	14
6	Synthesis, characterization, and swelling behavior evaluation of hydrogels based on Gum ghatti and acrylamide for selective absorption of saline from different petroleum fraction saline emulsions. <i>Journal of Applied Polymer Science</i> , <b>2012</b> , 124, 2037-2047	2.9	54
5	Synthesis of Crosslinked Networks of Gum ghatti with Different Vinyl Monomer Mixtures and Effect of Ionic Strength of Various Cations on its Swelling Behavior. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , <b>2012</b> , 61, 99-115	3	37
4	Rapid Synthesis of Acrylamide onto Xanthan Gum Based Hydrogels under Microwave Radiations for Enhanced Thermal and Chemical Modifications. <i>Polymers From Renewable Resources</i> , <b>2011</b> , 2, 105-116	0.4	11
3	Gamma-radiation initiated synthesis of Psyllium and acrylic acid-based polymeric networks for selective absorption of water from different oil/water emulsions. <i>Journal of Applied Polymer Science</i> , <b>2011</b> , 124, n/a-n/a	2.9	2
2	Polysaccharide Graft Copolymers Synthesis, Properties and Applications <b>2011</b> , 35-57		
1	UTILIZATION OF ACRYLAMIDE AND NATURAL POLYSACCHARIDE BASED POLYMERIC NETWORKS IN PH CONTROLLED RELEASE OF 5-AMINO SALICYLIC ACID. <i>Journal of the Chilean Chemical Society</i> , <b>2010</b> , 55, 522-526	2.5	12