Hemant Mittal

List of Publications by Citations

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	Gum ghatti and Fe□□magnetic nanoparticles based nanocomposites for the effective adsorption of rhodamine B. *Carbohydrate Polymers*, **2014**, 101, 1255-64	10.3	133
59	Synthesis of co-polymer-grafted gum karaya and silica hybrid organic□inorganic hydrogel nanocomposite for the highly effective removal of methylene blue. *Chemical Engineering Journal*, **2015**, 279, 166-179	14.7	132
58	Adsorption of methyl violet from aqueous solution using gum xanthan/Fe3O4 based nanocomposite hydrogel. *International Journal of Biological Macromolecules*, **2016**, 89, 1-11	7.9	106
57	Recent progress in the structural modification of chitosan for applications in diversified biomedical fields. *European Polymer Journal*, **2018**, 109, 402-434	5.2	93
56	The adsorption of Pb2+ and Cu2+ onto gum ghatti-grafted poly(acrylamide-co-acrylonitrile) biodegradable hydrogel: isotherms and kinetic models. *Journal of Physical Chemistry B*, **2015**, 119, 2026-39	3.4	91
55	Gum ghatti and acrylic acid based biodegradable hydrogels for the effective adsorption of cationic dyes. *Journal of Industrial and Engineering Chemistry*, **2015**, 22, 171-178	6.3	83
54	A study on the adsorption of methylene blue onto gum ghatti/TiO2 nanoparticles-based hydrogel nanocomposite. *International Journal of Biological Macromolecules*, **2016**, 88, 66-80	7.9	83
53	Efficient removal of rhodamine 6G dye from aqueous solution using nickel sulphide incorporated polyacrylamide grafted gum karaya bionanocomposite hydrogel. *RSC Advances*, **2016**, 6, 21929-21939	3.7	80
52	Thermodynamic properties and adsorption behaviour of hydrogel nanocomposites for cadmium removal from mine effluents. *Journal of Industrial and Engineering Chemistry*, **2017**, 48, 151-161	6.3	79
51	Gum karaya based hydrogel nanocomposites for the effective removal of cationic dyes from aqueous solutions. *Applied Surface Science*, **2016**, 364, 917-930	6.7	79
50	Recent Progress on the Design and Applications of Polysaccharide-Based Graft Copolymer Hydrogels as Adsorbents for Wastewater Purification. *Macromolecular Materials and Engineering*, **2016**, 301, 496-522	3.9	79
49	Effective removal of cationic dyes from aqueous solution using gum ghatti-based biodegradable hydrogel. *International Journal of Biological Macromolecules*, **2015**, 79, 8-20	7.9	77
48	Flocculation and adsorption properties of biodegradable gum-ghatti-grafted poly(acrylamide-co-methacrylic acid) hydrogels. *Carbohydrate Polymers*, **2015**, 115, 617-28	10.3	68
47	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. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 17011-17025	8.3	68
46	Graphene oxide crosslinked hydrogel nanocomposites of xanthan gum for the adsorption of crystal violet dye. *Journal of Molecular Liquids*, **2021**, 323, 115034	6	66
45	Efficient organic dye removal from wastewater by magnetic carbonaceous adsorbent prepared from corn starch. *Journal of Environmental Chemical Engineering*, **2018**, 6, 7119-7131	6.8	61
44	In-Situ Synthesis of ZnO Nanoparticles using Gum Arabic Based Hydrogels as a Self-template for Effective Malachite Green Dye Adsorption. *Journal of Polymers and the Environment*, **2020**, 28, 1637-1653	4.5	59

43	Morphogenesis of ZnO nanostructures: role of acetate (COOH) and nitrate (NO3) ligand donors from zinc salt precursors in synthesis and morphology dependent photocatalytic properties. *RSC Advances*, **2015**, 5, 38801-38809	3.7	54
42	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. *Journal of Applied Polymer Science*, **2012**, 124, 2037-2047	2.9	54
41	Preparation of poly(acrylamide-co-acrylic acid)-grafted gum and its flocculation and biodegradation studies. *Carbohydrate Polymers*, **2013**, 98, 397-404	10.3	52
40	Zeolite-Y incorporated karaya gum hydrogel composites for highly effective removal of cationic dyes. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2020**, 586, 124161	5.1	51
39	Modification of gum ghatti via grafting with acrylamide and analysis of its flocculation, adsorption, and biodegradation properties. *International Journal of Biological Macromolecules*, **2018**, 114, 283-294	7.9	50
38	Gum ghatti and Fe3O4 magnetic nanoparticles based nanocomposites for the effective adsorption of methylene blue from aqueous solution. *Journal of Industrial and Engineering Chemistry*, **2014**, 20, 2184-2192	6.3	50
37	Effect of functionalization on the adsorption capacity of cellulose for the removal of methyl violet. *International Journal of Biological Macromolecules*, **2014**, 65, 389-97	7.9	50
36	Flocculation characteristics and biodegradation studies of Gum ghatti based hydrogels. *International Journal of Biological Macromolecules*, **2013**, 58, 37-46	7.9	47
35	Synthesis and flocculation properties of gum ghatti and poly(acrylamide-co-acrylonitrile) based biodegradable hydrogels. *Carbohydrate Polymers*, **2014**, 114, 321-329	10.3	46
34	Biodegradable hydrogels of tragacanth gum polysaccharide to improve water retention capacity of soil and environment-friendly controlled release of agrochemicals. *International Journal of Biological Macromolecules*, **2019**, 132, 1252-1261	7.9	45
33	Gum ghatti and poly(acrylamide-co-acrylic acid) based biodegradable hydrogel-evaluation of the flocculation and adsorption properties. *Polymer Degradation and Stability*, **2015**, 120, 42-52	4.7	45
32	Adsorption isotherm and kinetics of water vapors on novel superporous hydrogel composites. *Microporous and Mesoporous Materials*, **2020**, 299, 110106	5.3	41
31	Preparation and characterization of gum karaya hydrogel nanocomposite flocculant for metal ions removal from mine effluents. *International Journal of Environmental Science and Technology*, **2016**, 13, 711-724	3.3	41
30	Utilization of gum xanthan based superporous hydrogels for the effective removal of methyl violet from aqueous solution. *International Journal of Biological Macromolecules*, **2020**, 143, 413-423	7.9	38
29	Synthesis of Crosslinked Networks of Gum ghatti with Different Vinyl Monomer Mixtures and Effect of Ionic Strength of Various Cations on its Swelling Behavior. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2012**, 61, 99-115	3	37
28	Biosorption potential of Gum ghatti-g-poly(acrylic acid) and susceptibility to biodegradation by B. subtilis. *International Journal of Biological Macromolecules*, **2013**, 62, 370-8	7.9	36
27	High efficiency removal of methylene blue dye using carrageenan-poly(acrylamide-co-methacrylic acid)/AQSOA-Z05 zeolite hydrogel composites. *Cellulose*, **2020**, 27, 8269-8285	5.5	34
26	GO crosslinked hydrogel nanocomposites of chitosan/carboxymethyl cellulose - A versatile adsorbent for the treatment of dyes contaminated wastewater. *International Journal of Biological Macromolecules*, **2021**, 167, 1248-1261	7.9	34

25	Synthesis, characterization and photoluminescence properties of Ce3+-doped ZnO-nanophosphors. *Chemical Papers*, **2014**, 68,	1.9	32
24	Solid polymer desiccants based on poly(acrylic acid-co-acrylamide) and Laponite RD: Adsorption isotherm and kinetics studies. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2020**, 599, 124813	5.1	30
23	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. *Journal of Environmental Management*, **2020**, 258, 110029	7.9	29
22	Sustained delivery of atenolol drug using gum dammar crosslinked polyacrylamide and zirconium based biodegradable hydrogel composites. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2019**, 562, 136-145	5.1	25
21	Fabrication of photocatalyst based on Eu3+-doped ZnS-SiO2 and sodium alginate core shell nanocomposite. *International Journal of Biological Macromolecules*, **2014**, 70, 143-9	7.9	22
20	Advanced TiO-SiO-Sulfur (Ti-Si-S) Nanohybrid Materials: Potential Adsorbent for the Remediation of Contaminated Wastewater. *ACS Applied Materials & Interfaces*, **2019**, 11, 30247-30258	9.5	20
19	A comparative study on the effect of different reaction conditions on graft co-polymerization, swelling, and thermal properties of Gum ghatti-based hydrogels. *Journal of Thermal Analysis and Calorimetry*, **2015**, 119, 131-144	4.1	17
18	A study on effect of different reaction conditions on grafting of psyllium and acrylic acid-based hydrogels. *Journal of Applied Polymer Science*, **2012**, 123, 1874-1883	2.9	14
17	Low-Temperature Synthesis of Magnetic Carbonaceous Materials Coated with Nanosilica for Rapid Adsorption of Methylene Blue. *ACS Omega*, **2020**, 5, 6100-6112	3.9	12
16	UTILIZATION OF ACRYLAMIDE AND NATURAL POLYSACCHARIDE BASED POLYMERIC NETWORKS IN PH CONTROLLED RELEASE OF 5-AMINO SALICYLIC ACID. *Journal of the Chilean Chemical Society*, **2010**, 55, 522-526	2.5	12
15	Rapid Synthesis of Acrylamide onto Xanthan Gum Based Hydrogels under Microwave Radiations for Enhanced Thermal and Chemical Modifications. *Polymers From Renewable Resources*, **2011**, 2, 105-116	0.4	11
14	Surface Modification Of Ramie Fibers Using Microwave Assisted Graft Copolymerization Followed By Brevibacillus Parabrevis Pretreatment. *Advanced Materials Letters*, **2013**, 4, 742-748	2.4	8
13	Mercury removal by porous sulfur copolymers: Adsorption isotherm and kinetics studies. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2020**, 606, 125333	5.1	7
12	Facile synthesis of 2D nanoflakes and 3D nanosponge-like Ni1⊠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. *Journal of Molecular Liquids*, **2021**, 325, 115235	6	7
11	Experimental assessment of the utilization of a novel interpenetrating polymer network in different processes in the agricultural sector. *Journal of Applied Polymer Science*, **2019**, 136, 47739	2.9	6
10	In Vacuo Synthesis of Xanthan-gum-based Hydrogels with Different Vinyl Monomer Mixtures and their Swelling Behaviour in Response to External Environmental Conditions. *Polymers From Renewable Resources*, **2013**, 4, 19-34	0.4	6
9	Surface Functionalization of Sisal Fibers Using Peroxide Treatment Followed by Grafting of Poly(ethyl acrylate) and Copolymers. *International Journal of Polymer Analysis and Characterization*, **2013**, 18, 596-607	1.7	5
8	Water-Soluble Carbon Nanotubes from Bitumen Waste: Synthesis, Functionalisation and Derivatisation for its Use as Superabsorbent. *Journal of Inorganic and Organometallic Polymers and Materials*, **2013**, 23, 1128-1137	3.2	3

List of Publications

7	Hybrid super-porous hydrogel composites with high water vapor adsorption capacity Adsorption isotherm and kinetics studies. *Journal of Environmental Chemical Engineering*, **2021**, 9, 106611	6.8	3
6	Gamma-radiation initiated synthesis of Psyllium and acrylic acid-based polymeric networks for selective absorption of water from different oil water emulsions. *Journal of Applied Polymer Science*, **2011**, 124, n/a-n/a	2.9	2
5	Crosslinked hydrogels of polyethylenimine and graphene oxide to treat Cr(VI) contaminated wastewater. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2021**, 630, 127533	5.1	2
4	Peroxide Treatment of Soy Protein Fibers Followed by Grafting of Poly(methyl acrylate) and Copolymers. *Journal of Renewable Materials*, **2013**, 1, 302-310	2.4	1
3	Water vapor adsorption on metal-exchanged hierarchical porous zeolite-Y. *Microporous and Mesoporous Materials*, **2021**, 326, 111380	5.3	1
2	Capturing water vapors from atmospheric air using superporous gels.. *Scientific Reports*, **2022**, 12, 5626	4.9	0
1	Polysaccharide Graft Copolymers Synthesis, Properties and Applications **2011**, 35-57		