Hemant Mittal

List of Publications by Year
in descending order

60 papers	3,767 citations	87886 38 h-index	128286 60 g-index
61 all docs	61 docs citations	61 times ranked	2894 citing authors

#	Article	IF	Citations
1	Gum ghatti and Fe3O4 magnetic nanoparticles based nanocomposites for the effective adsorption of rhodamine B. Carbohydrate Polymers, 2014, 101, 1255-1264.	10.2	169
2	Synthesis of co-polymer-grafted gum karaya and silica hybrid organicâ€“inorganic hydrogel nanocomposite for the highly effective removal of methylene blue. Chemical Engineering Journal, 2015, 279, 166-179.	12.7	165
3	Graphene oxide crosslinked hydrogel nanocomposites of xanthan gum for the adsorption of crystal violet dye. Journal of Molecular Liquids, 2021, 323, 115034.	4.9	162
4	Recent progress in the structural modification of chitosan for applications in diversified biomedical fields. European Polymer Journal, 2018, 109, 402-434.	5.4	147
5	Adsorption of methyl violet from aqueous solution using gum xanthan/Fe3O4 based nanocomposite hydrogel. International Journal of Biological Macromolecules, 2016, 89, 1-11.	7.5	141
6	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.	5.0	124
7	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.	7.5	118
8	Recent Progress on the Design and Applications of Polysaccharideâ€Based Graft Copolymer Hydrogels as Adsorbents for Wastewater Purification. Macromolecular Materials and Engineering, 2016, 301, 496-522.	3.6	114
9	The Adsorption of Pb²⁺ and Cu²⁺ onto Gum Ghatti-Grafted Poly(acrylamide-<i>co</i>-acrylonitrile) Biodegradable Hydrogel: Isotherms and Kinetic Models. Journal of Physical Chemistry B, 2015, 119, 2026-2039.	2.6	111
10	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.	6.7	108
11	Gum karaya based hydrogel nanocomposites for the effective removal of cationic dyes from aqueous solutions. Applied Surface Science, 2016, 364, 917-930.	6.1	106
12	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.	5.8	103
13	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.	3.6	100
14	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.	4.7	100
15	Thermodynamic properties and adsorption behaviour of hydrogel nanocomposites for cadmium removal from mine effluents. Journal of Industrial and Engineering Chemistry, 2017, 48, 151-161.	5.8	99
16	Effective removal of cationic dyes from aqueous solution using gum ghatti-based biodegradable hydrogel. International Journal of Biological Macromolecules, 2015, 79, 8-20.	7.5	97
17	Efficient organic dye removal from wastewater by magnetic carbonaceous adsorbent prepared from corn starch. Journal of Environmental Chemical Engineering, 2018, 6, 7119-7131.	6.7	97
18	GO crosslinked hydrogel nanocomposites of chitosan/carboxymethyl cellulose â€“ A versatile adsorbent for the treatment of dyes contaminated wastewater. International Journal of Biological Macromolecules, 2021, 167, 1248-1261.	7.5	92

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19	Flocculation and adsorption properties of biodegradable gum-ghatti-grafted poly(acrylamide-co-methacrylic acid) hydrogels. Carbohydrate Polymers, 2015, 115, 617-628.	10.2	88
20	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.	7.5	81
21	Adsorption isotherm and kinetics of water vapors on novel superporous hydrogel composites. Microporous and Mesoporous Materials, 2020, 299, 110106.	4.4	80
22	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.	7.5	74
23	Morphogenesis of ZnO nanostructures: role of acetate (COOH^{â^'}) and nitrate (NO₃^{â^'}) ligand donors from zinc salt precursors in synthesis and morphology dependent photocatalytic properties. RSC Advances, 2015, 5, 38801-38809.	3.6	69
24	High efficiency removal of methylene blue dye using Î°-carrageenan-poly(acrylamide-co-methacrylic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	4.9	69
25	Synthesis, characterization, and swelling behavior evaluation of hydrogels based on <i>Gum ghatti</i> and acrylamide for selective absorption of saline from different petroleum fractionâ€"saline emulsions. Journal of Applied Polymer Science, 2012, 124, 2037-2047.	2.6	62
26	Effect of functionalization on the adsorption capacity of cellulose for the removal of methyl violet. International Journal of Biological Macromolecules, 2014, 65, 389-397.	7.5	62
27	Preparation of poly(acrylamide-co-acrylic acid)-grafted gum and its flocculation and biodegradation studies. Carbohydrate Polymers, 2013, 98, 397-404.	10.2	59
28	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.	5.8	59
29	Synthesis and flocculation properties of gum ghatti and poly(acrylamide-co-acrylonitrile) based biodegradable hydrogels. Carbohydrate Polymers, 2014, 114, 321-329.	10.2	58
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.	7.5	58
31	Flocculation characteristics and biodegradation studies of Gum ghatti based hydrogels. International Journal of Biological Macromolecules, 2013, 58, 37-46.	7.5	57
32	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.	5.8	55
33	Super porous TiO2 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.	7.8	54
34	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.	4.7	50
35	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.	3.5	48
36	Synthesis of Crosslinked Networks of<i>Gum ghatti</i>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.	3.4	45

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37	Biosorption potential of Gum ghatti-g-poly(acrylic acid) and susceptibility to biodegradation by B. subtilis. International Journal of Biological Macromolecules, 2013, 62, 370-378.	7.5	41
38	Synthesis, characterization and photoluminescence properties of Ce3+-doped ZnO-nanophosphors. Chemical Papers, 2014, 68, .	2.2	41
39	Low-Temperature Synthesis of Magnetic Carbonaceous Materials Coated with Nanosilica for Rapid Adsorption of Methylene Blue. ACS Omega, 2020, 5, 6100-6112.	3.5	40
40	Advanced TiO₂â€“SiO₂â€“Sulfur (Tiâ€“Siâ€“S) Nanohybrid Materials: Potential Adsorbent for the Remediation of Contaminated Wastewater. ACS Applied Materials & Interfaces, 2019, 11, 30247-30258.	8.0	39
41	Fabrication of photocatalyst based on Eu3+-doped ZnSâ€“SiO2 and sodium alginate core shell nanocomposite. International Journal of Biological Macromolecules, 2014, 70, 143-149.	7.5	36
42	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.	4.7	36
43	Mercury removal by porous sulfur copolymers: Adsorption isotherm and kinetics studies. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 606, 125333.	4.7	27
44	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.	3.6	25
45	Crosslinked hydrogels of polyethylenimine and graphene oxide to treat Cr(VI) contaminated wastewater. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 630, 127533.	4.7	23
46	A study on effect of different reaction conditions on grafting of psyllium and acrylic acidâ€based hydrogels. Journal of Applied Polymer Science, 2012, 123, 1874-1883.	2.6	22
47	Hybrid super-porous hydrogel composites with high water vapor adsorption capacity â€“ Adsorption isotherm and kinetics studies. Journal of Environmental Chemical Engineering, 2021, 9, 106611.	6.7	21
48	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.	1.2	19
49	Facile synthesis of 2D nanoflakes and 3D nanosponge-like Ni1â^’xO 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.	4.9	16
50	Gammaâ€radiation initiated synthesis of <i>Psyllium</i> and acrylic acidâ€based polymeric networks for selective absorption of water from different oilâ€“water emulsions. Journal of Applied Polymer Science, 2012, 124, 4969-4977.	2.6	15
51	Water vapor adsorption on metal-exchanged hierarchical porous zeolite-Y. Microporous and Mesoporous Materials, 2021, 326, 111380.	4.4	14
52	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.	1.3	13
53	Capturing water vapors from atmospheric air using superporous gels. Scientific Reports, 2022, 12, 5626.	3.3	12
54	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.	2.6	11

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55	Surface Modification Of Ramie Fibers Using Microwave Assisted Graft Copolymerization Followed By Brevibacillus Parabrevis Pretreatment. Advanced Materials Letters, 2013, 4, 742-748.	0.6	10
56	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.	1.9	9
57	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.	1.3	9
58	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.	3.7	4
59	Peroxide Treatment of Soy Protein Fibers Followed by Grafting of Poly(methyl acrylate) and Copolymers. Journal of Renewable Materials, 2013, 1, 302-310.	2.2	1
60	Synthesis and Characterization of Gold Nanoparticles Conjugated Magnetite Nanoparticles via Phosphonic Acid Linkage. Current Nanoscience, 2013, 9, 787-791.	1.2	1