

# Dibyendu Mondal

## List of Publications by Year in descending order

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90  
papers

3,597  
citations

136950

32  
h-index

144013

57  
g-index

96  
all docs

96  
docs citations

96  
times ranked

4363  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ionic-Liquid-Mediated Extraction and Separation Processes for Bioactive Compounds: Past, Present, and Future Trends. <i>Chemical Reviews</i> , 2017, 117, 6984-7052.	47.7	689
2	Dissolution of $\beta$ -chitin in deep eutectic solvents. <i>RSC Advances</i> , 2013, 3, 18149.	3.6	207
3	Deep eutectic solvents as efficient solvent system for the extraction of $\beta$ -carrageenan from <i>Kappaphycus alvarezii</i> . <i>Carbohydrate Polymers</i> , 2016, 136, 930-935.	10.2	126
4	Choline chloride- $\epsilon$ -thiourea, a deep eutectic solvent for the production of chitin nanofibers. <i>Carbohydrate Polymers</i> , 2014, 103, 466-471.	10.2	122
5	Improved solubility of DNA in recyclable and reusable bio-based deep eutectic solvents with long-term structural and chemical stability. <i>Chemical Communications</i> , 2013, 49, 9606.	4.1	106
6	Effect of xanthan gum and guar gum on in situ gelling ophthalmic drug delivery system based on poloxamer-407. <i>International Journal of Biological Macromolecules</i> , 2013, 62, 117-123.	7.5	96
7	Deep eutectic solvent promoted one step sustainable conversion of fresh seaweed biomass to functionalized graphene as a potential electrocatalyst. <i>Green Chemistry</i> , 2016, 18, 2819-2826.	9.0	84
8	Long-term protein packaging in cholinium-based ionic liquids: improved catalytic activity and enhanced stability of cytochrome c against multiple stresses. <i>Green Chemistry</i> , 2017, 19, 4900-4911.	9.0	83
9	Suitability of bio-based ionic liquids for the extraction and purification of IgG antibodies. <i>Green Chemistry</i> , 2016, 18, 6071-6081.	9.0	74
10	Rapid dissolution of DNA in a novel bio-based ionic liquid with long-term structural and chemical stability: successful recycling of the ionic liquid for reuse in the process. <i>Chemical Communications</i> , 2013, 49, 6849.	4.1	67
11	Improving the extraction and purification of immunoglobulin G by the use of ionic liquids as adjuvants in aqueous biphasic systems. <i>Journal of Biotechnology</i> , 2016, 236, 166-175.	3.8	65
12	Preparation of tamarind gum based soft ion gels having thixotropic properties. <i>Carbohydrate Polymers</i> , 2014, 102, 467-471.	10.2	64
13	Creating ultrahigh surface area functional carbon from biomass for high performance supercapacitor and facile removal of emerging pollutants. <i>Chemical Engineering Journal</i> , 2022, 427, 131477.	12.7	59
14	Elimination of gibberellin from <i>Kappaphycus alvarezii</i> seaweed sap foliar spray enhances corn stover production without compromising the grain yield advantage. <i>Plant Growth Regulation</i> , 2015, 75, 657-666.	3.4	55
15	Microbial synthesis of polyhydroxyalkanoate using seaweed-derived crude levulinic acid as co-nutrient. <i>International Journal of Biological Macromolecules</i> , 2015, 72, 487-494.	7.5	54
16	Stimuli responsive ion gels based on polysaccharides and other polymers prepared using ionic liquids and deep eutectic solvents. <i>Carbohydrate Polymers</i> , 2018, 180, 328-336.	10.2	53
17	Binder free self-standing high performance supercapacitive electrode based on graphene/titanium carbide composite aerogel. <i>Applied Surface Science</i> , 2019, 481, 892-899.	6.1	52
18	Uncovering the Phytochemical Basis and the Mechanism of Plant Extract-Mediated Eco-Friendly Synthesis of Silver Nanoparticles Using Ultra-Performance Liquid Chromatography Coupled with a Photodiode Array and High-Resolution Mass Spectrometry. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 562-571.	6.7	52

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19	Seaweed-Derived Nontoxic Functionalized Graphene Sheets as Sustainable Materials for the Efficient Removal of Fluoride from High Fluoride Containing Drinking Water. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 3488-3498.	6.7	51
20	One-step green route synthesis of spinel ZnMn <sub>2</sub> O <sub>4</sub> nanoparticles decorated on MWCNTs as a novel electrode material for supercapacitor. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2020, 252, 114481.	3.5	50
21	Very High Concentration Solubility and Long-Term Stability of DNA in an Ammonium-Based Ionic Liquid: A Suitable Medium for Nucleic Acid Packaging and Preservation. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 1998-2005.	6.7	49
22	A green and sustainable approach to utilize bio-ionic liquids for the selective precipitation of high purity agarose from an agarophyte extract. <i>Green Chemistry</i> , 2015, 17, 2867-2873.	9.0	48
23	Exploring the Mechanism of Covalent Inhibition: Simulating the Binding Free Energy of $\hat{\pm}$ -Ketoamide Inhibitors of the Main Protease of SARS-CoV-2. <i>Biochemistry</i> , 2020, 59, 4601-4608.	2.5	45
24	Fuel intermediates, agricultural nutrients and pure water from <i>Kappaphycus alvarezii</i> seaweed. <i>RSC Advances</i> , 2013, 3, 17989.	3.6	43
25	Low operating pressure nanofiltration membrane with functionalized natural nanoclay as antifouling and flux promoting agent. <i>Chemical Engineering Journal</i> , 2019, 358, 821-830.	12.7	43
26	Biomolecule-derived quantum dots for sustainable optoelectronics. <i>Nanoscale Advances</i> , 2019, 1, 913-936.	4.6	42
27	Self-healing guar gum and guar gum-multiwalled carbon nanotubes nanocomposite gels prepared in an ionic liquid. <i>Carbohydrate Polymers</i> , 2013, 98, 1025-1030.	10.2	41
28	Ultrafast synthesis of exfoliated manganese oxides in deep eutectic solvents for water purification and energy storage. <i>Chemical Engineering Journal</i> , 2020, 379, 122327.	12.7	38
29	A facile approach to prepare a dual functionalized DNA based material in a bio-deep eutectic solvent. <i>Chemical Communications</i> , 2014, 50, 3989-3992.	4.1	37
30	Effect of PVA on the gel temperature of MC and release kinetics of KT from MC based ophthalmic formulations. <i>International Journal of Biological Macromolecules</i> , 2012, 50, 565-572.	7.5	36
31	High concentration DNA solubility in bio-ionic liquids with long-lasting chemical and structural stability at room temperature. <i>RSC Advances</i> , 2015, 5, 40546-40551.	3.6	33
32	Introducing deep eutectic solvents as flux boosting and surface cleaning agents for thin film composite polyamide membranes. <i>Green Chemistry</i> , 2020, 22, 2381-2387.	9.0	33
33	Sustainable Water Reclamation from Different Feed Streams by Forward Osmosis Process Using Deep Eutectic Solvents as Reusable Draw Solution. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 14623-14632.	3.7	32
34	Simultaneous dehydration of biomass-derived sugars to 5-hydroxymethyl furfural (HMF) and reduction of graphene oxide in ethyl lactate: one pot dual chemistry. <i>RSC Advances</i> , 2014, 4, 29834-29839.	3.6	31
35	Green one step morphosynthesis of silver nanoparticles and their antibacterial and anticancerous activities. <i>New Journal of Chemistry</i> , 2016, 40, 2749-2762.	2.8	31
36	Progress in marine derived renewable functional materials and biochar for sustainable water purification. <i>Green Chemistry</i> , 2021, 23, 8305-8331.	9.0	31

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37	Effect of PEG salt mixture on the gelation temperature and morphology of MC gel for sustained delivery of drug. <i>Carbohydrate Polymers</i> , 2013, 91, 529-536.	10.2	30
38	Four-fold concentration of sucrose in sugarcane juice through energy efficient forward osmosis using sea bitters as draw solution. <i>RSC Advances</i> , 2015, 5, 17872-17878.	3.6	29
39	Catalyzing the Intercalation Storage Capacity of Aqueous Zinc-Ion Battery Constructed with Zn(II) Preinserted Organo-Vanadyl Hybrid Cathode. <i>ACS Applied Energy Materials</i> , 2020, 3, 3425-3434.	5.1	27
40	Thermochemical conversion pathways of <i>Kappaphycus alvarezii</i> granules through study of kinetic models. <i>Bioresource Technology</i> , 2017, 234, 233-242.	9.6	26
41	Deep eutectic solvents as a new class of draw agent to enrich low abundance DNA and proteins using forward osmosis. <i>RSC Advances</i> , 2015, 5, 89539-89544.	3.6	25
42	Sustainable Processing and Synthesis of Nontoxic and Antibacterial Magnetic Nanocomposite from Spider Silk in Neoteric Solvents. <i>ACS Sustainable Chemistry and Engineering</i> , 2015, 3, 2575-2581.	6.7	23
43	Developing helical carbon functionalized chitosan-based loose nanofiltration membranes for selective separation and wastewater treatment. <i>Chemical Engineering Journal</i> , 2021, 417, 127911.	12.7	23
44	Preparation of bio-deep eutectic solvent triggered cephalopod shaped silver chloride-DNA hybrid material having antibacterial and bactericidal activity. <i>Materials Science and Engineering C</i> , 2015, 56, 125-131.	7.3	21
45	Engineering a Biopolymer-Based Ultrafast Permeable Aerogel Membrane Decorated with Task-Specific Fe-Al Nanocomposites for Robust Water Purification. <i>ACS Applied Bio Materials</i> , 2020, 3, 5233-5243.	4.6	21
46	Fe-Al based nanocomposite reinforced hydrothermal carbon: Efficient and robust absorbent for anionic dyes. <i>Chemosphere</i> , 2020, 259, 127421.	8.2	21
47	Multifunctional solvothermal carbon derived from alginate using water-in-deep eutectic solvents for enhancing enzyme activity. <i>Chemical Communications</i> , 2020, 56, 9659-9662.	4.1	21
48	High concentration solubility and stability of $\beta$ -poly-L-lysine in an ammonium-based ionic liquid: A suitable media for polypeptide packaging and biomaterial preparation. <i>International Journal of Biological Macromolecules</i> , 2018, 120, 378-384.	7.5	20
49	Engineering Fe-doped highly oxygenated solvothermal carbon from glucose-based eutectic system as active microcleaner and efficient carbocatalyst. <i>Journal of Materials Chemistry A</i> , 2019, 7, 4988-4997.	10.3	20
50	Protein packaging in ionic liquid mixtures: an ecofriendly approach towards the improved stability of $\beta$ -lactoglobulin in cholinium-based mixed ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 14811-14821.	2.8	20
51	Bioinspired engineering protein nanofibrils-based multilayered self-cleaning membranes for universal water purification. <i>Journal of Hazardous Materials</i> , 2022, 424, 127561.	12.4	20
52	Direct conversion of lignocellulosic biomass to biomimetic tendril-like functional carbon helices: a protein friendly host for cytochrome C. <i>Green Chemistry</i> , 2018, 20, 3711-3716.	9.0	19
53	Facile Process for Metallizing DNA in a Multitasking Deep Eutectic Solvent for Ecofriendly C-C Coupling Reaction and Nitrobenzene Reduction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 14225-14235.	6.7	19
54	Sustainable Water Purification Using an Engineered Solvothermal Carbon Based Membrane Derived from a Eutectic System. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 10143-10153.	6.7	19

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55	Production of partially reduced graphene oxide nanosheets using a seaweed sap. RSC Advances, 2014, 4, 64583-64588.	3.6	18
56	EF-Tu and EF-G are activated by allosteric effects. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3386-3391.	7.1	18
57	Boosting the electrochemical performance of polyaniline based all-solid-state flexible supercapacitor using NiFe <sub>2</sub> O <sub>4</sub> as adjuvant. Journal of Electroanalytical Chemistry, 2019, 851, 113482.	3.8	18
58	Designing biological fluid inspired molecularly crowded ionic liquid media as a sustainable packaging platform for cytochrome c. Chemical Communications, 2019, 55, 5747-5750.	4.1	18
59	New prospects on solvothermal carbonisation assisted by organic solvents, ionic liquids and eutectic mixtures – A critical review. Progress in Materials Science, 2022, 126, 100932.	32.8	18
60	Solvent responsive healing of guar gum and guar gum–multiwalled carbon nanotube nanocomposite gels prepared in an ionic liquid. RSC Advances, 2013, 3, 16509.	3.6	17
61	Hybrid alginate–protein cryogel beads: efficient and sustainable bio-based materials to purify immunoglobulin G antibodies. Green Chemistry, 2020, 22, 2225-2233.	9.0	17
62	Exploring the Effectiveness of Binding Free Energy Calculations. Journal of Physical Chemistry B, 2019, 123, 8910-8915.	2.6	16
63	Engineering Quantum Dots with Ionic Liquid: A Multifunctional White Light Emitting Hydrogel for Enzyme Packaging. Advanced Optical Materials, 2020, 8, 1902022.	7.3	16
64	Combinatorial Approach for Exploring Conformational Space and Activation Barriers in Computer-Aided Enzyme Design. ACS Catalysis, 2020, 10, 6002-6012.	11.2	16
65	Exploring the activation pathway and G <sub>i</sub> -coupling specificity of the $\mu$ -opioid receptor. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26218-26225.	7.1	15
66	Exploring the Activation Process of the $\mu$ 2AR-G <sub>s</sub> Complex. Journal of the American Chemical Society, 2021, 143, 11044-11051.	13.7	14
67	Neoteric solvent-based blue biorefinery: for chemicals, functional materials and fuels from oceanic biomass. Green Chemistry, 2021, 23, 8821-8847.	9.0	14
68	Biomass derived solvents for the scalable production of single layered graphene from graphite. Chemical Communications, 2016, 52, 9074-9077.	4.1	13
69	Exploring the Proteolysis Mechanism of the Proteasomes. Journal of Physical Chemistry B, 2020, 124, 5626-5635.	2.6	12
70	Engineering Cytochrome C with Quantum Dots and Ionic Liquids: A Win-Win Strategy for Protein Packaging against Multiple Stresses. ACS Sustainable Chemistry and Engineering, 2021, 9, 8327-8335.	6.7	11
71	Synthesis of functionalized N-doped graphene DNA hybrid material in a deep eutectic solvent. Green Chemistry, 2016, 18, 4297-4302.	9.0	10
72	Solvent Thermodynamic Driving Force Controls Stacking Interactions between Polyaromatics. Journal of Physical Chemistry C, 2016, 120, 23858-23869.	3.1	10

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73	Unconventional Electrode Material Prepared from Coir Fiber through Sputter Coating of Gold: A Study toward Value Addition of Natural Biopolymer. ACS Sustainable Chemistry and Engineering, 2014, 2, 348-352.	6.7	9
74	Studies on the effect of bio-ionic liquid structures on the spontaneous reduction and dispersion stability of graphene oxide in aqueous media. RSC Advances, 2014, 4, 42197-42201.	3.6	8
75	Exploring the Drug Resistance of HCV Protease. Journal of Physical Chemistry B, 2017, 121, 6831-6840.	2.6	8
76	Restructuring thin film composite membrane interfaces using biopolymer as a sustainable alternative to prevent organic fouling. Carbohydrate Polymers, 2021, 254, 117297.	10.2	8
77	Purification of immunoglobulin Y from egg yolk using thermoresponsive aqueous micellar two-phase systems comprising ionic liquids. Separation and Purification Technology, 2022, 288, 120589.	7.9	8
78	Presenting B-DNA as macromolecular crowding agent to improve efficacy of cytochrome c under various stresses. International Journal of Biological Macromolecules, 2022, 215, 184-191.	7.5	8
79	Biomass-based composites from different sources. , 2017, , 45-76.		7
80	Instantaneous fibrillation of egg white proteome with ionic liquid and macromolecular crowding. Communications Materials, 2020, 1, .	6.9	7
81	Fabrication of composites reinforced with lignocellulosic materials from agricultural biomass. , 2017, , 179-191.		6
82	Nanocomposite-based high-performance adsorptive water filters: recent advances, limitations, nanotoxicity and environmental implications. Environmental Science: Nano, 2022, 9, 2320-2341.	4.3	6
83	Syntheses and characterization of few bio-ionic liquids comprising of cholinium cation and plant derived carboxylic acids as anions. Journal of the Indian Chemical Society, 2021, 98, 100205.	2.8	5
84	Experimental evidence for the participation of deep eutectic solvents in silver chloride crystal formation at low temperature. Journal of Crystal Growth, 2016, 442, 95-97.	1.5	4
85	Biomass-derived carbon helices induced phase transition in poly(N-isopropylacrylamide): A sustainable tailoring of coil-globule transition in thermoresponsive polymer. Colloids and Surfaces B: Biointerfaces, 2020, 187, 110637.	5.0	4
86	Seaweed biomass derived bio solvents for the large scale production of few layered graphene nanosheets from graphite. Materials Science for Energy Technologies, 2021, 4, 100-106.	1.8	4
87	Designing biopolymer-based artificial peroxidase for oxidative removal of dibenzothiophene from a model diesel fuel. International Journal of Biological Macromolecules, 2021, 183, 1784-1793.	7.5	3
88	Histidine protonation states are key in the LigI catalytic reaction mechanism. Proteins: Structure, Function and Bioinformatics, 2021, , .	2.6	2
89	Quantum chemical investigation of thermochemistry in Calvin cycle. Journal of Chemical Sciences, 2015, 127, 2231-2240.	1.5	1
90	Biomass nanofibrillar cellulose in nanocomposites. , 2017, , 305-326.		1