

Dibyendu Mondal

List of Publications by Year in descending order

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Version: 2024-02-01

90
papers

3,597
citations

136950

32
h-index

144013

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96
all docs

96
docs citations

96
times ranked

4363
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	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
3	Purification of immunoglobulin Y from egg yolk using thermoresponsive aqueous micellar two-phase systems comprising ionic liquids. <i>Separation and Purification Technology</i> , 2022, 288, 120589.	7.9	8
4	New prospects on solvothermal carbonisation assisted by organic solvents, ionic liquids and eutectic mixtures – A critical review. <i>Progress in Materials Science</i> , 2022, 126, 100932.	32.8	18
5	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
6	Nanocomposite-based high-performance adsorptive water filters: recent advances, limitations, nanotoxicity and environmental implications. <i>Environmental Science: Nano</i> , 2022, 9, 2320-2341.	4.3	6
7	Presenting B-DNA as macromolecular crowding agent to improve efficacy of cytochrome c under various stresses. <i>International Journal of Biological Macromolecules</i> , 2022, 215, 184-191.	7.5	8
8	Restructuring thin film composite membrane interfaces using biopolymer as a sustainable alternative to prevent organic fouling. <i>Carbohydrate Polymers</i> , 2021, 254, 117297.	10.2	8
9	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
10	Seaweed biomass derived bio solvents for the large scale production of few layered graphene nanosheets from graphite. <i>Materials Science for Energy Technologies</i> , 2021, 4, 100-106.	1.8	4
11	Engineering Cytochrome C with Quantum Dots and Ionic Liquids: A Win-Win Strategy for Protein Packaging against Multiple Stresses. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 8327-8335.	6.7	11
12	Exploring the Activation Process of the Zn^{2+} -G ₂ AR-G ₂ AR Complex. <i>Journal of the American Chemical Society</i> , 2021, 143, 11044-11051.	13.7	14
13	Designing biopolymer-based artificial peroxidase for oxidative removal of dibenzothiophene from a model diesel fuel. <i>International Journal of Biological Macromolecules</i> , 2021, 183, 1784-1793.	7.5	3
14	Histidine protonation states are key in the LigI catalytic reaction mechanism. <i>Proteins: Structure, Function and Bioinformatics</i> , 2021, , .	2.6	2
15	Progress in marine derived renewable functional materials and biochar for sustainable water purification. <i>Green Chemistry</i> , 2021, 23, 8305-8331.	9.0	31
16	Neoteric solvent-based blue biorefinery: for chemicals, functional materials and fuels from oceanic biomass. <i>Green Chemistry</i> , 2021, 23, 8821-8847.	9.0	14
17	Syntheses and characterization of few bio-ionic liquids comprising of cholinium cation and plant derived carboxylic acids as anions. <i>Journal of the Indian Chemical Society</i> , 2021, 98, 100205.	2.8	5
18	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

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19	Biomass-derived carbon helices induced phase transition in poly(N-isopropylacrylamide): A sustainable tailoring of coil-globule transition in thermoresponsive polymer. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 187, 110637.	5.0	4
20	One-step green route synthesis of spinel ZnMn ₂ O ₄ 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	Exploring the activation pathway and G-coupling specificity of the μ -opioid receptor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 26218-26225.	7.1	15
22	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
23	Exploring the Mechanism of Covalent Inhibition: Simulating the Binding Free Energy of β -Ketoamide Inhibitors of the Main Protease of SARS-CoV-2. <i>Biochemistry</i> , 2020, 59, 4601-4608.	2.5	45
24	Instantaneous fibrillation of egg white proteome with ionic liquid and macromolecular crowding. <i>Communications Materials</i> , 2020, 1, .	6.9	7
25	Fe-Al based nanocomposite reinforced hydrothermal carbon: Efficient and robust absorbent for anionic dyes. <i>Chemosphere</i> , 2020, 259, 127421.	8.2	21
26	Exploring the Proteolysis Mechanism of the Proteasomes. <i>Journal of Physical Chemistry B</i> , 2020, 124, 5626-5635.	2.6	12
27	Protein packaging in ionic liquid mixtures: an ecofriendly approach towards the improved stability of β -lactoglobulin in cholinium-based mixed ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 14811-14821.	2.8	20
28	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
29	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
30	Multifunctional solvothermal carbon derived from alginate using H_2O -in-deep eutectic solvents TM for enhancing enzyme activity. <i>Chemical Communications</i> , 2020, 56, 9659-9662.	4.1	21
31	Hybrid alginate-protein cryogel beads: efficient and sustainable bio-based materials to purify immunoglobulin G antibodies. <i>Green Chemistry</i> , 2020, 22, 2225-2233.	9.0	17
32	Engineering Quantum Dots with Ionic Liquid: A Multifunctional White Light Emitting Hydrogel for Enzyme Packaging. <i>Advanced Optical Materials</i> , 2020, 8, 1902022.	7.3	16
33	Combinatorial Approach for Exploring Conformational Space and Activation Barriers in Computer-Aided Enzyme Design. <i>ACS Catalysis</i> , 2020, 10, 6002-6012.	11.2	16
34	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
35	Boosting the electrochemical performance of polyaniline based all-solid-state flexible supercapacitor using NiFe ₂ O ₄ as adjuvant. <i>Journal of Electroanalytical Chemistry</i> , 2019, 851, 113482.	3.8	18
36	Exploring the Effectiveness of Binding Free Energy Calculations. <i>Journal of Physical Chemistry B</i> , 2019, 123, 8910-8915.	2.6	16

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37	Biomolecule-derived quantum dots for sustainable optoelectronics. <i>Nanoscale Advances</i> , 2019, 1, 913-936.	4.6	42
38	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
39	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
40	Designing biological fluid inspired molecularly crowded ionic liquid media as a sustainable packaging platform for cytochrome <i>c</i> . <i>Chemical Communications</i> , 2019, 55, 5747-5750.	4.1	18
41	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
42	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
43	EF-Tu and EF-G are activated by allosteric effects. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 3386-3391.	7.1	18
44	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
45	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
46	High concentration solubility and stability of ϵ -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
47	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
48	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
49	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
50	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
51	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
52	Sustainable Water Reclamation from Different Feed Streams by Forward Osmosis Process Using Deep Eutectic Solvents as Reusable Draw Solution. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 14623-14632.	3.7	32
53	Exploring the Drug Resistance of HCV Protease. <i>Journal of Physical Chemistry B</i> , 2017, 121, 6831-6840.	2.6	8
54	Fabrication of composites reinforced with lignocellulosic materials from agricultural biomass. , 2017, , 179-191.		6

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55	Biomass nanofibrillar cellulose in nanocomposites. , 2017, , 305-326.		1
56	Biomass-based composites from different sources. , 2017, , 45-76.		7
57	Synthesis of functionalized N-doped graphene DNA hybrid material in a deep eutectic solvent. Green Chemistry, 2016, 18, 4297-4302.	9.0	10
58	Improving the extraction and purification of immunoglobulin G by the use of ionic liquids as adjuvants in aqueous biphasic systems. Journal of Biotechnology, 2016, 236, 166-175.	3.8	65
59	Solvent Thermodynamic Driving Force Controls Stacking Interactions between Polyaromatics. Journal of Physical Chemistry C, 2016, 120, 23858-23869.	3.1	10
60	Suitability of bio-based ionic liquids for the extraction and purification of IgG antibodies. Green Chemistry, 2016, 18, 6071-6081.	9.0	74
61	Deep eutectic solvent promoted one step sustainable conversion of fresh seaweed biomass to functionalized graphene as a potential electrocatalyst. Green Chemistry, 2016, 18, 2819-2826.	9.0	84
62	Green one step morphosynthesis of silver nanoparticles and their antibacterial and anticancerous activities. New Journal of Chemistry, 2016, 40, 2749-2762.	2.8	31
63	Biomass derived solvents for the scalable production of single layered graphene from graphite. Chemical Communications, 2016, 52, 9074-9077.	4.1	13
64	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
65	Deep eutectic solvents as efficient solvent system for the extraction of Î²-carrageenan from Kappaphycus alvarezii. Carbohydrate Polymers, 2016, 136, 930-935.	10.2	126
66	Quantum chemical investigation of thermochemistry in Calvin cycle. Journal of Chemical Sciences, 2015, 127, 2231-2240.	1.5	1
67	Four-fold concentration of sucrose in sugarcane juice through energy efficient forward osmosis using sea bitters as draw solution. RSC Advances, 2015, 5, 17872-17878.	3.6	29
68	A green and sustainable approach to utilize bio-ionic liquids for the selective precipitation of high purity agarose from an agarophyte extract. Green Chemistry, 2015, 17, 2867-2873.	9.0	48
69	Preparation of bio-deep eutectic solvent triggered cephalopod shaped silver chloride-DNA hybrid material having antibacterial and bactericidal activity. Materials Science and Engineering C, 2015, 56, 125-131.	7.3	21
70	High concentration DNA solubility in bio-ionic liquids with long-lasting chemical and structural stability at room temperature. RSC Advances, 2015, 5, 40546-40551.	3.6	33
71	Deep eutectic solvents as a new class of draw agent to enrich low abundance DNA and proteins using forward osmosis. RSC Advances, 2015, 5, 89539-89544.	3.6	25
72	Sustainable Processing and Synthesis of Nontoxic and Antibacterial Magnetic Nanocomposite from Spider Silk in Neoteric Solvents. ACS Sustainable Chemistry and Engineering, 2015, 3, 2575-2581.	6.7	23

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73	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
74	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
75	Production of partially reduced graphene oxide nanosheets using a seaweed sap. <i>RSC Advances</i> , 2014, 4, 64583-64588.	3.6	18
76	Choline chloride–thiourea, a deep eutectic solvent for the production of chitin nanofibers. <i>Carbohydrate Polymers</i> , 2014, 103, 466-471.	10.2	122
77	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
78	Studies on the effect of bio-ionic liquid structures on the spontaneous reduction and dispersion stability of graphene oxide in aqueous media. <i>RSC Advances</i> , 2014, 4, 42197-42201.	3.6	8
79	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
80	Unconventional Electrode Material Prepared from Coir Fiber through Sputter Coating of Gold: A Study toward Value Addition of Natural Biopolymer. <i>ACS Sustainable Chemistry and Engineering</i> , 2014, 2, 348-352.	6.7	9
81	Preparation of tamarind gum based soft ion gels having thixotropic properties. <i>Carbohydrate Polymers</i> , 2014, 102, 467-471.	10.2	64
82	Fuel intermediates, agricultural nutrients and pure water from <i>Kappaphycus alvarezii</i> seaweed. <i>RSC Advances</i> , 2013, 3, 17989.	3.6	43
83	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
84	Dissolution of β -chitin in deep eutectic solvents. <i>RSC Advances</i> , 2013, 3, 18149.	3.6	207
85	Solvent responsive healing of guar gum and guar gum–multiwalled carbon nanotube nanocomposite gels prepared in an ionic liquid. <i>RSC Advances</i> , 2013, 3, 16509.	3.6	17
86	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
87	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
88	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
89	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
90	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