

# Bishnupada Mandal

## List of Publications by Year in descending order

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96  
papers

3,522  
citations

126708

33  
h-index

155451

55  
g-index

98  
all docs

98  
docs citations

98  
times ranked

3086  
citing authors

#	ARTICLE	IF	CITATIONS
1	Removal of carbon dioxide by absorption in mixed amines: modelling of absorption in aqueous MDEA/MEA and AMP/MEA solutions. <i>Chemical Engineering Science</i> , 2001, 56, 6217-6224.	1.9	175
2	Removal of Cr(VI) from aqueous solution using Bael fruit ( <i>Aegle marmelos correa</i> ) shell as an adsorbent. <i>Journal of Hazardous Materials</i> , 2009, 168, 633-640.	6.5	172
3	Absorption of carbon dioxide into aqueous blends of 2-amino-2-methyl-1-propanol and monoethanolamine. <i>Chemical Engineering Science</i> , 2006, 61, 5440-5447.	1.9	157
4	Adsorption of chromium(VI) and Rhodamine B by surface modified tannery waste: Kinetic, mechanistic and thermodynamic studies. <i>Journal of Hazardous Materials</i> , 2011, 186, 1088-1096.	6.5	152
5	Absorption of carbon dioxide into aqueous blends of 2-amino-2-methyl-1-propanol and diethanolamine. <i>Chemical Engineering Science</i> , 2003, 58, 4137-4144.	1.9	148
6	Density and Viscosity of Aqueous Solutions of (N-Methyldiethanolamine + Monoethanolamine), (N-Methyldiethanolamine + Diethanolamine), (2-Amino-2-methyl-1-propanol + Monoethanolamine), and (2-Amino-2-methyl-1-propanol + Diethanolamine). <i>Journal of Chemical &amp; Engineering Data</i> , 2003, 48, 703-707.	1.0	127
7	Simultaneous absorption of carbon dioxide and hydrogen sulfide into aqueous blends of 2-amino-2-methyl-1-propanol and diethanolamine. <i>Chemical Engineering Science</i> , 2005, 60, 6438-6451.	1.9	99
8	Graphene Quantum Dots-Doped Thin Film Nanocomposite Polyimide Membranes with Enhanced Solvent Resistance for Solvent-Resistant Nanofiltration. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 6527-6540.	4.0	99
9	Graphene oxide (GO)-interlayered thin-film nanocomposite (TFN) membranes with high solvent resistance for organic solvent nanofiltration (OSN). <i>Journal of Materials Chemistry A</i> , 2019, 7, 13315-13330.	5.2	86
10	Developments in Directed Evolution for Improving Enzyme Functions. <i>Applied Biochemistry and Biotechnology</i> , 2007, 143, 212-223.	1.4	85
11	Physical Solubility and Diffusivity of N <sub>2</sub> O and CO <sub>2</sub> into Aqueous Solutions of (2-Amino-2-methyl-1-propanol + Monoethanolamine) and (N-Methyldiethanolamine + Monoethanolamine). <i>Journal of Chemical &amp; Engineering Data</i> , 2003, 48, 703-707.	1.0	83
12	Adsorption of CO <sub>2</sub> , CO, CH <sub>4</sub> and N <sub>2</sub> on a zinc based metal organic framework. <i>Separation and Purification Technology</i> , 2012, 94, 124-130.	3.9	75
13	Density and Viscosity of Aqueous Solutions of (N-Methyldiethanolamine + Piperazine) and (2-Amino-2-methyl-1-propanol + Piperazine) from (288 to 333) K. <i>Journal of Chemical &amp; Engineering Data</i> , 2006, 51, 1808-1810.	1.0	71
14	CO <sub>2</sub> separation using thermally stable crosslinked poly(vinyl alcohol) membrane blended with polyvinylpyrrolidone/polyethyleneimine/tetraethylenepentamine. <i>Journal of Membrane Science</i> , 2014, 460, 126-138.	4.1	67
15	Removal of CO <sub>2</sub> by Single and Blended Aqueous Alkanolamine Solvents in Hollow-Fiber Membrane Contactor: A Modeling and Simulation. <i>Industrial &amp; Engineering Chemistry Research</i> , 2007, 46, 2576-2588.	1.8	66
16	Vapor-Liquid Equilibrium of CO <sub>2</sub> in Aqueous Solutions of 2-Amino-2-methyl-1-propanol. <i>Journal of Chemical &amp; Engineering Data</i> , 2003, 48, 789-796.	1.0	65
17	Simultaneous Absorption of CO <sub>2</sub> and H <sub>2</sub> S into Aqueous Blends of N-Methyldiethanolamine and Diethanolamine. <i>Environmental Science &amp; Technology</i> , 2006, 40, 6076-6084.	4.6	65
18	Synthesis, characterization and CO <sub>2</sub> separation performance of novel PVA/PG/ZIF-8 mixed matrix membrane. <i>Journal of Membrane Science</i> , 2019, 572, 198-209.	4.1	61

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19	Kinetics of absorption of carbon dioxide into aqueous solution of 2-(1-piperazinyl)-ethylamine. <i>Chemical Engineering Science</i> , 2009, 64, 313-321.	1.9	54
20	Physical Solubility and Diffusivity of N <sub>2</sub> O and CO <sub>2</sub> into Aqueous Solutions of (2-Amino-2-methyl-1-propanol + Diethanolamine) and (N-Methyldiethanolamine + Diethanolamine). <i>Journal of Chemical &amp; Engineering Data</i> , 2004, 49, 264-270.	1.0	53
21	Theoretical studies on separation of CO <sub>2</sub> by single and blended aqueous alkanolamine solvents in flat sheet membrane contactor (FSMC). <i>Chemical Engineering Journal</i> , 2008, 144, 352-360.	6.6	48
22	Carboxymethyl chitosan/carbon nanotubes mixed matrix membranes for CO <sub>2</sub> separation. <i>Reactive and Functional Polymers</i> , 2019, 143, 104331.	2.0	47
23	Advancements in visible light responsive MOF composites for photocatalytic decontamination of textile wastewater: A review. <i>Chemosphere</i> , 2022, 295, 133835.	4.2	47
24	Fluorine incorporation for enhancing solvent resistance of organic solvent nanofiltration membrane. <i>Chemical Engineering Journal</i> , 2019, 369, 498-510.	6.6	44
25	Synthesis and characterization of crosslinked poly(vinyl Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 507 Td (alcohol)/poly(allylamine) for CO <sub>2</sub> /N <sub>2</sub> separation. <i>Journal of Membrane Science</i> , 2013, 446, 383-394.	4.1	43
26	Adsorption of CO <sub>2</sub> , CO, CH <sub>4</sub> and N <sub>2</sub> on DABCO based metal organic frameworks. <i>Microporous and Mesoporous Materials</i> , 2013, 169, 75-80.	2.2	43
27	Amine-functionalized ZIF-8 nanoparticles as interlayer for the improvement of the separation performance of organic solvent nanofiltration (OSN) membrane. <i>Journal of Membrane Science</i> , 2020, 614, 118433.	4.1	43
28	Absorption of Carbon Dioxide into Aqueous Solutions of 2-Piperidineethanol: Kinetics Analysis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2009, 48, 1414-1419.	1.8	42
29	Absorption of carbon dioxide into aqueous blends of 2-amino-2-hydroxymethyl-1,3-propanediol and monoethanolamine. <i>Separation and Purification Technology</i> , 2012, 94, 92-96.	3.9	39
30	Moisture responsive and CO <sub>2</sub> selective biopolymer membrane containing silk fibroin as a green carrier for facilitated transport of CO <sub>2</sub> . <i>Journal of Membrane Science</i> , 2018, 550, 416-426.	4.1	38
31	Development of a photoresponsive chitosan conjugated prodrug nano-carrier for controlled delivery of antitumor drug 5-fluorouracil. <i>International Journal of Biological Macromolecules</i> , 2019, 121, 1070-1076.	3.6	37
32	Density and Viscosity of Aqueous Solutions of (2-Piperidineethanol + Piperazine) from (288 to 333) K and Surface Tension of Aqueous Solutions of (N-Methyldiethanolamine + Piperazine), (2-Amino-2-methyl-1-propanol + Piperazine), and (2-Piperidineethanol + Piperazine) from (293 to 323) K. <i>Journal of Chemical &amp; Engineering Data</i> , 2006, 51, 2242-2245.	1.0	36
33	Graphene-Incorporated Biopolymeric Mixed-Matrix Membrane for Enhanced CO <sub>2</sub> Separation by Regulating the Support Pore Filling. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 27810-27820.	4.0	36
34	Adsorption and Separation of Carbon Dioxide Using MIL-53(Al) Metal-Organic Framework. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 19747-19753.	1.8	35
35	Preparation and characterization of CO <sub>2</sub> -selective facilitated transport membrane composed of chitosan and poly(allylamine) blend for CO <sub>2</sub> /N <sub>2</sub> separation. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 66, 419-429.	2.9	35
36	Kinetics of absorption of carbon dioxide into aqueous blends of 2-(1-piperazinyl)-ethylamine and N-methyldiethanolamine. <i>Chemical Engineering Science</i> , 2009, 64, 1618-1622.	1.9	34

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37	Adsorption Characteristics of Metal-Organic Frameworks Containing Coordinatively Unsaturated Metal Sites: Effect of Metal Cations and Adsorbate Properties. <i>Journal of Physical Chemistry C</i> , 2014, 118, 6847-6855.	1.5	34
38	Ultrasound assisted extraction of gallic acid from <i>Ficus auriculata</i> leaves using green solvent. <i>Food and Bioproducts Processing</i> , 2021, 128, 1-11.	1.8	33
39	Enhanced CO <sub>2</sub> separation performance by PVA/PEG/silica mixed matrix membrane. <i>Journal of Applied Polymer Science</i> , 2018, 135, 46481.	1.3	31
40	Synthesis and characterization of water-soluble chitosan membrane blended with a mobile carrier for CO <sub>2</sub> separation. <i>Separation and Purification Technology</i> , 2019, 222, 177-187.	3.9	31
41	CO <sub>2</sub> separation performance by chitosan/tetraethylenepentamine/poly(ether) Tj ETQq1 1.0.784314 rgBT /Overlock 10 Tf 50	1.3	30
42	Effect of physical parameters, carbon and nitrogen sources on the production of alkaline protease from a newly isolated <i>Bacillus pseudofirmus</i> SVB1. <i>Annals of Microbiology</i> , 2009, 59, 531-538.	1.1	29
43	Density and Viscosity of Aqueous Solutions of 2-Piperidineethanol, (2-Piperidineethanol +) Tj ETQq1 1.0.784314 rgBT /Overlock 10 Tf 50 Chemical & Engineering Data, 2006, 51, 1406-1410.	1.0	27
44	Effect of single and blended amine carriers on CO <sub>2</sub> separation from CO <sub>2</sub> /N <sub>2</sub> mixtures using crosslinked thin-film poly(vinyl alcohol) composite membrane. <i>International Journal of Greenhouse Gas Control</i> , 2015, 39, 27-38.	2.3	27
45	Equilibrium CO <sub>2</sub> solubility and thermophysical properties of aqueous blends of 1-(2-aminoethyl) piperazine and N-methyldiethanolamine. <i>Fluid Phase Equilibria</i> , 2018, 463, 91-105.	1.4	27
46	pH Responsive Carboxymethyl Chitosan/Poly(amidoamine) Molecular Gate Membrane for CO <sub>2</sub> /N <sub>2</sub> Separation. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 42616-42628.	4.0	27
47	Thermally stable and moisture responsive carboxymethyl chitosan/dendrimer/hydroxycitric acid membrane for CO <sub>2</sub> separation. <i>Journal of Membrane Science</i> , 2020, 608, 118214.	4.1	27
48	Synthesis of functionalized silk-coated chitosan-gold nanoparticles and microparticles for target-directed delivery of antitumor agents. <i>Carbohydrate Polymers</i> , 2021, 258, 117659.	5.1	26
49	L-tyrosine grafted palladium graphite oxide and sulfonated poly(ether ether ketone) based novel composite membrane for direct methanol fuel cell. <i>Chemical Engineering Journal</i> , 2021, 423, 130235.	6.6	24
50	Effects of sintering temperature and initial compaction load on alpha-alumina membrane support quality. <i>Ceramics International</i> , 2014, 40, 11299-11309.	2.3	23
51	Novel CO <sub>2</sub> -Selective Cross-Linked Poly(vinyl alcohol)/Polyvinylpyrrolidone Blend Membrane Containing Amine Carrier for CO <sub>2</sub> -N <sub>2</sub> Separation: Synthesis, Characterization, and Gas Permeation Study. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 19736-19746.	1.8	23
52	Investigation on the inclusion of 1-(2-aminoethyl) piperazine as a promoter on the equilibrium CO <sub>2</sub> solubility of aqueous 2-amino-2-methyl-1-propanol. <i>Journal of Molecular Liquids</i> , 2019, 289, 111036.	2.3	22
53	Synthesis of highly fluorescent, amine-functionalized carbon dots from biotin-modified chitosan and silk-fibroin blend for target-specific delivery of antitumor agents. <i>Carbohydrate Polymers</i> , 2022, 277, 118862.	5.1	22
54	Effect of Adsorbent History on Adsorption Characteristics of MIL-53(Al) Metal Organic Framework. <i>Langmuir</i> , 2013, 29, 12162-12167.	1.6	21

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55	Environment-friendly synthesis of sustainable chitosan-based nonisocyanate polyurethane: A biobased polymeric film. <i>Journal of Applied Polymer Science</i> , 2020, 137, 49050.	1.3	21
56	Engineering of structural and surface functional characteristics of graphite oxide nanosheets by controlling oxidation temperature. <i>Applied Surface Science</i> , 2020, 504, 144444.	3.1	20
57	Engineering of graphene quantum dots by varying the properties of graphene oxide for fluorescence detection of picric acid. <i>Chemosphere</i> , 2022, 300, 134432.	4.2	20
58	Nitration of nitrobenzene at high concentrations of sulfuric acid: Mass transfer and kinetic aspects. <i>AIChE Journal</i> , 2010, 56, 737-748.	1.8	19
59	Kinetics of absorption of carbon dioxide into aqueous solutions of 2-amino-2-hydroxymethyl-1,3-propanediol. <i>Separation and Purification Technology</i> , 2009, 68, 422-427.	3.9	19
60	Enhanced CO <sub>2</sub> separation membrane prepared from waste by-product of silk fibroin. <i>Journal of Membrane Science</i> , 2019, 587, 117170.	4.1	18
61	Fundamental understanding on the preparation conditions of high-performance polyimide-based hollow fiber membranes for organic solvent nanofiltration (OSN). <i>Separation and Purification Technology</i> , 2021, 254, 117600.	3.9	18
62	Measurement and Modeling of Adsorption of Lower Hydrocarbons on Activated Carbon. <i>Journal of Chemical &amp; Engineering Data</i> , 2013, 58, 1606-1612.	1.0	17
63	Hierarchical graphite oxide decorated UiO-66 for ultrahigh adsorption of dye with synergistic effect of ultrasonication: Experimental and density functional theory study. <i>Separation and Purification Technology</i> , 2022, 294, 121217.	3.9	17
64	Physicochemical Properties of Aqueous Solutions of 2-Amino-2-hydroxymethyl-1,3-propanediol. <i>Journal of Chemical &amp; Engineering Data</i> , 2009, 54, 444-447.	1.0	16
65	Synthesis and characterization of ordered mesoporous silica membrane: Role of porous support and gas permeation study. <i>Microporous and Mesoporous Materials</i> , 2015, 210, 10-19.	2.2	16
66	A review on chitosan-based membranes for sustainable CO <sub>2</sub> separation applications: Mechanism, issues, and the way forward. <i>Carbohydrate Polymers</i> , 2021, 267, 118178.	5.1	16
67	Measurements and modeling of vapor liquid equilibrium of CO <sub>2</sub> in amine activated imidazolium ionic liquid solvents. <i>Fluid Phase Equilibria</i> , 2020, 521, 112643.	1.4	15
68	Absorption of CO <sub>2</sub> into novel aqueous bis(3-aminopropyl)amine and enhancement of CO <sub>2</sub> absorption into its blends with N-methyldiethanolamine. <i>International Journal of Greenhouse Gas Control</i> , 2017, 60, 172-185.	2.3	14
69	Measurement and Correlation of the Physicochemical Properties of Novel Aqueous Bis(3-aminopropyl)amine and Its Blend with N-Methyldiethanolamine for CO <sub>2</sub> Capture. <i>Journal of Chemical &amp; Engineering Data</i> , 2016, 61, 2226-2235.	1.0	13
70	High-speed CO <sub>2</sub> transport channel containing carboxymethyl chitosan/hydroxycitric acid membrane for CO <sub>2</sub> separation. <i>Journal of Applied Polymer Science</i> , 2020, 137, 48715.	1.3	13
71	Elucidating the performance of (N-(3-aminopropyl)-1, 3-propanediamine) activated (1-) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 100. <i>Fuel</i> , 2020, 277, 118209.	3.4	13
72	Analysis of equilibrium CO <sub>2</sub> solubility in aqueous APDA and its potential blends with AMP / MDEA for postcombustion CO <sub>2</sub> capture. <i>International Journal of Energy Research</i> , 2020, 44, 12395-12415.	2.2	12

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73	Engineering of Interfacial Energy Bands for Synthesis of Photoluminescent OD/2D Coupled MOF Heterostructure with Enhanced Selectivity toward the Proton-Exchange Membrane. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 29619-29630.	4.0	12
74	Characterization of a Novel Surfactant and Organic Solvent Stable High-alkaline Protease from New <i>Bacillus pseudofirmus</i> SVB1. <i>Research Journal of Microbiology</i> , 2011, 6, 769-783.	0.2	12
75	Experimental and theoretical studies on efficient carbon dioxide capture using novel bis(3-aminopropyl)amine (APA)-activated aqueous 2-amino-2-methyl-1-propanol (AMP) solutions. <i>RSC Advances</i> , 2017, 7, 21518-21530.	1.7	11
76	Fabrication and Performance Evaluation of Industrial Alumina Based Graded Ceramic Substrate for CO <sub>2</sub> Selective Amino Silicate Membrane. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 40269-40284.	4.0	11
77	Physicochemical Properties of Aqueous Solutions of 2-(1-Piperazinyl)-ethylamine. <i>Journal of Chemical &amp; Engineering Data</i> , 2010, 55, 1359-1363.	1.0	10
78	Adsorption of Lower Alkanes on a Zinc Based Metal Organic Framework. <i>Journal of Chemical &amp; Engineering Data</i> , 2012, 57, 2610-2613.	1.0	10
79	Stimulation of CO <sub>2</sub> solubility in reversible ionic liquids activated by novel 1-(2-aminoethyl piperazine) and bis (3-aminopropyl) amine. <i>Separation and Purification Technology</i> , 2021, 262, 118260.	3.9	10
80	Equilibrium CO <sub>2</sub> solubility of novel tris(2-aminoethyl) amine as a promoter to N-methyldiethanolamine and 2-amino-2-methyl-1-propanol. <i>Separation and Purification Technology</i> , 2021, 279, 119705.	3.9	9
81	Medium development for enhanced production of alkaline protease from a newly isolated <i>Bacillus pseudofirmus</i> SVB1. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2010, 5, 925-931.	0.8	6
82	Thermally induced characterization and modeling of physicochemical, acoustic, rheological, and thermodynamic properties of novel blends of (HEF + AEP) and (HEF + AMP) for CO <sub>2</sub> /H <sub>2</sub> S absorption. <i>Environmental Science and Pollution Research</i> , 2019, 26, 32209-32223.	2.7	6
83	Single, binary and ternary metal adsorption using acid-treated <i>Aegle marmelos</i> Correa shell: kinetic, mechanistic and thermodynamic study. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2012, 7, 928-939.	0.8	5
84	Enhanced CO <sub>2</sub> separation performance of mixed matrix membrane by incorporating amine-functionalized silica filler. <i>Journal of Applied Polymer Science</i> , 2021, 138, 51438.	1.3	5
85	Elucidating the important thermo physical characterization properties of amine activated hybrid novel solvents for designing post-combustion CO <sub>2</sub> capture unit. <i>Journal of Molecular Liquids</i> , 2022, 355, 118919.	2.3	5
86	Physicochemical and thermodynamic properties of aqueous blends of 3-aminopropyl triethoxysilane and amines at 298.15–333.15 K. <i>Journal of Molecular Liquids</i> , 2021, 332, 115440.	2.3	4
87	Sustainable Routes for Synthesis of Poly( $\mu$ -Caprolactone): Prospects in Chemical Industries. <i>Materials Horizons</i> , 2020, , 21-33.	0.3	4
88	Enrichment in CO <sub>2</sub> Absorption by 2-Methyl Piperazine-Activated Tertiary Amines, Physical Solvents, and Ionic Liquid Systems. <i>ACS Omega</i> , 2022, 7, 23611-23623.	1.6	4
89	Modeling and simulation for post-combustion carbon dioxide capture from power plant flue gas with economic analysis. <i>Separation Science and Technology</i> , 0, , 150527095459001.	1.3	3
90	Enzymatic removal of burnt-on protein residues from solid surface: A potential food equipment cleanser. <i>Food Control</i> , 2014, 40, 314-319.	2.8	2

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91	Measurement and Correlations of Physicochemical Properties of the Novel Solvent Tris(2-aminoethyl) amine and Its Blend with <i>N</i> -Methyldiethanolamine and 2-Amino 2-Methyl-1-Propanol. Journal of Chemical & Engineering Data, 2022, 67, 2067-2076.	1.0	2
92	Negatively charged polyamide thin film composite membrane with ultra-smooth selective layer and excellent organic solvent resistance for nanofiltration application. , 0, 157, 18-28.		1
93	Advances in Bio-based Polymer Membranes for CO2 Separation. Materials Horizons, 2019, , 277-307.	0.3	1
94	Fabrication, characterization and optimization of industrial alpha alumina powders based ceramic membrane supports and its applicative potential for CO2/N2 separation. Journal of CO2 Utilization, 2022, 63, 102121.	3.3	1
95	Cover Image, Volume 138, Issue 47. Journal of Applied Polymer Science, 2021, 138, 51659.	1.3	0
96	Introduction to carbon capture. , 2022, , 1-31.		0