Arup K Sengupta

List of Publications by Year
in descending order

83 papers	4,657 citations	117453 34 h-index	98622 67 g-index
98 all docs	98 docs citations	98 times ranked	3496 citing authors

#	Article	IF	Citations
1	Self-Regenerating Hybrid Anion Exchange Process for Removing Radium, Barium, and Strontium from Marcellus-Produced Wastewater Using Only Acid Mine Drainage. ACS ES&T Water, 2021, 1, 195-204.	2.3	2
2	Use of a Novel Bio-Nano-IX Process to Remove SeO₄^{2â€“} or Se(VI) from Contaminated Water in the Presence of Competing Sulfate (SO₄^{2â€“}). ACS ES&T Water, 2021, 1, 1859-1867.	2.3	7
3	CO₂ Utilization for Water Treatment: Ion Exchange Nitrate Removal Driven by CO₂ without Producing Spent Brine Regenerant. ACS ES&T Water, 2021, 1, 2275-2283.	2.3	5
4	Transforming a Global Water Crisis into an Economic Opportunity: Unmet Needs and Lessons Learned during the Last Two Decades. Journal of Environmental Engineering, ASCE, 2021, 147, 02521002.	0.7	1
5	Field validation of multifunctional ion exchange process for reverse osmosis pretreatment and phosphate recovery during impaired water reuse. Journal of Water Process Engineering, 2020, 36, 101347.	2.6	16
6	COVID-19 and Unsafe Water: A Tale of Two Enemies. Environmental Engineering Science, 2020, 37, 393-394.	0.8	1
7	Hybrid nitrate selective resin (NSR-NanoZr) for simultaneous selective removal of nitrate and phosphate (or fluoride) from impaired water sources. Journal of Environmental Chemical Engineering, 2020, 8, 103846.	3.3	28
8	Fluoride removal from groundwater using Zirconium Impregnated Anion Exchange Resin. Journal of Environmental Management, 2020, 263, 110415.	3.8	43
9	Multifunctional ion exchange pretreatment driven by carbon dioxide for enhancing reverse osmosis recovery during impaired water reuse. Desalination, 2020, 485, 114459.	4.0	12
10	Field validation of self-regenerating reversible ion exchange-membrane (RIX-M) process to prevent sulfate and silica fouling. Desalination, 2019, 469, 114093.	4.0	14
11	Treated Municipal Wastewater Reuse: A Holistic Approach Using Hybrid Ion Exchange (HIX) with Concurrent Nutrient Recovery and CO₂ Sequestration. ACS Sustainable Chemistry and Engineering, 2019, 7, 9671-9679.	3.2	25
12	Transforming the Global Arsenic and Fluoride Crisis Into an Economic Enterprise: Role of Hybrid Anion Exchange Nanotechnology (HAIX-Nano) in Ballia, Uttar Pradesh and Nalhati, West Bengal. , 2019, , 327-354.		0
13	Evidence of Economically Sustainable Village-Scale Microenterprises for Arsenic Remediation in Developing Countries. Environmental Science & Technology, 2019, 53, 1078-1086.	4.6	20
14	Hybrid Ion Exchange Desalination (HIX-Desal) of Impaired Brackish Water Using Pressurized Carbon Dioxide (CO₂) as the Source of Energy and Regenerant. Environmental Science and Technology Letters, 2018, 5, 701-706.	3.9	14
15	Breakthrough Technology or Breakthrough Solution: What Are We Really After?. Environmental Science & Technology, 2017, 51, 2529-2530.	4.6	11
16	In-Situ Stability Control of Energy-Producing Anaerobic Biological Reactors through Novel Use of Ion Exchange Fibers. ACS Sustainable Chemistry and Engineering, 2017, 5, 9380-9389.	3.2	3
17	Aluminum-Cycle Ion Exchange Process for Hardness Removal: A New Approach for Sustainable Softening. Environmental Science & Technology, 2016, 50, 11943-11950.	4.6	22
18	Mixed Anion Exchange Resins for Tunable Control of Sulfateâ€“Chloride Selectivity for Sustainable Membrane Pretreatment. Industrial & Engineering Chemistry Research, 2016, 55, 647-655.	1.8	7

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19	Sensing of Toxic Metals Using Innovative Sorption-Based Technique. Ion Exchange and Solvent Extraction, 2016, , 175-240.	0.3	0
20	Environmental Recourse, Global Warming and a Conspicuous Anomaly. Environmental Science & Technology, 2015, 49, 12-13.	4.6	2
21	Nexus between polymer support and metal oxide nanoparticles in hybrid nanosorbent materials (HNMs) for sorption/desorption of target ligands. Frontiers of Environmental Science and Engineering, 2015, 9, 929-938.	3.3	18
22	Polymeric anion exchanger supported hydrated Zr(IV) oxide nanoparticles: A reusable hybrid sorbent for selective trace arsenic removal. Reactive and Functional Polymers, 2015, 93, 84-94.	2.0	76
23	Integrating Tunable Anion Exchange with Reverse Osmosis for Enhanced Recovery During Inland Brackish Water Desalination. Environmental Science & Technology, 2015, 49, 5637-5644.	4.6	18
24	Investigation on the long-term storage and fate of arsenic obtained as a treatment residual: A case study. Journal of Hazardous Materials, 2014, 271, 302-310.	6.5	20
25	Hybrid Anion Exchanger with Dispersed Zirconium Oxide Nanoparticles: A Durable and Reusable Fluoride-Selective Sorbent. Environmental Engineering Science, 2014, 31, 360-372.	0.8	41
26	Mitigating arsenic crisis in the developing world: Role of robust, reusable and selective hybrid anion exchanger (HAIX). Science of the Total Environment, 2014, 488-489, 547-553.	3.9	42
27	Transforming the Arsenic Crisis into an Economic Enterprise. , 2013, , 299-319.		1
28	Comment on â€œPolymerization of Silicate on Hematite Surfaces and Its Influence on Arsenic Sorptionâ€. Environmental Science & Technology, 2013, 47, 5514-5515.	4.6	8
29	Hydrogen Ion (H⁺) in Waste Acid as a Driver for Environmentally Sustainable Processes: Opportunities and Challenges. Environmental Science & Technology, 2013, 47, 2145-2150.	4.6	34
30	Carbon Dioxide Regeneration of Ion Exchange Resins and Fibers: A Review. Solvent Extraction and Ion Exchange, 2012, 30, 350-371.	0.8	12
31	Sustainable Engineered Processes to Mitigate the Global Arsenic Crisis in Drinking Water: Challenges and Progress. Annual Review of Chemical and Biomolecular Engineering, 2012, 3, 497-517.	3.3	23
32	Energy Recovery from Acidâ€“Base Neutralization Process through pH-Sensitive Polymeric Ion Exchangers. Industrial & Engineering Chemistry Research, 2011, 50, 12293-12298.	1.8	12
33	Reversible Ion Exchange-Membrane (RIX-M) Process for Fouling Free and Energy Efficient Desalination of Seawater. ACS Symposium Series, 2011, , 285-301.	0.5	0
34	Hybrid ion exchanger supported nanocomposites: Sorption and sensing for environmental applications. Chemical Engineering Journal, 2011, 166, 923-931.	6.6	70
35	Interference-free detection of trace copper in the presence of EDTA and other metals using two complementary chelating polymers. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 384, 432-441.	2.3	17
36	Toxic Metal Sensing through Novel Use of Hybrid Inorganic and Polymeric Ion-Exchangers. Solvent Extraction and Ion Exchange, 2011, 29, 398-420.	0.8	5

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37	Preparation of Fe oxide nanoparticles for environmental applications: arsenic removal. Environmental Geochemistry and Health, 2010, 32, 291-296.	1.8	27
38	Synthesis and characterization of a new class of polymeric ligand exchangers for selective removal of arsenate from drinking water. Reactive and Functional Polymers, 2010, 70, 497-507.	2.0	38
39	Evidence of Competitive Adsorption of Sb(III) and As(III) on Activated Alumina. Industrial & Engineering Chemistry Research, 2010, 49, 2521-2524.	1.8	22
40	Evolution of community-based arsenic removal systems in remote villages in West Bengal, India: Assessment of decade-long operation. Water Research, 2010, 44, 5813-5822.	5.3	71
41	The Donnan Membrane Principle: Opportunities for Sustainable Engineered Processes and Materials. Environmental Science & Technology, 2010, 44, 1161-1166.	4.6	188
42	Flue Gas Carbon Dioxide Sequestration during Water Softening with Ion-Exchange Fibers. Journal of Environmental Engineering, ASCE, 2009, 135, 386-396.	0.7	15
43	Sensing of toxic metals through pH changes using a hybrid sorbent material: Concept and experimental validation. AICHE Journal, 2009, 55, 2997-3004.	1.8	7
44	Hybrid Anion Exchange Fibers with Dual Binding Sites: Simultaneous and Reversible Sorption of Perchlorate and Arsenate. Environmental Engineering Science, 2009, 26, 1673-1683.	0.8	18
45	A new hybrid ion exchange-nanofiltration (HIX-NF) separation process for energy-efficient desalination: Process concept and laboratory evaluation. Journal of Membrane Science, 2008, 324, 76-84.	4.1	56
46	Arsenic Removal from Groundwater and Its Safe Containment in a Rural Environment: Validation of a Sustainable Approach. Environmental Science & Technology, 2008, 42, 4268-4273.	4.6	153
47	Application of Donnan Membrane Process for Recovery of Coagulants from Water Treatment Residuals. , 2008, , 945-979.		0
48	Hybrid anion exchanger for trace phosphate removal from water and wastewater. Water Research, 2007, 41, 1603-1613.	5.3	386
49	Comment on â€œArsenic Removal from Groundwater by Household Sand Filters:Â Comparative Field Study, Model Calculations, and Health Benefitsâ€• Environmental Science & Technology, 2007, 41, 1051-1052.	4.6	4
50	Use of ArsenXnp, a hybrid anion exchanger, for arsenic removal in remote villages in the Indian subcontinent. Reactive and Functional Polymers, 2007, 67, 1599-1611.	2.0	104
51	Evidence of Tunable Onâ˘'Off Sorption Behaviors of Metal Oxide Nanoparticles:Â Role of Ion Exchanger Support. Industrial & Engineering Chemistry Research, 2006, 45, 7737-7742.	1.8	71
52	Comment on â€œLandfill-Stimulated Iron Reduction and Arsenic Release at the Coakley Superfund Site (NH)â€• Environmental Science & Technology, 2006, 40, 4037-4038.	4.6	9
53	Environmentally Benign Hardness Removal Using Ion-Exchange Fibers and Snowmelt. Environmental Science & Technology, 2006, 40, 370-376.	4.6	50
54	Some observations about electrolyte permeation mechanism through reverse osmosis and nanofiltration membranes. Journal of Membrane Science, 2006, 278, 301-307.	4.1	18

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55	Two novel applications of ion exchange fibers: Arsenic removal and chemical-free softening of hard water. Environmental Progress, 2006, 25, 300-311.	0.8	88
56	Modeling Al3+/H+ ion transport in Donnan membrane process for coagulant recovery. AICHE Journal, 2005, 51, 333-344.	1.8	20
57	Arsenic Removal Using Polymer-Supported Hydrated Iron(III) Oxide Nanoparticles:Â Role of Donnan Membrane Effectâ€. Environmental Science & Technology, 2005, 39, 6508-6515.	4.6	508
58	Well-head arsenic removal units in remote villages of Indian subcontinent: Field results and performance evaluation. Water Research, 2005, 39, 2196-2206.	5.3	98
59	Preparation and Characterization of Magnetically Active Dual-Zone Sorbent. Industrial & Engineering Chemistry Research, 2005, 44, 600-605.	1.8	23
60	Sorption of hydrophobic ionizable organic compounds (HIOCs) onto polymeric ion exchangers. Reactive and Functional Polymers, 2004, 60, 27-39.	2.0	51
61	Preparation and characterization of a new class of polymeric ligand exchangers for selective removal of trace contaminants from water. Reactive and Functional Polymers, 2004, 60, 109-120.	2.0	62
62	Polymer supported inorganic nanoparticles: characterization and environmental applications. Reactive and Functional Polymers, 2003, 54, 167-180.	2.0	225
63	Ion Exchange Selectivity as a Surrogate Indicator of Relative Permeability of Ions in Reverse Osmosis Processes. Environmental Science & Technology, 2003, 37, 1432-1440.	4.6	43
64	Selective Coagulant Recovery from Water Treatment Plant Residuals Using Donnan Membrane Process. Environmental Science & Technology, 2003, 37, 4468-4474.	4.6	84
65	Arsenic removal using a polymeric/inorganic hybrid sorbent. Water Research, 2003, 37, 164-176.	5.3	371
66	Chelating ion-exchangers embedded in PTFE for decontamination of heavy-metal-laden sludges and soils. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2001, 191, 79-95.	2.3	8
67	Intraparticle diffusion during selective ion exchange with a macroporous exchanger. Reactive and Functional Polymers, 2000, 44, 273-287.	2.0	46
68	Intraparticle Diffusion during Selective Sorption of Trace Contaminants:Â The Effect of Gel versus Macroporous Morphology. Environmental Science & Technology, 2000, 34, 5193-5200.	4.6	51
69	Preparation and Characterization of Magnetically Active Polymeric Particles (MAPPs) for Complex Environmental Separations. Environmental Science & Technology, 2000, 34, 3276-3282.	4.6	54
70	Ultimate removal of phosphate from wastewater using a new class of polymeric ion exchangers. Water Research, 1998, 32, 1613-1625.	5.3	242
71	Genesis of Selectivity and Reversibility for Sorption of Synthetic Aromatic Anions onto Polymeric Sorbents. Environmental Science & Technology, 1998, 32, 3756-3766.	4.6	91
72	Selective Removal of Cr(VI) Oxyanions with a New Anion Exchanger. Industrial & Engineering Chemistry Research, 1998, 37, 4383-4387.	1.8	92

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73	A new hybrid inorganic sorbent for heavy metals removal. Water Research, 1995, 29, 2195-2205.	5.3	55
74	Trace Contaminant Sorption through Polymeric Ligand Exchange. Industrial & Engineering Chemistry Research, 1995, 34, 2676-2684.	1.8	25
75	Removing Selenium(IV) and Arsenic(V) Oxyanions with Tailored Chelating Polymers. Journal of Environmental Engineering, ASCE, 1992, 118, 755-775.	0.7	88
76	Sorption enhancement of some hydrophilic organic solutes through polymeric ligand exchange. Environmental Science & Technology, 1992, 26, 1990-1998.	4.6	30
77	Metals sorption by chelating polymers: A unique role of ionic strength. AICHE Journal, 1992, 38, 153-157.	1.8	31
78	Metal(II) ion binding onto chelating exchangers with nitrogen donor atoms: some new observations and related implications. Environmental Science & Technology, 1991, 25, 481-488.	4.6	118
79	Toward separation of toxic metal(II) cations by chelating polymers: Some noteworthy observations. Reactive & Functional Polymers, 1990, 13, 241-253.	0.8	31
80	Ion-exchange resins for improved stability in biological and enzymatic reactors. AICHE Journal, 1989, 35, 1745-1748.	1.8	2
81	Modeling chromate ion-exchange processes. AICHE Journal, 1988, 34, 2019-2029.	1.8	39
82	Chromate ion-exchange process at alkaline pH. Water Research, 1986, 20, 1177-1184.	5.3	33
83	Important process variables in chromate ion exchange. Environmental Science & Technology, 1986, 20, 149-155.	4.6	102