John Kwame Bediako

List of Publications by Year
in descending order

105 papers	6,537 citations	76326 40 h-index	66911 78 g-index
105 all docs	105 docs citations	105 times ranked	6138 citing authors

#	Article	IF	Citations
1	Bacterial biosorbents and biosorption. Biotechnology Advances, 2008, 26, 266-291.	11.7	1,466
2	Spinel ferrite magnetic adsorbents: Alternative future materials for water purification?. Coordination Chemistry Reviews, 2016, 315, 90-111.	18.8	575
3	Biosorption of Trivalent Chromium on the Brown Seaweed Biomass. Environmental Science & Technology, 2001, 35, 4353-4358.	10.0	332
4	Biosorbents for recovery of precious metals. Bioresource Technology, 2014, 160, 203-212.	9.6	197
5	Effective adsorption of Pd(<scp>ii</scp>), Pt(<scp>iv</scp>) and Au(<scp>iii</scp>) by Zr(<scp>iv</scp>)-based metalâ€“organic frameworks from strongly acidic solutions. Journal of Materials Chemistry A, 2017, 5, 13557-13564.	10.3	179
6	Highly Effective Removal of Nonsteroidal Anti-inflammatory Pharmaceuticals from Water by Zr(IV)-Based Metalâ€“Organic Framework: Adsorption Performance and Mechanisms. ACS Applied Materials & Interfaces, 2018, 10, 28076-28085.	8.0	171
7	Selective recovery of Pd(II) from extremely acidic solution using ion-imprinted chitosan fiber: Adsorption performance and mechanisms. Journal of Hazardous Materials, 2015, 299, 10-17.	12.4	121
8	Selective recovery of Au(III), Pt(IV), and Pd(II) from aqueous solutions by liquidâ€“liquid extraction using ionic liquid Aliquat-336. Journal of Molecular Liquids, 2016, 216, 18-24.	4.9	121
9	Biosorption of methylene blue from aqueous solution using free and polysulfone-immobilized Corynebacterium glutamicum: Batch and column studies. Bioresource Technology, 2008, 99, 2864-2871.	9.6	107
10	Biosorption of cadmium by various types of dried sludge: An equilibrium study and investigation of mechanisms. Journal of Hazardous Materials, 2006, 138, 378-383.	12.4	105
11	Utilization of PEI-modified Corynebacterium glutamicum biomass for the recovery of Pd(II) in hydrochloric solution. Bioresource Technology, 2011, 102, 3888-3893.	9.6	104
12	Structure-controlled recovery of palladium(II) from acidic aqueous solution using metal-organic frameworks of MOF-802, UiO-66 and MOF-808. Chemical Engineering Journal, 2019, 362, 280-286.	12.7	93
13	Aliquat-336-impregnated alginate capsule as a green sorbent for selective recovery of gold from metal mixtures. Chemical Engineering Journal, 2016, 289, 413-422.	12.7	91
14	Platinum recovery from ICP wastewater by a combined method of biosorption and incineration. Bioresource Technology, 2010, 101, 1135-1140.	9.6	88
15	Removal of heavy metals from aqueous phases using chemically modified waste Lyocell fiber. Journal of Hazardous Materials, 2015, 299, 550-561.	12.4	85
16	Valorisation of post-sorption materials: Opportunities, strategies, and challenges. Advances in Colloid and Interface Science, 2017, 242, 35-58.	14.7	85
17	Interaction between protonated waste biomass of Corynebacterium glutamicum and anionic dye Reactive Red 4. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 262, 175-180.	4.7	80
18	Glutaraldehyde-crosslinked chitosan beads for sorptive separation of Au(III) and Pd(II): Opening a way to design reduction-coupled selectivity-tunable sorbents for separation of precious metals. Journal of Hazardous Materials, 2013, 248-249, 211-218.	12.4	80

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19	Carboxymethyl cellulose fiber as a fast binding and biodegradable adsorbent of heavy metals. Journal of the Taiwan Institute of Chemical Engineers, 2015, 57, 104-110.	5.3	76
20	Selective adsorption of Pd(II) over interfering metal ions (Co(II), Ni(II), Pt(IV)) from acidic aqueous phase by metal-organic frameworks. Chemical Engineering Journal, 2018, 345, 337-344.	12.7	76
21	Selective biosorption behavior of Escherichia coli biomass toward Pd(II) in Pt(IV)â€“Pd(II) binary solution. Journal of Hazardous Materials, 2015, 283, 657-662.	12.4	74
22	Chemical Modification and Immobilization ofCorynebacterium glutamicumfor Biosorption of Reactive Black 5 from Aqueous Solution. Industrial & Engineering Chemistry Research, 2007, 46, 608-617.	3.7	71
23	Benignly-fabricated crosslinked polyethylenimine/calcium-alginate fibers as high-performance adsorbents for effective recovery of gold. Journal of Cleaner Production, 2020, 252, 119389.	9.3	70
24	Mechanistic understanding and performance enhancement of biosorption of reactive dyestuffs by the waste biomass generated from amino acid fermentation process. Biochemical Engineering Journal, 2007, 36, 2-7.	3.6	69
25	Highly efficient and acid-resistant metal-organic frameworks of MIL-101(Cr)-NH2 for Pd(II) and Pt(IV) recovery from acidic solutions: Adsorption experiments, spectroscopic analyses, and theoretical computations. Journal of Hazardous Materials, 2020, 387, 121689.	12.4	62
26	Sequential recovery of gold and copper from bioleached wastewater using ion exchange resins. Environmental Pollution, 2020, 266, 115167.	7.5	61
27	Ruthenium recovery from acetic acid waste water through sorption with bacterial biosorbent fibers. Bioresource Technology, 2013, 128, 30-35.	9.6	58
28	Removal of hydrolyzed Reactive Black 5 from aqueous solution using a polyethylenimineâ€“polyvinyl chloride composite fiber. Chemical Engineering Journal, 2015, 280, 18-25.	12.7	55
29	A new approach to study the decolorization of complex reactive dye bath effluent by biosorption technique. Bioresource Technology, 2008, 99, 5778-5785.	9.6	54
30	Superâ€Stable, Highly Efficient, and Recyclable Fibrous Metalâ€“Organic Framework Membranes for Precious Metal Recovery from Strong Acidic Solutions. Small, 2019, 15, e1805242.	10.0	54
31	Polysulfone-immobilized Corynebacterium glutamicum: A biosorbent for Reactive black 5 from aqueous solution in an up-flow packed column. Chemical Engineering Journal, 2008, 145, 44-49.	12.7	51
32	Recovery of gold as a type of porous fiber by using biosorption followed by incineration. Bioresource Technology, 2012, 104, 208-214.	9.6	50
33	Development of polyethyleneimine-loaded core-shell chitosan hollow beads and their application for platinum recovery in sequential metal scavenging fill-and-draw process. Journal of Hazardous Materials, 2017, 324, 724-731.	12.4	49
34	Evaluation of orange peel-derived activated carbons for treatment of dye-contaminated wastewater tailings. Environmental Science and Pollution Research, 2020, 27, 1053-1068.	5.3	46
35	Cationic polymer-immobilized polysulfone-based fibers as high performance sorbents for Pt(IV) recovery from acidic solutions. Journal of Hazardous Materials, 2013, 263, 391-397.	12.4	45
36	A sustainable cationic chitosan/E. coli fiber biosorbent for Pt(IV) removal and recovery in batch and column systems. Separation and Purification Technology, 2015, 143, 32-39.	7.9	45

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37	Reusable polyethylenimine-coated polysulfone/bacterial biomass composite fiber biosorbent for recovery of Pd(II) from acidic solutions. Chemical Engineering Journal, 2016, 302, 545-551.	12.7	45
38	Functionalized magnetic biopolymeric graphene oxide with outstanding performance in water purification. NPG Asia Materials, 2019, 11, .	7.9	45
39	Different binding mechanisms in biosorption of reactive dyes according to their reactivity. Water Research, 2008, 42, 4847-4855.	11.3	44
40	Prediction of adsorption properties for ionic and neutral pharmaceuticals and pharmaceutical intermediates on activated charcoal from aqueous solution via LFER model. Chemical Engineering Journal, 2019, 362, 199-206.	12.7	42
41	Ion-imprinted chitosan fiber for recovery of Pd(II): Obtaining high selectivity through selective adsorption and two-step desorption. Environmental Research, 2020, 182, 108995.	7.5	40
42	Surface modified bacterial biosorbent with poly(allylamine hydrochloride): Development using response surface methodology and use for recovery of hexachloroplatinate(IV) from aqueous solution. Water Research, 2010, 44, 5919-5928.	11.3	39
43	Conversion of waste textile cellulose fibers into heavy metal adsorbents. Journal of Industrial and Engineering Chemistry, 2016, 43, 61-68.	5.8	39
44	Poly(styrenesulfonic acid)-impregnated alginate capsule for the selective sorption of Pd(II) from a Pt(IV)-Pd(II) binary solution. Journal of Hazardous Materials, 2016, 318, 79-89.	12.4	38
45	Modelling for antimicrobial activities of ionic liquids towards Escherichia coli, Staphylococcus aureus and Candida albicans using linear free energy relationship descriptors. Journal of Hazardous Materials, 2016, 311, 168-175.	12.4	37
46	Low-cost renewable adsorbent developed from waste textile fabric and its application to heavy metal adsorption. Journal of the Taiwan Institute of Chemical Engineers, 2016, 63, 250-258.	5.3	35
47	Comprehensive approach for predicting toxicological effects of ionic liquids on several biological systems using unified descriptors. Scientific Reports, 2016, 6, 33403.	3.3	35
48	Recovery of gold via adsorption-incineration techniques using banana peel and its derivatives: Selectivity and mechanisms. Waste Management, 2020, 113, 225-235.	7.4	30
49	Characterization of the residual biochemical components of sequentially extracted banana peel biomasses and their environmental remediation applications. Waste Management, 2019, 89, 141-153.	7.4	29
50	Self-coagulating polyelectrolyte complexes for target-tunable adsorption and separation of metal ions. Journal of Hazardous Materials, 2021, 401, 123352.	12.4	28
51	Immobilized citric acid-treated bacterial biosorbents for the removal of cationic pollutants. Chemical Engineering Journal, 2010, 162, 662-668.	12.7	27
52	Development of waste biomass based sorbent for removal of cyanotoxin microcystin-LR from aqueous phases. Bioresource Technology, 2018, 247, 690-696.	9.6	27
53	Recovery of zero-valent gold from cyanide solution by a combined method of biosorption and incineration. Bioresource Technology, 2010, 101, 8587-8592.	9.6	26
54	Adsorptive interaction of cationic pharmaceuticals on activated charcoal: Experimental determination and QSAR modelling. Journal of Hazardous Materials, 2018, 360, 529-535.	12.4	26

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55	Evaluation of fermentation waste (Corynebacterium glutamicum) as a biosorbent for the treatment of nickel(II)-bearing solutions. Biochemical Engineering Journal, 2008, 41, 228-233.	3.6	25
56	In silico prediction of linear free energy relationship descriptors of neutral and ionic compounds. RSC Advances, 2015, 5, 80634-80642.	3.6	25
57	Fabrication of Stable and Regenerable Amine Functionalized Magnetic Nanoparticles as a Potential Material for Pt(IV) Recovery from Acidic Solutions. ACS Applied Materials & Interfaces, 2017, 9, 18650-18659.	8.0	25
58	High-performance and acid-tolerant polyethylenimine-aminated polyvinyl chloride fibers: fabrication and application for recovery of platinum from acidic wastewaters. Journal of Environmental Chemical Engineering, 2019, 7, 102839.	6.7	25
59	Estimating environmental fate of tricyclic antidepressants in wastewater treatment plant. Science of the Total Environment, 2018, 634, 52-58.	8.0	24
60	Simple, green organic acid-based hydrometallurgy for waste-to-energy storage devices: Recovery of NiMnCoC2O4 as an electrode material for pseudocapacitor from spent LiNiMnCoO2 batteries. Journal of Hazardous Materials, 2022, 424, 127481.	12.4	24
61	Preparation of PEI-coated bacterial biosorbent in water solution: Optimization of manufacturing conditions using response surface methodology. Bioresource Technology, 2011, 102, 1462-1467.	9.6	23
62	Recovery of metallic palladium from hydrochloric acid solutions by a combined method of adsorption and incineration. Chemical Engineering Journal, 2013, 218, 303-308.	12.7	22
63	Effective Recovery of Pt(IV) from Acidic Solution by a Defective Metalâ€“Organic Frameworks Using Central Composite Design for Synthesis. ACS Sustainable Chemistry and Engineering, 2019, 7, 7510-7518.	6.7	22
64	QSAR modelling for predicting adsorption of neutral, cationic, and anionic pharmaceuticals and other neutral compounds to microalgae Chlorella vulgaris in aquatic environment. Water Research, 2019, 151, 288-295.	11.3	22
65	Polyethyleneimine impregnated alginate capsule as a high capacity sorbent for the recovery of monovalent and trivalent gold. Scientific Reports, 2021, 11, 17836.	3.3	22
66	Interpretation of toxicological activity of ionic liquids to acetylcholinesterase inhibition via in silico modelling. Chemosphere, 2016, 159, 178-183.	8.2	21
67	Development of Poly(acrylic acid)-Modified Bacterial Biomass As a High-Performance Biosorbent for Removal of Cd(II) from Aqueous Solution. Industrial & Engineering Chemistry Research, 2013, 52, 6446-6452.	3.7	20
68	Adsorptive separation of Pb(II) and Cu(II) from aqueous solutions using as-prepared carboxymethylated waste Lyocell fiber. International Journal of Environmental Science and Technology, 2016, 13, 875-886.	3.5	20
69	Facile fabrication of polyacrylic acid-polyvinyl chloride composite adsorbents for the treatment of cadmium-contaminated wastewater. Journal of Environmental Chemical Engineering, 2018, 6, 2401-2408.	6.7	20
70	Preparation and Characterization of Rubber Blends for Industrial Tire Tread Fabrication. International Journal of Polymer Science, 2018, 2018, 1-12.	2.7	20
71	Organic acid-based linear free energy relationship models for green leaching of strategic metals from spent lithium-ion batteries and improvement of leaching performance. Journal of Hazardous Materials, 2022, 423, 127214.	12.4	19
72	Removal of 1-ethyl-3-methylimidazolium cations with bacterial biosorbents from aqueous media. Journal of Hazardous Materials, 2013, 244-245, 130-134.	12.4	18

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73	Preparation, characterization and lead adsorption study of tripolyphosphate-modified waste Lyocell fibers. Journal of Environmental Chemical Engineering, 2017, 5, 412-421.	6.7	18
74	Removal of Basic Blue 3 from aqueous solution by Corynebacterium glutamicum biomass: Biosorption and precipitation mechanisms. Korean Journal of Chemical Engineering, 2008, 25, 1060-1064.	2.7	17
75	In-situ microwave-assisted leaching and selective separation of Au(III) from waste printed circuit boards in biphasic aqua regia-ionic liquid systems. Separation and Purification Technology, 2021, 255, 117649.	7.9	17
76	Adsorption modeling of microcrystalline cellulose for pharmaceutical-based micropollutants. Journal of Hazardous Materials, 2022, 426, 128087.	12.4	17
77	Sorptive removal and recovery of nickel(II) from an actual effluent of electroplating industry: Comparison between Escherichia coli biosorbent and Amberlite ion exchange resin. Korean Journal of Chemical Engineering, 2011, 28, 927-932.	2.7	16
78	Removal of Cd(II) by poly(styrenesulfonic acid)-impregnated alginate capsule. Journal of the Taiwan Institute of Chemical Engineers, 2016, 61, 188-195.	5.3	16
79	Recovery of high-purity metallic Pd from Pd(II)-sorbed biosorbents by incineration. Bioresource Technology, 2013, 137, 400-403.	9.6	15
80	Valorization ofEscherichia coliwaste biomass as a biosorbent for removing reactive dyes from aqueous solutions. Desalination and Water Treatment, 2016, 57, 20084-20090.	1.0	15
81	Quantitative analysis of adsorptive interactions of ionic and neutral pharmaceuticals and other chemicals with the surface of Escherichia coli cells in aquatic environment. Environmental Pollution, 2017, 227, 8-14.	7.5	15
82	Predicting adsorption of micropollutants on non-functionalized and functionalized multi-walled carbon nanotubes: Experimental study and LFER modeling. Journal of Hazardous Materials, 2021, 411, 125124.	12.4	15
83	Development of quaternized polyethylenimine-cellulose fibers for fast recovery of Au(CN)2- in alkaline wastewater: Kinetics, isotherm, and thermodynamic study. Journal of Hazardous Materials, 2022, 422, 126940.	12.4	15
84	Binding sites and mechanisms of cadmium to the dried sewage sludge biomass. Chemosphere, 2013, 93, 146-151.	8.2	14
85	Simultaneous scavenging of persistent pharmaceuticals with different charges by activated carbon fiber from aqueous environments. Chemosphere, 2020, 247, 125909.	8.2	14
86	Pd(II)-Imprinted Chitosan Adsorbent for Selective Adsorption of Pd(II): Optimizing the Imprinting Process through Boxâ€“Behnken Experimental Design. ACS Omega, 2021, 6, 13057-13065.	3.5	14
87	Facile Processing of Polyelectrolyte Complexes for Immobilization of Heavy Metal Ions in Wastewater. ACS Applied Polymer Materials, 2022, 4, 2346-2354.	4.4	13
88	Importance of the coating pH in fabrication of polyethylenimine-coated polysulfone- Escherichia coli composite fiber sorbent. Journal of the Taiwan Institute of Chemical Engineers, 2016, 66, 379-385.	5.3	12
89	Development of melamine-impregnated alginate capsule for selective recovery of Pd(II) from a binary metal solution. Journal of Cleaner Production, 2021, 288, 125648.	9.3	12
90	Development of polyethyleneimine-starch fibers stable over the broad pH range for selective adsorption of gold from actual leachate solutions of waste electrical and electronic equipment. Journal of Cleaner Production, 2021, 328, 129545.	9.3	12

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91	Sorptive Removal of Cadmium Ions from Solution Phases Using Textile Fiber Waste Coated with Carboxymethyl Cellulose. Advanced Materials Research, 0, 1130, 631-634.	0.3	11
92	The Preparation of Modified Industrial Waste Polyacrylonitrile for the Adsorptive Recovery of Pt(IV) from Acidic Solutions. Materials, 2016, 9, 988.	2.9	11
93	Polyethylenimine-coated biomass-chitosan composite fibers for recovery of ruthenium from industrial effluents: Effects of chitosan molecular weight and drying method. Hydrometallurgy, 2018, 182, 114-120.	4.3	11
94	Experimental and QSAR studies on adsorptive interaction of anionic nonsteroidal anti-inflammatory drugs with activated charcoal. Chemosphere, 2018, 212, 620-628.	8.2	11
95	Prediction of organic pollutant removal using Corynebacterium glutamicum fermentation waste. Environmental Research, 2021, 192, 110271.	7.5	9
96	Potentiometric titration data on the enhancement of sorption capacity of surface-modified biosorbents: functional groups scanning method. Clean Technologies and Environmental Policy, 2018, 20, 2191-2199.	4.1	7
97	Selection of low-toxic and highly efficient ionic liquids for the separation of palladium and platinum in acidic solution, and prediction of the metal affinity of ionic liquids. Separation and Purification Technology, 2021, 258, 118019.	7.9	7
98	Adsorptive removal of cationic tricyclic antidepressants using cation-exchange resin. Environmental Science and Pollution Research, 2020, 27, 24760-24771.	5.3	6
99	Strategies for recovery of copper and gold as single constituents or an alloy: Selective separation and adsorption-coupled incineration of the bulk metal-loaded adsorbents. Resources, Conservation and Recycling, 2022, 181, 106264.	10.8	6
100	Selective Recovery of Au(III) from Binary Metal Solution Using Aliquat-336-Impregnated Alginate Capsule. Advanced Materials Research, 0, 1130, 511-514.	0.3	5
101	Fabrication and Application of Polyethylenimine/Ca-Alginate Blended Hydrogel Fibers as High-Capacity Adsorbents for Recovery of Gold from Acidic Solutions. Solid State Phenomena, 0, 262, 103-106.	0.3	4
102	Thiourea-Immobilized Polymer Beads for Sorption of Cr(VI) Ions in Acidic Aqueous Media. Macromolecular Research, 2019, 27, 515-521.	2.4	4
103	Fabrication of Magnetic Polymer Composite Sorbents and its Application for Recovery of Platinum from Acidic Solution. Solid State Phenomena, 0, 262, 311-314.	0.3	1
104	Metalâ€“Organic Framework Fibrous Membranes: Superâ€stable, Highly Efficient, and Recyclable Fibrous Metalâ€“Organic Framework Membranes for Precious Metal Recovery from Strong Acidic Solutions (Small 10/2019). Small, 2019, 15, 1970055.	10.0	1
105	In silico prediction and analysis of dielectric constant of ionic liquids. Korean Journal of Chemical Engineering, 2022, 39, 1651-1657.	2.7	1