Omotayo A Arotiba

List of Publications by Year
in descending order

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109 papers	5,096 citations	94433 37 h-index	98798 67 g-index
110 all docs	110 docs citations	110 times ranked	5825 citing authors

#	Article	IF	Citations
1	Chitosan-based nanomaterials: A state-of-the-art review. International Journal of Biological Macromolecules, 2013, 59, 46-58.	7.5	721
2	Simultaneous determination of cholesterol, ascorbic acid and uric acid as three essential biological compounds at a carbon paste electrode modified with copper oxide decorated reduced graphene oxide nanocomposite and ionic liquid. Journal of Colloid and Interface Science, 2020, 560, 208-212.	9.4	364
3	Development of a sodium alginate-based organic/inorganic superabsorbent composite hydrogel for adsorption of methylene blue. Carbohydrate Polymers, 2016, 153, 34-46.	10.2	306
4	The determination of 2-phenylphenol in the presence of 4-chlorophenol using nano-Fe3O4/ionic liquid paste electrode as an electrochemical sensor. Journal of Colloid and Interface Science, 2019, 554, 603-610.	9.4	242
5	Electrochemical Aptasensor for Endocrine Disrupting 17Î²-Estradiol Based on a Poly(3,4-ethylenedioxylthiopene)-Gold Nanocomposite Platform. Sensors, 2010, 10, 9872-9890.	3.8	128
6	Recent trend in visible-light photoelectrocatalytic systems for degradation of organic contaminants in water/wastewater. Environmental Science: Water Research and Technology, 2018, 4, 1389-1411.	2.4	114
7	Electrochemical Immunosensor Based on Polythionine/Gold Nanoparticles for the Determination of Aflatoxin B1. Sensors, 2008, 8, 8262-8274.	3.8	106
8	Electrochemical detection of glyphosate herbicide using horseradish peroxidase immobilized on sulfonated polymer matrix. Bioelectrochemistry, 2009, 75, 117-123.	4.6	94
9	Visible light driven photoelectrocatalysis on a FTO/BiVO4/BiOI anode for water treatment involving emerging pharmaceutical pollutants. Electrochimica Acta, 2019, 307, 285-292.	5.2	83
10	Electrochemical co-detection of As(III), Hg(II) and Pb(II) on a bismuth modified exfoliated graphite electrode. Talanta, 2016, 153, 99-106.	5.5	82
11	Towards wastewater treatment: Photo-assisted electrochemical degradation of 2-nitrophenol and orange II dye at a tungsten trioxide-exfoliated graphite composite electrode. Chemical Engineering Journal, 2017, 317, 290-301.	12.7	81
12	Synthesis, characterization and adsorption studies of an acrylic acid-grafted sodium alginate-based TiO₂hydrogel nanocomposite. Adsorption Science and Technology, 2018, 36, 458-477.	3.2	80
13	Solar photoelectrocatalytic degradation of ciprofloxacin at a FTO/BiVO4/MnO2 anode: Kinetics, intermediate products and degradation pathway studies. Journal of Environmental Chemical Engineering, 2020, 8, 103607.	6.7	80
14	Cu2O on anodised TiO2 nanotube arrays: A heterojunction photoanode for visible light assisted electrochemical degradation of pharmaceuticals in water. Electrochimica Acta, 2020, 340, 135944.	5.2	77
15	Synthesis, swelling and adsorption studies of a pH-responsive sodium alginateâ€“poly(acrylic acid) superabsorbent hydrogel. Polymer Bulletin, 2018, 75, 4587-4606.	3.3	73
16	Voltammetric detection of arsenic on a bismuth modified exfoliated graphite electrode. Electrochimica Acta, 2014, 128, 48-53.	5.2	71
17	Towards visible light driven photoelectrocatalysis for water treatment: Application of a FTO/BiVO4/Ag2S heterojunction anode for the removal of emerging pharmaceutical pollutants. Scientific Reports, 2020, 10, 5348.	3.3	68
18	Expanded graphite supported p-n MoS2-SnO2 heterojunction nanocomposite electrode for enhanced photo-electrocatalytic degradation of a pharmaceutical pollutant. Journal of Electroanalytical Chemistry, 2018, 827, 193-203.	3.8	62

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19	Carboxymethyl cellulose thiol-imprinted polymers: Synthesis, characterization and selective Hg(II) adsorption. Journal of Environmental Sciences, 2019, 79, 280-296.	6.1	60
20	Coupling cathodic electro-fenton with anodic photo-electrochemical oxidation: A feasibility study on the mineralization of paracetamol. Journal of Environmental Chemical Engineering, 2020, 8, 104394.	6.7	60
21	An Exfoliated Graphite-Based Bisphenol A Electrochemical Sensor. Sensors, 2012, 12, 11601-11611.	3.8	57
22	Cu₂O as an emerging semiconductor in photocatalytic and photoelectrocatalytic treatment of water contaminated with organic substances: a review. RSC Advances, 2020, 10, 36514-36525.	3.6	53
23	Bismuth vanadate in photoelectrocatalytic water treatment systems for the degradation of organics: A review on recent trends. Journal of Electroanalytical Chemistry, 2020, 878, 114724.	3.8	50
24	Photoelectrocatalytic water treatment systems: degradation, kinetics and intermediate products studies of sulfamethoxazole on a TiO₂â€“exfoliated graphite electrode. RSC Advances, 2017, 7, 40571-40580.	3.6	49
25	Green synthesis and stabilization of gold nanoparticles in chemically modified chitosan matrices. International Journal of Biological Macromolecules, 2011, 48, 682-687.	7.5	48
26	Enhancement of hydrogen peroxide production by electrochemical reduction of oxygen on carbon nanotubes modified with fluorine. Chemosphere, 2020, 259, 127423.	8.2	48
27	Electro-Fenton and photoelectro-Fenton degradation of sulfamethazine using an active gas diffusion electrode without aeration. Chemosphere, 2020, 250, 126177.	8.2	48
28	Visible lightâ€“driven photoelectrocatalytic semiconductor heterojunction anodes for water treatment applications. Current Opinion in Electrochemistry, 2020, 22, 25-34.	4.8	48
29	An Electrochemical DNA Biosensor Developed on a Nanocomposite Platform of Gold and Poly(propyleneimine) Dendrimer. Sensors, 2008, 8, 6791-6809.	3.8	47
30	Sol-gel derived xanthan gum/silica nanocompositeâ€”a highly efficient cationic dyes adsorbent in aqueous system. International Journal of Biological Macromolecules, 2017, 103, 596-604.	7.5	47
31	Epichlorohydrin crosslinked carboxymethyl cellulose-ethylenediamine imprinted polymer for the selective uptake of Cr(VI). International Journal of Biological Macromolecules, 2017, 101, 837-844.	7.5	45
32	Synthesis and characterization of poly (2-hydroxyethyl methacrylate)-polyaniline based hydrogel composites. Reactive and Functional Polymers, 2008, 68, 1239-1244.	4.1	44
33	Interrogating solar photoelectrocatalysis on an exfoliated graphiteâ€“BiVO₄/ZnO composite electrode towards water treatment. RSC Advances, 2019, 9, 16586-16595.	3.6	44
34	Photocatalytic degradation of acid blue 74 in water using Agâ€“Ag 2 Oâ€“Zno nanostuctures anchored on graphene oxide. Solid State Sciences, 2016, 51, 66-73.	3.2	43
35	Laccase-immobilized dendritic nanofibrous membranes as a novel approach towards the removal of bisphenol A. Environmental Technology (United Kingdom), 2018, 39, 392-404.	2.2	42
36	Electrochemical detection of Hg(II) in water using self-assembled single walled carbon nanotube-poly(m -amino benzene sulfonic acid) on gold electrode. Sensing and Bio-Sensing Research, 2016, 10, 27-33.	4.2	41

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37	Nanogold modified glassy carbon electrode for the electrochemical detection of arsenic in water. Russian Journal of Electrochemistry, 2017, 53, 170-177.	0.9	41
38	Electrochemical aptasensing of cadmium (II) on a carbon black-gold nano-platform. Journal of Electroanalytical Chemistry, 2020, 858, 113796.	3.8	41
39	Microsomal cytochrome P450-3A4 (CYP3A4) nanobiosensor for the determination of 2,4-dichlorophenolâ€"An endocrine disruptor compound. Electrochimica Acta, 2009, 54, 1925-1931.	5.2	39
40	Functionalized Carbon Nanoparticles, Blacks and Soots as Electronâ€Transfer Building Blocks and Conduits. Chemistry - an Asian Journal, 2014, 9, 1226-1241.	3.3	39
41	An Electrochemical Cholesterol Biosensor Based on A CdTe/CdSe/ZnSe Quantum Dotsâ€"Poly (Propylene Imine) Dendrimer Nanocomposite Immobilisation Layer. Sensors, 2018, 18, 3368.	3.8	38
42	An electrochemical DNA biosensor developed on novel multinuclear nickel(II) salicylaldimine metallodendrimer platform. Electrochimica Acta, 2007, 53, 1689-1696.	5.2	36
43	A potential masking approach in the detection of dopamine on 3-mercaptopropionic acid capped ZnSe quantum dots modified gold electrode in the presence of interferences. Journal of Electroanalytical Chemistry, 2010, 643, 77-81.	3.8	36
44	Electrochemical detection and removal of lead in water using poly(propylene imine) modified re-compressed exfoliated graphite electrodes. Journal of Applied Electrochemistry, 2011, 41, 1389-1396.	2.9	35
45	Perovskite Oxideâ€"Based Materials for Photocatalytic and Photoelectrocatalytic Treatment of Water. Frontiers in Chemistry, 2021, 9, 634630.	3.6	33
46	Electrochemical nitrite nanosensor developed with amine- and sulphate-functionalised polystyrene latex beads self-assembled on polyaniline. Electrochimica Acta, 2010, 55, 4274-4280.	5.2	32
47	Dealing with interference challenge in the electrochemical detection of As(III) â€"A complexometric masking approach. Electrochemistry Communications, 2016, 64, 18-20.	4.7	31
48	Zirconia-poly(propylene imine) dendrimer nanocomposite based electrochemical urea biosensor. Enzyme and Microbial Technology, 2014, 66, 48-55.	3.2	30
49	An aptasensor for arsenic on a carbonâ€'gold bi-nanoparticle platform. Sensing and Bio-Sensing Research, 2019, 24, 100280.	4.2	30
50	An Exfoliated Graphite-Based Electrochemical Immunosensor on a Dendrimer/Carbon Nanodot Platform for the Detection of Carcinoembryonic Antigen Cancer Biomarker. Biosensors, 2019, 9, 39.	4.7	30
51	The application of FTO-Cu2O/Ag3PO4 heterojunction in the photoelectrochemical degradation of emerging pharmaceutical pollutant under visible light irradiation. Chemosphere, 2021, 266, 129231.	8.2	30
52	Electrochemical impedimetry of electrodeposited poly(propylene imine) dendrimer monolayer. Journal of Electroanalytical Chemistry, 2010, 638, 287-292.	3.8	29
53	Photoelectrochemical degradation of orange II dye in wastewater at a silverâ€"zinc oxide/reduced graphene oxide nanocomposite photoanode. RSC Advances, 2016, 6, 52868-52877.	3.6	28
54	An Exfoliated Graphite-Bismuth Vanadate Composite Photoanode for the Photoelectrochemical Degradation of Acid Orange 7 Dye. Electrocatalysis, 2019, 10, 429-435.	3.0	27

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55	Solar-Light-Responsive Titanium-Sheet-Based Carbon Nanoparticles/B-BiVO₄/WO₃ Photoanode for the Photoelectrocatalytic Degradation of Orange II Dye Water Pollutant. ACS Omega, 2020, 5, 4743-4750.	3.5	27
56	Exfoliated graphite/titanium dioxide nanocomposites for photodegradation of eosin yellow. Applied Surface Science, 2014, 300, 159-164.	6.1	26
57	An Exfoliated Graphite Based Electrochemical Sensor for As(III) in Water. Electroanalysis, 2016, 28, 1462-1469.	2.9	26
58	Photoelectrocatalysis of paracetamol on Pdâ€“ZnO/ N-doped carbon nanofibers electrode. Applied Materials Today, 2021, 24, 101129.	4.3	26
59	Photoelectrocatalytic application of palladium decorated zinc oxide-expanded graphite electrode for the removal of 4-nitrophenol: experimental and computational studies. RSC Advances, 2018, 8, 10255-10266.	3.6	25
60	Photoelectrochemical oxidation of p-nitrophenol on an expanded graphiteâ€”TiO2 electrode. Photochemical and Photobiological Sciences, 2013, 12, 1091-1102.	2.9	24
61	Electrochemical Degradation of an Anthraquinonic Dye on an Expanded Graphite-Diamond Composite Electrode. Electrocatalysis, 2016, 7, 132-139.	3.0	24
62	Photoelectrochemical Degradation of Organic Pollutants on a La3+ Doped BiFeO3 Perovskite. Catalysts, 2021, 11, 1069.	3.5	24
63	Synthesis, characterisation and application of an exfoliated graphiteâ€“diamond composite electrode in the electrochemical degradation of trichloroethylene. RSC Advances, 2013, 3, 24473.	3.6	23
64	Electroanalysis of selenium in water on an electrodeposited gold-nanoparticle modified glassy carbon electrode. Journal of Electroanalytical Chemistry, 2015, 758, 7-11.	3.8	23
65	Electroanalysis of copper as a heavy metal pollutant in water using cobalt oxide modified exfoliated graphite electrode. Physics and Chemistry of the Earth, 2012, 50-52, 127-131.	2.9	20
66	An alpha-fetoprotein electrochemical immunosensor based on a carbon/gold bi-nanoparticle platform. Analytical Methods, 2018, 10, 5649-5658.	2.7	20
67	Synthesis and characterization of poly(propylene imine) dendrimer â€“ Polypyrrole conducting star copolymer. Journal of Electroanalytical Chemistry, 2011, 652, 18-25.	3.8	19
68	Application of a Polypyrrole/Carboxy Methyl Cellulose Ion Imprinted Polymer in the Electrochemical Detection of Mercury in Water. Electroanalysis, 2018, 30, 2612-2619.	2.9	19
69	A Silver-Loaded Exfoliated Graphite Nanocomposite Anti-Fouling Electrochemical Sensor for Bisphenol A in Thermal Paper Samples. ACS Omega, 2021, 6, 9401-9409.	3.5	19
70	Combined Electro-Fenton and Anodic Oxidation Processes at a Sub-Stoichiometric Titanium Oxide (Ti4O7) Ceramic Electrode for the Degradation of Tetracycline in Water. Water (Switzerland), 2021, 13, 2772.	2.7	19
71	A Dendrimer Supported Electrochemical Immunosensor for the Detection of Alphaâ€feto protein â€“ a Cancer Biomarker. Electroanalysis, 2018, 30, 31-37.	2.9	18
72	Rapid and template-free synthesis of copper(I) oxide-graphitic carbon nitride heterojunction for photocatalytic degradation of orange II dye in water. Solid State Sciences, 2019, 97, 105994.	3.2	18

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73	Enhanced photoelectrocatalytic degradation of diclofenac sodium using a system of Ag-BiVO4/BiOI anode and Ag-BiOI cathode. Scientific Reports, 2022, 12, 4214.	3.3	17
74	Electrochemical Detection of 2,4â€Dichlorophenol on a Ternary Composite Electrode of Diamond, Graphene, and Polyaniline. ChemElectroChem, 2017, 4, 1074-1080.	3.4	16
75	Ethylenediamine functionalized carbon nanoparticles: synthesis, characterization, and evaluation for cadmium removal from water. RSC Advances, 2017, 7, 34226-34235.	3.6	16
76	Flexible Polyester Screenâ€printed Electrode Modified with Carbon Nanofibers for the Electrochemical Aptasensing of Cadmium (II). Electroanalysis, 2020, 32, 2650-2658.	2.9	16
77	An AC-driven desalination/salination system based on a Nafion cationic rectifier. Desalination, 2020, 480, 114351.	8.2	16
78	A polyamidoamine dendrimer-streptavidin supramolecular architecture for biosensor development. Bioelectrochemistry, 2017, 118, 14-18.	4.6	15
79	Microscale Ionic Diodes: An Overview. Electroanalysis, 2021, 33, 1398-1418.	2.9	15
80	Sonoelectrochemical degradation of ciprofloxacin in water on a Ti/BaTiO3 electrode. Journal of Environmental Chemical Engineering, 2022, 10, 107224.	6.7	15
81	Synthesis, Characterization, and Application of Exfoliated Graphite/Zirconium Nanocomposite Electrode for the Photoelectrochemical Degradation of Organic Dye in Water. Electrocatalysis, 2015, 6, 390-397.	3.0	14
82	Photoelectrochemical degradation of eosin yellowish dye on exfoliated graphiteâ€“ZnO nanocomposite electrode. Journal of Materials Science: Materials in Electronics, 2016, 27, 592-598.	2.2	14
83	An electrochemical sensor for caffeine at a carbon nanofiber modified glassy carbon electrode. Journal of Food Measurement and Characterization, 2022, 16, 2536-2544.	3.2	14
84	Cyclodextrinâ€dendrimer functionalized polysulfone membrane for the removal of humic acid in water. Journal of Applied Polymer Science, 2013, 130, 4428-4439.	2.6	13
85	Photocatalytic application of Pd-ZnO-exfoliated graphite nanocomposite for the enhanced removal of acid orange 7 dye in water. Solid State Sciences, 2017, 74, 118-124.	3.2	13
86	Towards cancer diagnostics â€“ an Î±-feto protein electrochemical immunosensor on a manganese(iv) oxide/gold nanocomposite immobilisation layer. RSC Advances, 2018, 8, 30683-30691.	3.6	13
87	Switching Anionic and Cationic Semipermeability in Partially Hydrolyzed Polyacrylonitrile: A pH-Tunable Ionic Rectifier. ACS Applied Materials & Interfaces, 2020, 12, 3214-3224.	8.0	13
88	Photocatalytic degradation of ciprofloxacin and sulfamethoxazole on a carbon nanodot doped tungsten trioxide: degradation product study. Reaction Kinetics, Mechanisms and Catalysis, 2020, 131, 453-470.	1.7	13
89	Electrochemical detection of selenium using glassy carbon electrode modified with reduced graphene oxide. International Journal of Environmental Analytical Chemistry, 2017, 97, 534-547.	3.3	12
90	Composite polyester membranes with embedded dendrimer hosts and bimetallic Fe/Ni nanoparticles: synthesis, characterisation and application to water treatment. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	11

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91	Nanostructured Î²-Cyclodextrin-Hyperbranched Polyethyleneimine (Î²-CD-HPEI) Embedded in Polysulfone Membrane for the Removal of Humic Acid from Water. Separation Science and Technology, 2013, 48, 2724-2734.	2.5	11
92	Voltammetric Determination of Pb(II) Ions at a Modified Kaolinite-Carbon Paste Electrode. Electrocatalysis, 2019, 10, 643-652.	3.0	11
93	The Pathway towards Photoelectrocatalytic Water Disinfection: Review and Prospects of a Powerful Sustainable Tool. Catalysts, 2021, 11, 921.	3.5	11
94	Synthesis and characterisation of generation 2 and 3 poly(propylene imine) dendrimer capped NiFe nanoalloy. Materials Letters, 2012, 68, 324-326.	2.6	10
95	Cationic diodes by hot-pressing of Fumasep FKS-30 ionomer film onto a microhole in polyethylene terephthalate (PET). Journal of Electroanalytical Chemistry, 2018, 815, 114-122.	3.8	10
96	Overoxidized Polypyrrole Incorporated with Gold Nanoparticles as Platform for Impedimetric Anti-Transglutaminase Immunosensor. Analytical Letters, 2011, 44, 1956-1966.	1.8	9
97	Carbon Nanofibers Provide a Cationic Rectifier Material: Specific Electrolyte Effects, Bipolar Reactivity, and Prospect for Desalination. ChemElectroChem, 2019, 6, 3145-3153.	3.4	8
98	A Poly(Propylene Imine) Dendrimer and Carbon Black Modified Flexible Screen Printed Electrochemical Sensor for Lead and Cadmium Coâ€detection. Electroanalysis, 2020, 32, 3009-3016.	2.9	8
99	An Electrochemical Aptamer Biosensor for Bisphenol A on a Carbon Nanofibreâ€silver Nanoparticle Immobilisation Platform. Electroanalysis, 2021, 33, 2053-2061.	2.9	8
100	A poly (propylene imine) dendrimer â€“ Carbon nanofiber based aptasensor for bisphenol A in water. Journal of Electroanalytical Chemistry, 2021, 901, 115783.	3.8	8
101	Improved Magnetite Nanoparticle Immobilization on a Carbon Felt Cathode in the Heterogeneous Electro-Fenton Degradation of Aspirin in Wastewater. ACS Omega, 2022, 7, 19261-19269.	3.5	8
102	Sulphate radical enhanced photoelectrochemical degradation of sulfamethoxazole on a fluorine doped tin oxide - copper(I) oxide photoanode. Journal of Electroanalytical Chemistry, 2021, 900, 115714.	3.8	6
103	Electrochemical detection of nicotine at a carbon Nanofiber-Poly(amidoamine) dendrimer modified glassy carbon electrode. Chemosphere, 2022, 303, 134961.	8.2	6
104	Surface modified carbon nanomats provide cationic and anionic rectifier membranes in aqueous electrolyte media. Electrochimica Acta, 2020, 354, 136750.	5.2	5
105	Determination of Catechins from Elephantorrhiza elephantina and Pentanisia prunelloides using Voltammetry and UV spectroscopy. Natural Product Communications, 2014, 9, 1934578X1400900.	0.5	4
106	Enhanced Visible Light-Driven Photoelectrocatalytic Degradation of Paracetamol at a Ternary z-Scheme Heterojunction of Bi2WO6 with Carbon Nanoparticles and TiO2 Nanotube Arrays Electrode. Nanomaterials, 2022, 12, 2467.	4.1	4
107	The application of exfoliated graphite electrode in the electrochemical degradation ofp-nitrophenol in water. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2016, 51, 571-578.	1.7	1
108	Welcome for the Special Issue â€œElectrocatalysis in South Africaâ€• Electrocatalysis, 2019, 10, 287-287.	3.0	0

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109	Composite polyester membranes with embedded dendrimer hosts and bimetallic Fe/Ni nanoparticles: synthesis, characterisation and application to water treatment. , 2013, , 47-61.		0