

Omotayo A Arotiba

List of Publications by Year in descending order

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109
papers

5,096
citations

94269

37
h-index

98622

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. <i>International Journal of Biological Macromolecules</i> , 2013, 59, 46-58.	3.6	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. <i>Journal of Colloid and Interface Science</i> , 2020, 560, 208-212.	5.0	364
3	Development of a sodium alginate-based organic/inorganic superabsorbent composite hydrogel for adsorption of methylene blue. <i>Carbohydrate Polymers</i> , 2016, 153, 34-46.	5.1	306
4	The determination of 2-phenylphenol in the presence of 4-chlorophenol using nano-Fe ₃ O ₄ /ionic liquid paste electrode as an electrochemical sensor. <i>Journal of Colloid and Interface Science</i> , 2019, 554, 603-610.	5.0	242
5	Electrochemical Aptasensor for Endocrine Disrupting 17 β -Estradiol Based on a Poly(3,4-ethylenedioxythiophene)-Gold Nanocomposite Platform. <i>Sensors</i> , 2010, 10, 9872-9890.	2.1	128
6	Recent trend in visible-light photoelectrocatalytic systems for degradation of organic contaminants in water/wastewater. <i>Environmental Science: Water Research and Technology</i> , 2018, 4, 1389-1411.	1.2	114
7	Electrochemical Immunosensor Based on Polythionine/Gold Nanoparticles for the Determination of Aflatoxin B ₁ . <i>Sensors</i> , 2008, 8, 8262-8274.	2.1	106
8	Electrochemical detection of glyphosate herbicide using horseradish peroxidase immobilized on sulfonated polymer matrix. <i>Bioelectrochemistry</i> , 2009, 75, 117-123.	2.4	94
9	Visible light driven photoelectrocatalysis on a FTO/BiVO ₄ /BiOI anode for water treatment involving emerging pharmaceutical pollutants. <i>Electrochimica Acta</i> , 2019, 307, 285-292.	2.6	83
10	Electrochemical co-detection of As(III), Hg(II) and Pb(II) on a bismuth modified exfoliated graphite electrode. <i>Talanta</i> , 2016, 153, 99-106.	2.9	82
11	Towards wastewater treatment: Photo-assisted electrochemical degradation of 2-nitrophenol and orange II dye at a tungsten trioxide-exfoliated graphite composite electrode. <i>Chemical Engineering Journal</i> , 2017, 317, 290-301.	6.6	81
12	Synthesis, characterization and adsorption studies of an acrylic acid-grafted sodium alginate-based TiO ₂ hydrogel nanocomposite. <i>Adsorption Science and Technology</i> , 2018, 36, 458-477.	1.5	80
13	Solar photoelectrocatalytic degradation of ciprofloxacin at a FTO/BiVO ₄ /MnO ₂ anode: Kinetics, intermediate products and degradation pathway studies. <i>Journal of Environmental Chemical Engineering</i> , 2020, 8, 103607.	3.3	80
14	Cu ₂ O on anodised TiO ₂ nanotube arrays: A heterojunction photoanode for visible light assisted electrochemical degradation of pharmaceuticals in water. <i>Electrochimica Acta</i> , 2020, 340, 135944.	2.6	77
15	Synthesis, swelling and adsorption studies of a pH-responsive sodium alginate-poly(acrylic acid) superabsorbent hydrogel. <i>Polymer Bulletin</i> , 2018, 75, 4587-4606.	1.7	73
16	Voltammetric detection of arsenic on a bismuth modified exfoliated graphite electrode. <i>Electrochimica Acta</i> , 2014, 128, 48-53.	2.6	71
17	Towards visible light driven photoelectrocatalysis for water treatment: Application of a FTO/BiVO ₄ /Ag ₂ S heterojunction anode for the removal of emerging pharmaceutical pollutants. <i>Scientific Reports</i> , 2020, 10, 5348.	1.6	68
18	Expanded graphite supported p-n MoS ₂ -SnO ₂ heterojunction nanocomposite electrode for enhanced photo-electrocatalytic degradation of a pharmaceutical pollutant. <i>Journal of Electroanalytical Chemistry</i> , 2018, 827, 193-203.	1.9	62

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19	Carboxymethyl cellulose thiol-imprinted polymers: Synthesis, characterization and selective Hg(II) adsorption. <i>Journal of Environmental Sciences</i> , 2019, 79, 280-296.	3.2	60
20	Coupling cathodic electro-fenton with anodic photo-electrochemical oxidation: A feasibility study on the mineralization of paracetamol. <i>Journal of Environmental Chemical Engineering</i> , 2020, 8, 104394.	3.3	60
21	An Exfoliated Graphite-Based Bisphenol A Electrochemical Sensor. <i>Sensors</i> , 2012, 12, 11601-11611.	2.1	57
22	Cu ₂ O as an emerging semiconductor in photocatalytic and photoelectrocatalytic treatment of water contaminated with organic substances: a review. <i>RSC Advances</i> , 2020, 10, 36514-36525.	1.7	53
23	Bismuth vanadate in photoelectrocatalytic water treatment systems for the degradation of organics: A review on recent trends. <i>Journal of Electroanalytical Chemistry</i> , 2020, 878, 114724.	1.9	50
24	Photoelectrocatalytic water treatment systems: degradation, kinetics and intermediate products studies of sulfamethoxazole on a TiO ₂ -exfoliated graphite electrode. <i>RSC Advances</i> , 2017, 7, 40571-40580.	1.7	49
25	Green synthesis and stabilization of gold nanoparticles in chemically modified chitosan matrices. <i>International Journal of Biological Macromolecules</i> , 2011, 48, 682-687.	3.6	48
26	Enhancement of hydrogen peroxide production by electrochemical reduction of oxygen on carbon nanotubes modified with fluorine. <i>Chemosphere</i> , 2020, 259, 127423.	4.2	48
27	Electro-Fenton and photoelectro-Fenton degradation of sulfamethazine using an active gas diffusion electrode without aeration. <i>Chemosphere</i> , 2020, 250, 126177.	4.2	48
28	Visible light-driven photoelectrocatalytic semiconductor heterojunction anodes for water treatment applications. <i>Current Opinion in Electrochemistry</i> , 2020, 22, 25-34.	2.5	48
29	An Electrochemical DNA Biosensor Developed on a Nanocomposite Platform of Gold and Poly(propyleneimine) Dendrimer. <i>Sensors</i> , 2008, 8, 6791-6809.	2.1	47
30	Sol-gel derived xanthan gum/silica nanocomposite—a highly efficient cationic dyes adsorbent in aqueous system. <i>International Journal of Biological Macromolecules</i> , 2017, 103, 596-604.	3.6	47
31	Epichlorohydrin crosslinked carboxymethyl cellulose-ethylenediamine imprinted polymer for the selective uptake of Cr(VI). <i>International Journal of Biological Macromolecules</i> , 2017, 101, 837-844.	3.6	45
32	Synthesis and characterization of poly (2-hydroxyethyl methacrylate)-polyaniline based hydrogel composites. <i>Reactive and Functional Polymers</i> , 2008, 68, 1239-1244.	2.0	44
33	Interrogating solar photoelectrocatalysis on an exfoliated graphite-BiVO ₄ /ZnO composite electrode towards water treatment. <i>RSC Advances</i> , 2019, 9, 16586-16595.	1.7	44
34	Photocatalytic degradation of acid blue 74 in water using Ag-Ag ₂ O-ZnO nanostructures anchored on graphene oxide. <i>Solid State Sciences</i> , 2016, 51, 66-73.	1.5	43
35	Laccase-immobilized dendritic nanofibrous membranes as a novel approach towards the removal of bisphenol A. <i>Environmental Technology (United Kingdom)</i> , 2018, 39, 392-404.	1.2	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. <i>Sensing and Bio-Sensing Research</i> , 2016, 10, 27-33.	2.2	41

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37	Nanogold modified glassy carbon electrode for the electrochemical detection of arsenic in water. <i>Russian Journal of Electrochemistry</i> , 2017, 53, 170-177.	0.3	41
38	Electrochemical aptasensing of cadmium (II) on a carbon black-gold nano-platform. <i>Journal of Electroanalytical Chemistry</i> , 2020, 858, 113796.	1.9	41
39	Microsomal cytochrome P450-3A4 (CYP3A4) nanobiosensor for the determination of 2,4-dichlorophenol—An endocrine disruptor compound. <i>Electrochimica Acta</i> , 2009, 54, 1925-1931.	2.6	39
40	Functionalized Carbon Nanoparticles, Blacks and Soots as Electron—Transfer Building Blocks and Conduits. <i>Chemistry - an Asian Journal</i> , 2014, 9, 1226-1241.	1.7	39
41	An Electrochemical Cholesterol Biosensor Based on A CdTe/CdSe/ZnSe Quantum Dots—Poly (Propylene Imine) Dendrimer Nanocomposite Immobilisation Layer. <i>Sensors</i> , 2018, 18, 3368.	2.1	38
42	An electrochemical DNA biosensor developed on novel multinuclear nickel(II) salicylaldimine metallodendrimer platform. <i>Electrochimica Acta</i> , 2007, 53, 1689-1696.	2.6	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. <i>Journal of Electroanalytical Chemistry</i> , 2010, 643, 77-81.	1.9	36
44	Electrochemical detection and removal of lead in water using poly(propylene imine) modified re-compressed exfoliated graphite electrodes. <i>Journal of Applied Electrochemistry</i> , 2011, 41, 1389-1396.	1.5	35
45	Perovskite Oxide—Based Materials for Photocatalytic and Photoelectrocatalytic Treatment of Water. <i>Frontiers in Chemistry</i> , 2021, 9, 634630.	1.8	33
46	Electrochemical nitrite nanosensor developed with amine- and sulphate-functionalised polystyrene latex beads self-assembled on polyaniline. <i>Electrochimica Acta</i> , 2010, 55, 4274-4280.	2.6	32
47	Dealing with interference challenge in the electrochemical detection of As(III) —A complexometric masking approach. <i>Electrochemistry Communications</i> , 2016, 64, 18-20.	2.3	31
48	Zirconia-poly(propylene imine) dendrimer nanocomposite based electrochemical urea biosensor. <i>Enzyme and Microbial Technology</i> , 2014, 66, 48-55.	1.6	30
49	An aptasensor for arsenic on a carbon—gold bi-nanoparticle platform. <i>Sensing and Bio-Sensing Research</i> , 2019, 24, 100280.	2.2	30
50	An Exfoliated Graphite-Based Electrochemical Immunosensor on a Dendrimer/Carbon Nanodot Platform for the Detection of Carcinoembryonic Antigen Cancer Biomarker. <i>Biosensors</i> , 2019, 9, 39.	2.3	30
51	The application of FTO-Cu ₂ O/Ag ₃ PO ₄ heterojunction in the photoelectrochemical degradation of emerging pharmaceutical pollutant under visible light irradiation. <i>Chemosphere</i> , 2021, 266, 129231.	4.2	30
52	Electrochemical impedimetry of electrodeposited poly(propylene imine) dendrimer monolayer. <i>Journal of Electroanalytical Chemistry</i> , 2010, 638, 287-292.	1.9	29
53	Photoelectrochemical degradation of orange II dye in wastewater at a silver—zinc oxide/reduced graphene oxide nanocomposite photoanode. <i>RSC Advances</i> , 2016, 6, 52868-52877.	1.7	28
54	An Exfoliated Graphite-Bismuth Vanadate Composite Photoanode for the Photoelectrochemical Degradation of Acid Orange 7 Dye. <i>Electrocatalysis</i> , 2019, 10, 429-435.	1.5	27

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55	Solar-Light-Responsive Titanium-Sheet-Based Carbon Nanoparticles/B-BiVO ₄ /WO ₃ Photoanode for the Photoelectrocatalytic Degradation of Orange II Dye Water Pollutant. ACS Omega, 2020, 5, 4743-4750.	1.6	27
56	Exfoliated graphite/titanium dioxide nanocomposites for photodegradation of eosin yellow. Applied Surface Science, 2014, 300, 159-164.	3.1	26
57	An Exfoliated Graphite Based Electrochemical Sensor for As(III) in Water. Electroanalysis, 2016, 28, 1462-1469.	1.5	26
58	Photoelectrocatalysis of paracetamol on Pd@ZnO/ N-doped carbon nanofibers electrode. Applied Materials Today, 2021, 24, 101129.	2.3	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.	1.7	25
60	Photoelectrochemical oxidation of p-nitrophenol on an expanded graphite@TiO ₂ electrode. Photochemical and Photobiological Sciences, 2013, 12, 1091-1102.	1.6	24
61	Electrochemical Degradation of an Anthraquinonic Dye on an Expanded Graphite-Diamond Composite Electrode. Electroanalysis, 2016, 7, 132-139.	1.5	24
62	Photoelectrochemical Degradation of Organic Pollutants on a La ³⁺ Doped BiFeO ₃ Perovskite. Catalysts, 2021, 11, 1069.	1.6	24
63	Synthesis, characterisation and application of an exfoliated graphite@diamond composite electrode in the electrochemical degradation of trichloroethylene. RSC Advances, 2013, 3, 24473.	1.7	23
64	Electroanalysis of selenium in water on an electrodeposited gold-nanoparticle modified glassy carbon electrode. Journal of Electroanalytical Chemistry, 2015, 758, 7-11.	1.9	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.	1.2	20
66	An alpha-fetoprotein electrochemical immunosensor based on a carbon/gold bi-nanoparticle platform. Analytical Methods, 2018, 10, 5649-5658.	1.3	20
67	Synthesis and characterization of poly(propylene imine) dendrimer @ Polypyrrole conducting star copolymer. Journal of Electroanalytical Chemistry, 2011, 652, 18-25.	1.9	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.	1.5	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.	1.6	19
70	Combined Electro-Fenton and Anodic Oxidation Processes at a Sub-Stoichiometric Titanium Oxide (Ti ₄ O ₇) Ceramic Electrode for the Degradation of Tetracycline in Water. Water (Switzerland), 2021, 13, 2772.	1.2	19
71	A Dendrimer Supported Electrochemical Immunosensor for the Detection of Alpha-feto protein a Cancer Biomarker. Electroanalysis, 2018, 30, 31-37.	1.5	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.	1.5	18

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73	Enhanced photoelectrocatalytic degradation of diclofenac sodium using a system of Ag-BiVO ₄ /BiOI anode and Ag-BiOI cathode. <i>Scientific Reports</i> , 2022, 12, 4214.	1.6	17
74	Electrochemical Detection of 2,4-Dichlorophenol on a Ternary Composite Electrode of Diamond, Graphene, and Polyaniline. <i>ChemElectroChem</i> , 2017, 4, 1074-1080.	1.7	16
75	Ethylenediamine functionalized carbon nanoparticles: synthesis, characterization, and evaluation for cadmium removal from water. <i>RSC Advances</i> , 2017, 7, 34226-34235.	1.7	16
76	Flexible Polyester Screen-Printed Electrode Modified with Carbon Nanofibers for the Electrochemical Aptasensing of Cadmium (II). <i>Electroanalysis</i> , 2020, 32, 2650-2658.	1.5	16
77	An AC-driven desalination/salination system based on a Nafion cationic rectifier. <i>Desalination</i> , 2020, 480, 114351.	4.0	16
78	A polyamidoamine dendrimer-streptavidin supramolecular architecture for biosensor development. <i>Bioelectrochemistry</i> , 2017, 118, 14-18.	2.4	15
79	Microscale Ionic Diodes: An Overview. <i>Electroanalysis</i> , 2021, 33, 1398-1418.	1.5	15
80	Sonoelectrochemical degradation of ciprofloxacin in water on a Ti/BaTiO ₃ electrode. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 107224.	3.3	15
81	Synthesis, Characterization, and Application of Exfoliated Graphite/Zirconium Nanocomposite Electrode for the Photoelectrochemical Degradation of Organic Dye in Water. <i>Electrocatalysis</i> , 2015, 6, 390-397.	1.5	14
82	Photoelectrochemical degradation of eosin yellowish dye on exfoliated graphite-ZnO nanocomposite electrode. <i>Journal of Materials Science: Materials in Electronics</i> , 2016, 27, 592-598.	1.1	14
83	An electrochemical sensor for caffeine at a carbon nanofiber modified glassy carbon electrode. <i>Journal of Food Measurement and Characterization</i> , 2022, 16, 2536-2544.	1.6	14
84	Cyclodextrin-dendrimer functionalized polysulfone membrane for the removal of humic acid in water. <i>Journal of Applied Polymer Science</i> , 2013, 130, 4428-4439.	1.3	13
85	Photocatalytic application of Pd-ZnO-exfoliated graphite nanocomposite for the enhanced removal of acid orange 7 dye in water. <i>Solid State Sciences</i> , 2017, 74, 118-124.	1.5	13
86	Towards cancer diagnostics – an α -feto protein electrochemical immunosensor on a manganese(IV) oxide/gold nanocomposite immobilisation layer. <i>RSC Advances</i> , 2018, 8, 30683-30691.	1.7	13
87	Switching Anionic and Cationic Semipermeability in Partially Hydrolyzed Polyacrylonitrile: A pH-Tunable Ionic Rectifier. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 3214-3224.	4.0	13
88	Photocatalytic degradation of ciprofloxacin and sulfamethoxazole on a carbon nanodot doped tungsten trioxide: degradation product study. <i>Reaction Kinetics, Mechanisms and Catalysis</i> , 2020, 131, 453-470.	0.8	13
89	Electrochemical detection of selenium using glassy carbon electrode modified with reduced graphene oxide. <i>International Journal of Environmental Analytical Chemistry</i> , 2017, 97, 534-547.	1.8	12
90	Composite polyester membranes with embedded dendrimer hosts and bimetallic Fe/Ni nanoparticles: synthesis, characterisation and application to water treatment. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	0.8	11

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91	Nanostructured β -Cyclodextrin-Hyperbranched Polyethyleneimine (β -CD-HPEI) Embedded in Polysulfone Membrane for the Removal of Humic Acid from Water. <i>Separation Science and Technology</i> , 2013, 48, 2724-2734.	1.3	11
92	Voltammetric Determination of Pb(II) Ions at a Modified Kaolinite-Carbon Paste Electrode. <i>Electrocatalysis</i> , 2019, 10, 643-652.	1.5	11
93	The Pathway towards Photoelectrocatalytic Water Disinfection: Review and Prospects of a Powerful Sustainable Tool. <i>Catalysts</i> , 2021, 11, 921.	1.6	11
94	Synthesis and characterisation of generation 2 and 3 poly(propylene imine) dendrimer capped NiFe nanoalloy. <i>Materials Letters</i> , 2012, 68, 324-326.	1.3	10
95	Cationic diodes by hot-pressing of Fumasep FKS-30 ionomer film onto a microhole in polyethylene terephthalate (PET). <i>Journal of Electroanalytical Chemistry</i> , 2018, 815, 114-122.	1.9	10
96	Overoxidized Polypyrrole Incorporated with Gold Nanoparticles as Platform for Impedimetric Anti-Transglutaminase Immunosensor. <i>Analytical Letters</i> , 2011, 44, 1956-1966.	1.0	9
97	Carbon Nanofibers Provide a Cationic Rectifier Material: Specific Electrolyte Effects, Bipolar Reactivity, and Prospect for Desalination. <i>ChemElectroChem</i> , 2019, 6, 3145-3153.	1.7	8
98	A Poly(Propylene Imine) Dendrimer and Carbon Black Modified Flexible Screen Printed Electrochemical Sensor for Lead and Cadmium Co-detection. <i>Electroanalysis</i> , 2020, 32, 3009-3016.	1.5	8
99	An Electrochemical Aptamer Biosensor for Bisphenol A on a Carbon Nanofibre-silver Nanoparticle Immobilisation Platform. <i>Electroanalysis</i> , 2021, 33, 2053-2061.	1.5	8
100	A poly (propylene imine) dendrimer - Carbon nanofiber based aptasensor for bisphenol A in water. <i>Journal of Electroanalytical Chemistry</i> , 2021, 901, 115783.	1.9	8
101	Improved Magnetite Nanoparticle Immobilization on a Carbon Felt Cathode in the Heterogeneous Electro-Fenton Degradation of Aspirin in Wastewater. <i>ACS Omega</i> , 2022, 7, 19261-19269.	1.6	8
102	Sulphate radical enhanced photoelectrochemical degradation of sulfamethoxazole on a fluorine doped tin oxide - copper(I) oxide photoanode. <i>Journal of Electroanalytical Chemistry</i> , 2021, 900, 115714.	1.9	6
103	Electrochemical detection of nicotine at a carbon Nanofiber-Poly(amidoamine) dendrimer modified glassy carbon electrode. <i>Chemosphere</i> , 2022, 303, 134961.	4.2	6
104	Surface modified carbon nanomats provide cationic and anionic rectifier membranes in aqueous electrolyte media. <i>Electrochimica Acta</i> , 2020, 354, 136750.	2.6	5
105	Determination of Catechins from <i>Elephantorrhiza elephantina</i> and <i>Pentanisia prunelloides</i> using Voltammetry and UV spectroscopy. <i>Natural Product Communications</i> , 2014, 9, 1934578X1400900.	0.2	4
106	Enhanced Visible Light-Driven Photoelectrocatalytic Degradation of Paracetamol at a Ternary z-Scheme Heterojunction of Bi ₂ WO ₆ with Carbon Nanoparticles and TiO ₂ Nanotube Arrays Electrode. <i>Nanomaterials</i> , 2022, 12, 2467.	1.9	4
107	The application of exfoliated graphite electrode in the electrochemical degradation of <i>p</i> -nitrophenol in water. <i>Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering</i> , 2016, 51, 571-578.	0.9	1
108	Welcome for the Special Issue - Electro-catalysis in South Africa. <i>Electrocatalysis</i> , 2019, 10, 287-287.	1.5	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