

Rafiq Ahmad

List of Publications by Year in descending order

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95
papers

5,102
citations

50244

46
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91828

69
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96
all docs

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docs citations

96
times ranked

5993
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly Efficient Non-Enzymatic Glucose Sensor Based on CuO Modified Vertically-Grown ZnO Nanorods on Electrode. <i>Scientific Reports</i> , 2017, 7, 5715.	1.6	234
2	Chemical and biological sensors based on metal oxide nanostructures. <i>Chemical Communications</i> , 2012, 48, 10369.	2.2	226
3	Wide Linear-Range Detecting Nonenzymatic Glucose Biosensor Based on CuO Nanoparticles Inkjet-Printed on Electrodes. <i>Analytical Chemistry</i> , 2013, 85, 10448-10454.	3.2	180
4	Recent progress and perspectives of gas sensors based on vertically oriented ZnO nanomaterials. <i>Advances in Colloid and Interface Science</i> , 2019, 270, 1-27.	7.0	141
5	Deposition of nanomaterials: A crucial step in biosensor fabrication. <i>Materials Today Communications</i> , 2018, 17, 289-321.	0.9	140
6	Ultra thin NiO nanosheets for high performance hydrogen gas sensor device. <i>Applied Surface Science</i> , 2020, 506, 144971.	3.1	133
7	Improved selectivity and low concentration hydrogen gas sensor application of Pd sensitized heterojunction n-ZnO/p-NiO nanostructures. <i>Journal of Alloys and Compounds</i> , 2019, 797, 456-464.	2.8	127
8	High-performance glucose biosensor based on chitosan-glucose oxidase immobilized polypyrrole/Nafion/functionalized multi-walled carbon nanotubes bio-nanohybrid film. <i>Journal of Colloid and Interface Science</i> , 2016, 482, 39-47.	5.0	116
9	Fabrication of highly sensitive uric acid biosensor based on directly grown ZnO nanosheets on electrode surface. <i>Sensors and Actuators B: Chemical</i> , 2015, 206, 146-151.	4.0	112
10	Recent advances in nanowires-based field-effect transistors for biological sensor applications. <i>Biosensors and Bioelectronics</i> , 2018, 100, 312-325.	5.3	110
11	High-performance cholesterol sensor based on the solution-gated field effect transistor fabricated with ZnO nanorods. <i>Biosensors and Bioelectronics</i> , 2013, 45, 281-286.	5.3	105
12	Highly sensitive hydrazine chemical sensor based on ZnO nanorods field-effect transistor. <i>Chemical Communications</i> , 2014, 50, 1890.	2.2	102
13	Nonenzymatic flexible field-effect transistor based glucose sensor fabricated using NiO quantum dots modified ZnO nanorods. <i>Journal of Colloid and Interface Science</i> , 2018, 512, 21-28.	5.0	99
14	Glucose-assisted synthesis of Cu ₂ O shuriken-like nanostructures and their application as nonenzymatic glucose biosensors. <i>Sensors and Actuators B: Chemical</i> , 2014, 203, 471-476.	4.0	98
15	Photocatalytic degradation of methyl orange dye by ZnO nanoneedle under UV irradiation. <i>Materials Letters</i> , 2014, 136, 171-174.	1.3	95
16	Fabrication of a non-enzymatic glucose sensor field-effect transistor based on vertically-oriented ZnO nanorods modified with Fe ₂ O ₃ . <i>Electrochemistry Communications</i> , 2017, 77, 107-111.	2.3	94
17	ZnO nanorods array based field-effect transistor biosensor for phosphate detection. <i>Journal of Colloid and Interface Science</i> , 2017, 498, 292-297.	5.0	93
18	A comprehensive biosensor integrated with a ZnO nanorod FET array for selective detection of glucose, cholesterol and urea. <i>Chemical Communications</i> , 2015, 51, 11968-11971.	2.2	89

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19	In situ synthesis of cylindrical spongy polypyrrole doped protonated graphitic carbon nitride for cholesterol sensing application. <i>Biosensors and Bioelectronics</i> , 2017, 94, 686-693.	5.3	87
20	Nano-bitter gourd like structured CuO for enhanced hydrogen gas sensor application. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 22705-22714.	3.8	85
21	Organic field effect transistors (OFETs) in environmental sensing and health monitoring: A review. <i>TrAC - Trends in Analytical Chemistry</i> , 2019, 111, 27-36.	5.8	84
22	Engineered Hierarchical CuO Nanoleaves Based Electrochemical Nonenzymatic Biosensor for Glucose Detection. <i>Journal of the Electrochemical Society</i> , 2021, 168, 017501.	1.3	83
23	High performance cholesterol sensor based on ZnO nanotubes grown on Si/Ag electrodes. <i>Electrochemistry Communications</i> , 2014, 38, 4-7.	2.3	77
24	Highly stable urea sensor based on ZnO nanorods directly grown on Ag/glass electrodes. <i>Sensors and Actuators B: Chemical</i> , 2014, 194, 290-295.	4.0	76
25	Multi-Walled Carbon Nanotubes Decorated with Silver Nanoparticles for Acetone Gas Sensing at Room Temperature. <i>Journal of the Electrochemical Society</i> , 2020, 167, 167519.	1.3	75
26	Silver Nanoparticle Regulates Salt Tolerance in Wheat Through Changes in ABA Concentration, Ion Homeostasis, and Defense Systems. <i>Biomolecules</i> , 2020, 10, 1506.	1.8	73
27	Highly selective wide linear-range detecting glucose biosensors based on aspect-ratio controlled ZnO nanorods directly grown on electrodes. <i>Sensors and Actuators B: Chemical</i> , 2012, 174, 195-201.	4.0	69
28	Solution Process Synthesis of High Aspect Ratio ZnO Nanorods on Electrode Surface for Sensitive Electrochemical Detection of Uric Acid. <i>Scientific Reports</i> , 2017, 7, 46475.	1.6	64
29	Enhanced anticancer potency using an acid-responsive ZnO-incorporated liposomal drug-delivery system. <i>Nanoscale</i> , 2015, 7, 4088-4096.	2.8	63
30	A Highly Sensitive Nonenzymatic Sensor Based on Fe ₂ O ₃ Nanoparticle Coated ZnO Nanorods for Electrochemical Detection of Nitrite. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700691.	1.9	61
31	Ammonium ion detection in solution using vertically grown ZnO nanorod based field-effect transistor. <i>RSC Advances</i> , 2016, 6, 54836-54840.	1.7	60
32	Ambient-air-solution-processed efficient and highly stable perovskite solar cells based on CH ₃ NH ₃ PbI ₃ -xCl _x -NiO composite with Al ₂ O ₃ /NiO interfacial engineering. <i>Nano Energy</i> , 2017, 40, 408-417.	8.2	60
33	Two-dimensional ytterbium oxide nanodisks based biosensor for selective detection of urea. <i>Biosensors and Bioelectronics</i> , 2017, 98, 254-260.	5.3	59
34	Fabrication of sensitive non-enzymatic nitrite sensor using silver-reduced graphene oxide nanocomposite. <i>Journal of Colloid and Interface Science</i> , 2018, 516, 67-75.	5.0	59
35	Low-temperature sintering of highly conductive silver ink for flexible electronics. <i>Journal of Materials Chemistry C</i> , 2016, 4, 8522-8527.	2.7	58
36	Review of Recent Advances in Nanostructured Graphitic Carbon Nitride as a Sensing Material for Heavy Metal Ions. <i>Journal of the Electrochemical Society</i> , 2020, 167, 037519.	1.3	57

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37	Rapid methyl orange degradation using porous ZnO spheres photocatalyst. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 2016, 161, 312-317.	1.7	56
38	Hydrothermal synthesis of p-type nanocrystalline NiO nanoplates for high response and low concentration hydrogen gas sensor application. <i>Ceramics International</i> , 2018, 44, 15721-15729.	2.3	56
39	High response and low concentration hydrogen gas sensing properties using hollow ZnO particles transformed from polystyrene@ZnO core-shell structures. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 15677-15688.	3.8	56
40	Hydrothermally Synthesized Nickel Oxide Nanosheets for Non-Enzymatic Electrochemical Glucose Detection. <i>Journal of the Electrochemical Society</i> , 2020, 167, 107504.	1.3	56
41	Time-Dependent Control of Hole-Opening Degree of Porous ZnO Hollow Microspheres. <i>Inorganic Chemistry</i> , 2012, 51, 1104-1110.	1.9	55
42	Tailored lysozyme@ZnO nanoparticle conjugates as nanoantibiotics. <i>Chemical Communications</i> , 2014, 50, 9298-9301.	2.2	55
43	Highly stable hydrazine chemical sensor based on vertically-aligned ZnO nanorods grown on electrode. <i>Journal of Colloid and Interface Science</i> , 2017, 494, 153-158.	5.0	55
44	Wide linear-range detecting high sensitivity cholesterol biosensors based on aspect-ratio controlled ZnO nanorods grown on silver electrodes. <i>Sensors and Actuators B: Chemical</i> , 2012, 169, 382-386.	4.0	54
45	Biosensor for the detection of <i>Listeria monocytogenes</i> : emerging trends. <i>Critical Reviews in Microbiology</i> , 2018, 44, 590-608.	2.7	52
46	A robust enzymeless glucose sensor based on CuO nanoseed modified electrodes. <i>Dalton Transactions</i> , 2015, 44, 12488-12492.	1.6	50
47	Globular Shaped Polypyrrole Doped Well-Dispersed Functionalized Multiwall Carbon Nanotubes/Nafion Composite for Enzymatic Glucose Biosensor Application. <i>Scientific Reports</i> , 2017, 7, 16191.	1.6	50
48	Bi ₂ O ₂ CO ₃ nanoplates: Fabrication and characterization of highly sensitive and selective cholesterol biosensor. <i>Journal of Alloys and Compounds</i> , 2016, 683, 433-438.	2.8	46
49	Mesoporous ZnO nanoclusters as an ultra-active photocatalyst. <i>Ceramics International</i> , 2016, 42, 9519-9526.	2.3	46
50	Biosynthesized gold nanoparticles maintained nitrogen metabolism, nitric oxide synthesis, ions balance, and stabilizes the defense systems to improve salt stress tolerance in wheat. <i>Chemosphere</i> , 2022, 287, 132142.	4.2	45
51	Development of Highly Sensitive and Selective Cholesterol Biosensor Based on Cholesterol Oxidase Co-Immobilized with Fe ₂ O ₃ Micro-Pine Shaped Hierarchical Structures. <i>Electrochimica Acta</i> , 2014, 135, 396-403.	2.6	44
52	Outstanding Antibiofilm Features of Quanta-CuO Film on Glass Surface. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 15128-15137.	4.0	43
53	Nozzle-jet printed flexible field-effect transistor biosensor for high performance glucose detection. <i>Journal of Colloid and Interface Science</i> , 2017, 506, 188-196.	5.0	42
54	Preparation of a Highly Conductive Seed Layer for Calcium Sensor Fabrication with Enhanced Sensing Performance. <i>ACS Sensors</i> , 2018, 3, 772-778.	4.0	39

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55	One-step synthesis and decoration of nickel oxide nanosheets with gold nanoparticles by reduction method for hydrazine sensing application. <i>Sensors and Actuators B: Chemical</i> , 2019, 286, 139-147.	4.0	38
56	Exfoliated nanosheets of Co ₃ O ₄ webbed with polyaniline nanofibers: A novel composite electrode material for enzymeless glucose sensing application. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 73, 106-117.	2.9	37
57	Engineered CuO Nanofibers with Boosted Non-Enzymatic Glucose Sensing Performance. <i>Journal of the Electrochemical Society</i> , 2021, 168, 067507.	1.3	37
58	Fully nozzle-jet printed non-enzymatic electrode for biosensing application. <i>Journal of Colloid and Interface Science</i> , 2018, 512, 480-488.	5.0	36
59	Review—Recent Advances in the Development of Carbon Nanotubes Based Flexible Sensors. <i>Journal of the Electrochemical Society</i> , 2020, 167, 047506.	1.3	36
60	Fabrication and characterization of a highly sensitive hydroquinone chemical sensor based on iron-doped ZnO nanorods. <i>Dalton Transactions</i> , 2015, 44, 21081-21087.	1.6	35
61	Fabrication of a solution-gated transistor based on valinomycin modified iron oxide nanoparticles decorated zinc oxide nanorods for potassium detection. <i>Journal of Colloid and Interface Science</i> , 2018, 518, 277-283.	5.0	34
62	Gas sensing properties of single crystalline ZnO nanowires grown by thermal evaporation technique. <i>Current Applied Physics</i> , 2013, 13, 1769-1773.	1.1	30
63	Development of highly-stable binder-free chemical sensor electrodes for p-nitroaniline detection. <i>Journal of Colloid and Interface Science</i> , 2017, 494, 300-306.	5.0	28
64	Synthesis of manganese oxide nanorods and its application for potassium ion sensing in water. <i>Journal of Colloid and Interface Science</i> , 2018, 516, 364-370.	5.0	28
65	Highly Sensitive Hydrazine Detection Using a Vertically Oriented ZnO Nanosheet-based Field-Effect Transistor. <i>Journal of the Electrochemical Society</i> , 2020, 167, 167513.	1.3	26
66	Spruce branched γ -Fe ₂ O ₃ nanostructures as potential scaffolds for a highly sensitive and selective glucose biosensor. <i>New Journal of Chemistry</i> , 2014, 38, 5873-5879.	1.4	23
67	High performance chemical sensor with field-effect transistors array for selective detection of multiple ions. <i>Chemical Engineering Journal</i> , 2021, 417, 128064.	6.6	22
68	Transcriptomic analysis delineates potential signature genes and miRNAs associated with the pathogenesis of asthma. <i>Scientific Reports</i> , 2020, 10, 13354.	1.6	20
69	Fabrication of a robust and highly sensitive nitrate biosensor based on directly grown zinc oxide nanorods on a silver electrode. <i>New Journal of Chemistry</i> , 2017, 41, 10992-10997.	1.4	19
70	Hierarchically assembled ZnO nanosheets microspheres for enhanced glucose sensing performances. <i>Ceramics International</i> , 2016, 42, 13464-13469.	2.3	17
71	Multi-synergetic ZnO platform for high performance cancer therapy. <i>Chemical Communications</i> , 2015, 51, 2585-2588.	2.2	16
72	A highly sensitive uric acid biosensor based on vertically arranged ZnO nanorods on a ZnO nanoparticle-seeded electrode. <i>New Journal of Chemistry</i> , 2021, 45, 18863-18870.	1.4	16

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73	Vertically Oriented Zinc Oxide Nanorod-Based Electrolyte-Gated Field-Effect Transistor for High-Performance Glucose Sensing. <i>Analytical Chemistry</i> , 2022, 94, 8867-8873.	3.2	15
74	<i>In Silico</i> and Electrochemical Studies for a ZnO@CuO-Based Immunosensor for Sensitive and Selective Detection of <i>E. coli</i> . <i>ACS Omega</i> , 2021, 6, 16076-16085.	1.6	14
75	ZnO nanonails for photocatalytic degradation of crystal violet dye under UV irradiation. <i>AIMS Materials Science</i> , 2017, 4, 267-276.	0.7	14
76	Cholesterol biosensing based on highly immobilized ChOx on ZnO hollow nanospheres. <i>RSC Advances</i> , 2014, 4, 46049-46053.	1.7	13
77	Anodic stripping voltammetry analysis of gold nanoparticles functionalized one-dimensional single polypyrrole nanowire for arsenic sensing. <i>Surfaces and Interfaces</i> , 2021, 23, 100895.	1.5	12
78	KAUSTat: A Wireless, Wearable, Open-Source Potentiostat for Electrochemical Measurements. , 2019, , .		11
79	Wide-Linear Range Cholesterol Detection Using Fe ₂ O ₃ Nanoparticles Decorated ZnO Nanorods Based Electrolyte-Gated Transistor. <i>Journal of the Electrochemical Society</i> , 0, , .	1.3	11
80	Review-Emerging Applications of g-C ₃ N ₄ Films in Perovskite-Based Solar Cells. <i>ECS Journal of Solid State Science and Technology</i> , 0, , .	0.9	10
81	CsPbBr ₃ Nanoplatelets: Synthesis and Understanding of Ultraviolet Light-Induced Structural Phase Change and Luminescence Degradation. <i>ECS Journal of Solid State Science and Technology</i> , 2021, 10, 096002.	0.9	10
82	Hybrid Composite Biomaterials. , 2019, , 695-714.		9
83	Nano-donuts shaped nickel oxide nanostructures for sensitive non-enzymatic electrochemical detection of glucose. <i>Microsystem Technologies</i> , 2022, 28, 313-318.	1.2	7
84	Fabrication and Characterization of Highly Sensitive and Selective Glucose Biosensor Based on ZnO Decorated Carbon Nanotubes. <i>Nanoscience and Nanotechnology Letters</i> , 2016, 8, 853-858.	0.4	7
85	Effect of Annealing Atmosphere on the Optical and Electrical Properties of Al-Doped ZnO Films and ZnO Nanorods Grown by Solution Process. <i>Science of Advanced Materials</i> , 2016, 8, 1523-1529.	0.1	6
86	Fabrication of an ultra-sensitive hydrazine sensor based on nano-chips shaped nickel hydroxide modified electrodes. <i>Microsystem Technologies</i> , 2022, 28, 279-286.	1.2	5
87	Room Temperature Synthesis of Colossal Magneto-Resistance of La _{2/3} Ca _{1/3} MnO ₃ : Ag _{0.10} Composite. <i>ECS Journal of Solid State Science and Technology</i> , 2021, 10, 027006.	0.9	5
88	Physical Sensors for Biomedical Applications. , 2018, , .		4
89	Inorganic nanotheranostics: Strategy development and applications. , 2018, , 377-419.		3
90	Biomimetic Approaches for Regenerative Engineering. , 2019, , 483-495.		2

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91	Graphene Oxide (GO) Nanocomposite Based Room Temperature Gas Sensor. Materials Horizons, 2020, , 303-328.	0.3	1
92	Nanoimprinted ZnO and ZnO Quantum Dots Embedded SiO ₂ Layers for Inverted Bulk Heterojunction Solar Cells. Science of Advanced Materials, 2015, 7, 1253-1257.	0.1	1
93	Engineered Hierarchical CuO Nanoleaves Based Electrochemical Nonenzymatic Biosensor for Glucose Detection. ECS Meeting Abstracts, 2021, MA2021-01, 1379-1379.	0.0	0
94	Optical and Electrical Properties of Li-Doped CuO Quantum-Dots Films by Solution Process. Science of Advanced Materials, 2015, 7, 2481-2485.	0.1	0
95	Impact of NiO nano-particles on colossal magneto-resistance of La _{0.70} Ca _{0.30} MnO ₃ composite. Materials Letters: X, 2022, 14, 100147.	0.3	0