

Gugu H Mhlongo

List of Publications by Year in descending order

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49
papers

1,859
citations

218592

26
h-index

254106

43
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all docs

49
docs citations

49
times ranked

2501
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultra-high sensitive and selective H ₂ gas sensor manifested by interface of n ⁺ heterostructure of CeO ₂ -SnO ₂ nanoparticles. <i>Sensors and Actuators B: Chemical</i> , 2018, 254, 984-995.	4.0	175
2	Room temperature ferromagnetism and gas sensing in ZnO nanostructures: Influence of intrinsic defects and Mn, Co, Cu doping. <i>Applied Surface Science</i> , 2016, 390, 804-815.	3.1	121
3	Shape-Selective Dependence of Room Temperature Ferromagnetism Induced by Hierarchical ZnO Nanostructures. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 8981-8995.	4.0	117
4	Highly selective NH ₃ gas sensor based on Au loaded ZnO nanostructures prepared using microwave-assisted method. <i>Journal of Colloid and Interface Science</i> , 2016, 479, 127-138.	5.0	116
5	Fabrication of ultra-high sensitive and selective CH ₄ room temperature gas sensing of TiO ₂ nanorods: Detailed study on the annealing temperature. <i>Sensors and Actuators B: Chemical</i> , 2017, 238, 402-419.	4.0	88
6	A highly responsive NH ₃ sensor based on Pd-loaded ZnO nanoparticles prepared via a chemical precipitation approach. <i>Scientific Reports</i> , 2019, 9, 9881.	1.6	88
7	Temperature-dependence on the structural, optical, and paramagnetic properties of ZnO nanostructures. <i>Applied Surface Science</i> , 2014, 293, 62-70.	3.1	82
8	Structural, photoluminescence and XPS properties of Tm ³⁺ ions in ZnO nanostructures. <i>Journal of Luminescence</i> , 2017, 187, 141-153.	1.5	58
9	Facile synthesis of improved room temperature gas sensing properties of TiO ₂ nanostructures: Effect of acid treatment. <i>Sensors and Actuators B: Chemical</i> , 2016, 224, 841-856.	4.0	56
10	Microstructural and photoluminescence properties of sol-gel derived Tb ³⁺ doped ZnO nanocrystals. <i>Journal of Alloys and Compounds</i> , 2014, 591, 156-163.	2.8	53
11	Pd ²⁺ doped ZnO nanostructures: Structural, luminescence and gas sensing properties. <i>Materials Letters</i> , 2015, 160, 200-205.	1.3	51
12	Ultra-sensitive and selective NH ₃ room temperature gas sensing induced by manganese-doped titanium dioxide nanoparticles. <i>Journal of Colloid and Interface Science</i> , 2017, 504, 371-386.	5.0	46
13	Correlating the magnetism and gas sensing properties of Mn-doped ZnO films enhanced by UV irradiation. <i>RSC Advances</i> , 2016, 6, 26227-26238.	1.7	45
14	OD to 3D ZnO nanostructures and their luminescence, magnetic and sensing properties: Influence of pH and annealing. <i>Materials Research Bulletin</i> , 2017, 85, 52-63.	2.7	44
15	Defect-induced magnetism in undoped and Mn-doped wide band gap zinc oxide grown by aerosol spray pyrolysis. <i>Applied Surface Science</i> , 2014, 311, 14-26.	3.1	43
16	Hierarchically Porous Cu-, Co-, and Mn-Doped Platelet-Like ZnO Nanostructures and Their Photocatalytic Performance for Indoor Air Quality Control. <i>ACS Omega</i> , 2019, 4, 16429-16440.	1.6	42
17	Luminescence Dependence of Pr ³⁺ Activated SiO ₂ Nanophosphor on Pr ³⁺ Concentration, Temperature, and ZnO Incorporation. <i>Journal of Physical Chemistry C</i> , 2011, 115, 17625-17632.	1.5	39
18	Tailoring the sensing properties of microwave-assisted grown ZnO nanorods: Effect of irradiation time on luminescence and magnetic behaviour. <i>Journal of Alloys and Compounds</i> , 2016, 657, 917-926.	2.8	39

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19	Structural and optical properties of ZnO nanostructures grown by aerosol spray pyrolysis: Candidates for room temperature methane and hydrogen gas sensing. <i>Applied Surface Science</i> , 2013, 279, 142-149.	3.1	35
20	Design of porous p-type LaCoO ₃ nanofibers with remarkable response and selectivity to ethanol at low operating temperature. <i>Sensors and Actuators B: Chemical</i> , 2020, 308, 127670.	4.0	35
21	Size-tunable ferromagnetic ZnFe ₂ O ₄ nanoparticles and their ethanol detection capabilities. <i>Applied Surface Science</i> , 2020, 508, 144863.	3.1	35
22	Enhanced exciton emission from ZnO nano-phosphor induced by Yb ³⁺ ions. <i>Materials Letters</i> , 2014, 119, 71-74.	1.3	33
23	Comparative study: the effect of annealing conditions on the properties of P3HT:PCBM blends. <i>Journal of Materials Science</i> , 2013, 48, 1763-1778.	1.7	32
24	Photoluminescence Quenching and Enhanced Optical Conductivity of P3HT-Derived Ho ³⁺ -Doped ZnO Nanostructures. <i>Nanoscale Research Letters</i> , 2016, 11, 418.	3.1	32
25	H ₂ S detection capabilities with fibrous-like La-doped ZnO nanostructures: A comparative study on the combined effects of La-doping and post-annealing. <i>Journal of Alloys and Compounds</i> , 2019, 797, 284-301.	2.8	32
26	Life cycle assessment of facile microwave-assisted zinc oxide (ZnO) nanostructures. <i>Science of the Total Environment</i> , 2017, 586, 566-575.	3.9	28
27	Dependence of photoluminescence (PL) emission intensity on Eu ³⁺ and ZnO concentrations in Y ₂ O ₃ :Eu ³⁺ and ZnO:Y ₂ O ₃ :Eu ³⁺ nanophosphors. <i>Optical Materials</i> , 2011, 33, 1495-1499.	1.7	24
28	Improved sensitivity and selectivity of pristine zinc oxide nanostructures to H ₂ S gas: Detailed study on the synthesis reaction time. <i>Applied Surface Science</i> , 2016, 386, 210-223.	3.1	24
29	Analysis of the structure, particle morphology and photoluminescent properties of ZnS:Mn ²⁺ nanoparticulate phosphors. <i>Optik</i> , 2018, 153, 31-42.	1.4	24
30	Sol-gel preparation and characterization of Er ³⁺ doped TiO ₂ luminescent nanoparticles. <i>Materials Research Bulletin</i> , 2018, 108, 234-241.	2.7	24
31	Ultrafast Detection of Low Acetone Concentration Displayed by Au-Loaded LaFeO ₃ Nanobelts owing to Synergetic Effects of Porous 1D Morphology and Catalytic Activity of Au Nanoparticles. <i>ACS Omega</i> , 2019, 4, 19018-19029.	1.6	24
32	A study on the sensing of NO ₂ and O ₂ utilizing ZnO films grown by aerosol spray pyrolysis. <i>Materials Chemistry and Physics</i> , 2015, 162, 628-639.	2.0	20
33	Optical and structural properties of nanostructured ZnO thin films deposited onto FTO/glass substrate by a solution-based technique. <i>Optical Materials</i> , 2013, 35, 2721-2727.	1.7	17
34	Au functionalized ZnO rose-like hierarchical structures and their enhanced NO ₂ sensing performance. <i>Physica B: Condensed Matter</i> , 2018, 535, 216-220.	1.3	16
35	Evaluation of the effects of Au addition into ZnFe ₂ O ₄ nanostructures on acetone detection capabilities. <i>Materials Research Bulletin</i> , 2021, 142, 111395.	2.7	15
36	Energy transfer between doubly doped Er ³⁺ , Tm ³⁺ and Ho ³⁺ rare earth ions in SiO ₂ nanoparticles. <i>Journal of Luminescence</i> , 2011, 131, 790-794.	1.5	14

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37	Sensitizing effects of ZnO quantum dots on red-emitting Pr ³⁺ -doped SiO ₂ phosphor. <i>Physica B: Condensed Matter</i> , 2012, 407, 1607-1610.	1.3	12
38	Luminescent properties and quenching effects of Pr ³⁺ co-doping in SiO ₂ :Tb ³⁺ /Eu ³⁺ nanophosphors. <i>Optical Materials</i> , 2014, 36, 732-739.	1.7	11
39	The influence of ZnO nanostructures on the structure, optical and photovoltaic properties of organic materials. <i>Thin Solid Films</i> , 2014, 555, 100-106.	0.8	11
40	Effects of Ce ³⁺ concentration, beam voltage and current on the cathodoluminescence intensity of SiO ₂ :Pr ³⁺ ∕Ce ³⁺ nanophosphor. <i>Journal of Alloys and Compounds</i> , 2011, 509, 2986-2992.	2.8	10
41	LaBO ₃ (B= Fe, Co) nanofibers and their structural, luminescence and gas sensing characteristics. <i>Physica B: Condensed Matter</i> , 2020, 578, 411883.	1.3	9
42	A comprehensive comparison study on magnetic behaviour, defects-related emission and Ni substitution to clarify the origin of enhanced acetone detection capabilities. <i>Sensors and Actuators B: Chemical</i> , 2021, 339, 129860.	4.0	9
43	Photoluminescence studies of green emitting BaB ₈ O ₁₃ : Bi ³⁺ phosphors prepared by solution combustion method. <i>Journal of Luminescence</i> , 2018, 200, 94-102.	1.5	8
44	Effects of accelerating beam voltage on luminescence of Er ³⁺ and Tm ³⁺ doped SiO ₂ phosphor prepared by sol-gel process. <i>Optical Materials</i> , 2010, 33, 79-83.	1.7	6
45	Cathodoluminescence properties of SiO ₂ :Pr ³⁺ and ZnO∕SiO ₂ :Pr ³⁺ phosphor nanopowders. <i>Journal of Materials Science</i> , 2010, 45, 5228-5236.	1.7	5
46	Enhanced Propanol Response Behavior of ZnFe ₂ O ₄ NP-Based Active Sensing Layer Induced by Film Thickness Optimization. <i>Processes</i> , 2021, 9, 1791.	1.3	4
47	Concentration effect of Tm ³⁺ on cathodoluminescence properties of SiO ₂ :Tm ³⁺ and SiO ₂ :Ho ³⁺ ,Tm ³⁺ systems. <i>Physica B: Condensed Matter</i> , 2012, 407, 1582-1585.	1.3	3
48	Unveiling Semiconductor Nanostructured Based Holmium-Doped ZnO: Structural, Luminescent and Room Temperature Ferromagnetic Properties. <i>Nanomaterials</i> , 2021, 11, 2611.	1.9	3
49	Time-resolved fluorescence decay and Gaussian analysis of P3HT-derived Ho ³⁺ - and Tm ³⁺ -doped ZnO nanostructures. <i>Bulletin of Materials Science</i> , 2020, 43, 1.	0.8	1