Jackie M Nel

List of Publications by Year
in descending order

70 papers	922 citations	471509 17 h-index	552781 26 g-index
72 all docs	72 docs citations	72 times ranked	951 citing authors

#	Article	IF	Citations
1	Fabrication and characterisation of NiO/ZnO structures. Sensors and Actuators B: Chemical, 2004, 100, 270-276.	7.8	57
2	Effect of Sm doping ZnO nanorods on structural optical and electrical properties of Schottky diodes prepared by chemical bath deposition. Materials Science in Semiconductor Processing, 2018, 79, 53-60.	4.0	51
3	Electrical characterization of growth-induced defects in bulk-grown ZnO. Superlattices and Microstructures, 2006, 39, 17-23.	3.1	42
4	Microstructures of electrodeposited CdS layers. Thin Solid Films, 2003, 436, 186-195.	1.8	38
5	The dependence of barrier height on temperature for Pd Schottky contacts on ZnO. Physica B: Condensed Matter, 2009, 404, 4402-4405.	2.7	34
6	Electronic properties of defects in pulsed-laser deposition grown ZnO with levels at 300 and 370meV below the conduction band. Physica B: Condensed Matter, 2007, 401-402, 378-381.	2.7	30
7	Effects of hydrogen, oxygen, and argon annealing on the electrical properties of ZnO and ZnO devices studied by current-voltage, deep level transient spectroscopy, and Laplace DLTS. Journal of Applied Physics, 2012, 111, 094504.	2.5	29
8	Structural, optical and electrical properties of the fabricated Schottky diodes based on ZnO, Ce and Sm doped ZnO films prepared via wet chemical technique. Materials Research Bulletin, 2019, 115, 12-18.	5.2	29
9	Analysis of currentâ€“voltage measurements on Au/Ni/n-GaN Schottky contacts in a wide temperature range. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 171, 1-4.	3.5	26
10	Thermal annealing behaviour of platinum, nickel and titanium Schottky barrier diodes on n-Ge (1 0 0). Journal of Alloys and Compounds, 2010, 492, 649-655.	5.5	25
11	Effect of (Ce, Al) co-doped ZnO thin films on the Schottky diode properties fabricated using the sol-gel spin coating. Materials Science in Semiconductor Processing, 2019, 103, 104612.	4.0	24
12	Electrical defects introduced during high-temperature irradiation of GaN and AlGaN. Physica B: Condensed Matter, 2003, 340-342, 421-425.	2.7	23
13	Influence of ammonia concentration on the microstructure, electrical and raman properties of low temperature chemical bath deposited ZnO nanorods. Materials Science in Semiconductor Processing, 2017, 71, 209-216.	4.0	22
14	Structural, morphological, optical and electrical properties of Schottky diodes based on CBD deposited ZnO:Cu nanorods. Superlattices and Microstructures, 2017, 107, 163-171.	3.1	21
15	Currentâ€“voltage temperature characteristics of Au/n-Ge (100) Schottky diodes. Physica B: Condensed Matter, 2012, 407, 1574-1577.	2.7	18
16	Influence (Ce and Sm) co-doping ZnO nanorods on the structural, optical and electrical properties of the fabricated Schottky diode using chemical bath deposition. Journal of Alloys and Compounds, 2019, 810, 151929.	5.5	18
17	Structural, optical and electrical properties of a Schottky diode fabricated on Ce doped ZnO nanorods grown using a two step chemical bath deposition. Materials Science in Semiconductor Processing, 2018, 87, 187-194.	4.0	17
18	Dependence of Trap Concentrations in ZnO Thin Films on Annealing Conditions. Journal of the Korean Physical Society, 2008, 53, 2861-2863.	0.7	17

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19	Implementation of an AlGaN-based solar-blind UV four-quadrant detector. Physica B: Condensed Matter, 2014, 439, 93-96.	2.7	16
20	Electrical characterisation of NiO/ZnO structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 674-677.	0.8	15
21	Electrical characterization of defects introduced in n-type Ge during indium implantation. Applied Physics Letters, 2006, 89, 152123.	3.3	15
22	Electrical characterization of H+ ion irradiated n-ZnO. Nuclear Instruments & Methods in Physics Research B, 2007, 257, 311-314.	1.4	15
23	Electrical characterization of He+ irradiated n-ZnO. Physica Status Solidi (B): Basic Research, 2007, 244, 1544-1548.	1.5	15
24	Boron carbide coatings on diamond particles. Diamond and Related Materials, 2010, 19, 1411-1414.	3.9	15
25	Effects of high temperature annealing on single crystal ZnO and ZnO devices. Journal of Applied Physics, 2012, 111, .	2.5	15
26	Electrical characterization of defects introduced in n-Ge during electron beam deposition or exposure. Journal of Applied Physics, 2013, 114, 173708.	2.5	15
27	Structural, optical and electrical characteristics of nickel oxide thin films synthesised through chemical processing method. Physica B: Condensed Matter, 2018, 535, 24-28.	2.7	15
28	Effects of thermal treatment on structural, optical and electrical properties of NiO thin films. Physica B: Condensed Matter, 2019, 575, 411694.	2.7	15
29	Determination of the laterally homogeneous barrier height of palladium Schottky barrier diodes on n-Ge (1 1 1). Materials Science in Semiconductor Processing, 2010, 13, 371-375.	4.0	13
30	A comparative study of the electrical properties of Pd/ZnO Schottky contacts fabricated using electron beam deposition and resistive/thermal evaporation techniques. Journal of Applied Physics, 2011, 110, 094504.	2.5	13
31	The effect of alpha particle irradiation on electrical properties and defects of ZnO thin films prepared by sol-gel spin coating. Materials Science in Semiconductor Processing, 2019, 101, 82-86.	4.0	13
32	Thermal stability study of palladium and cobalt Schottky contacts on n-Ge (100) and defects introduced during contacts fabrication and annealing process. Physica B: Condensed Matter, 2009, 404, 4482-4484.	2.7	12
33	Effects of surface morphology on the optical and electrical properties of Schottky diodes of CBD deposited ZnO nanostructures. Physica B: Condensed Matter, 2018, 535, 175-180.	2.7	12
34	Using scanning force microscopy (SFM) to investigate various cleaning procedures of different transparent conducting oxide substrates. Applied Surface Science, 1998, 134, 22-30.	6.1	11
35	Electrical characterization of defects introduced in Ge during electron beam deposition of different metals. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 159-161.	1.8	11
36	Electrical characterization of defects introduced during electron beam deposition of Schottky contacts on n-type Ge. Materials Science in Semiconductor Processing, 2006, 9, 576-579.	4.0	10

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37	Comparison of metal Schottky contacts on n-Ge (100) at different annealing temperatures. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 248-251.	0.8	10
38	Effect of thermal treatment on the characteristics of iridium Schottky barrier diodes on n-Ge (100). Journal of Alloys and Compounds, 2012, 513, 44-49.	5.5	10
39	Defects induced by solid state reactions at the tungsten-silicon carbide interface. Journal of Applied Physics, 2018, 123, .	2.5	10
40	Correlation Between Barrier Heights and Ideality Factors of Ni/n-Ge (100) Schottky Barrier Diodes. Journal of the Korean Physical Society, 2010, 57, 1970-1975.	0.7	10
41	Electrical characterization of defects in heavy-ion implanted n-type Ge. Nuclear Instruments & Methods in Physics Research B, 2007, 257, 169-171.	1.4	9
42	Electrical Characterization of Defects Introduced During Sputter Deposition of Schottky Contacts on n-type Ge. Journal of Electronic Materials, 2007, 36, 1604-1607.	2.2	9
43	Electrical characterization of defects introduced in nâ€Si during electron beam deposition of Pt. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1926-1933.	1.8	9
44	A study of the T2 defect and the emission properties of the E3 deep level in annealed melt grown ZnO single crystals. Journal of Applied Physics, 2013, 113, 124502.	2.5	9
45	Electrical characterization of defects induced by electron beam exposure in low doped n-GaAs. Nuclear Instruments & Methods in Physics Research B, 2017, 409, 36-40.	1.4	9
46	Defects in swift heavy ion irradiated n-4H-SiC. Nuclear Instruments & Methods in Physics Research B, 2019, 460, 119-124.	1.4	9
47	Thermal annealing behaviour of Pd Schottky contacts on melt-grown single crystal ZnO studied by IV and CV measurements. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2012, 177, 180-183.	3.5	8
48	Annealing and surface conduction on Hydrogen peroxide treated bulk melt-grown, single crystal ZnO. Physica B: Condensed Matter, 2012, 407, 1624-1627.	2.7	7
49	Characterization of AlGaN-based metalâ€“semiconductor solar-blind UV photodiodes with IrO2 Schottky contacts. Physica B: Condensed Matter, 2012, 407, 1529-1532.	2.7	6
50	The Origin of Defects Induced in Ultra-Pure Germanium by Electron Beam Deposition. Springer Series in Materials Science, 2015, , 363-380.	0.6	6
51	Electronic properties of shallow level defects in ZnO grown by pulsed laser deposition. Journal of Physics: Conference Series, 2008, 100, 042038.	0.4	4
52	Electrical characterisation of ruthenium Schottky contacts on n-Ge (100). Physica B: Condensed Matter, 2012, 407, 1570-1573.	2.7	4
53	Unexpected properties of the inductively coupled plasma induced defect in germanium. Physica B: Condensed Matter, 2014, 439, 97-100.	2.7	4
54	Role of substrate and annealing temperature on the structure of ZnO and AlxZn1â^'xO thin films for solar cell applications. Physica B: Condensed Matter, 2016, 480, 72-79.	2.7	4

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55	Electrical characterization of defects introduced during sputter deposition of tungsten on n type 4H-SiC. Materials Science in Semiconductor Processing, 2018, 81, 122-126.	4.0	3
56	Effect of dopant density on contact potential difference across n-type GaAs homojunctions using Kelvin Probe Force Microscopy. Physica B: Condensed Matter, 2018, 535, 84-88.	2.7	3
57	Deep-level transient spectroscopy of GaN grown by electrochemical deposition and irradiated with alpha particles. Materials Science in Semiconductor Processing, 2021, 127, 105685.	4.0	3
58	IV and CV measurements of Schottky diodes deposited on Ge by electron beam and sputter deposition. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 626-629.	0.8	2
59	Damage formation in Ge during Ar+ and He+ implantation at 15K. Physica B: Condensed Matter, 2009, 404, 4382-4385.	2.7	2
60	Room temperature and high-pressure-pulsed laser deposition of nanocrystalline VO2 thin films on glass substrate: plasma and film analyses. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	2
61	RBS investigation of annealed thin gold layers on crystalline germanium. Journal of Physics: Conference Series, 2008, 100, 042005.	0.4	1
62	In Situ Study of Low-Temperature Irradiation-Induced Defects in Silicon Carbide. Journal of Electronic Materials, 2019, 48, 3849-3853.	2.2	1
63	Processing of and electrical properties of ZnO thin films and nanorods for sensor applications. , 2019, , .		1
64	Electrical characterization of as-grown and particle irradiated n-type bulk ZnO. , 2004, , .		0
65	Damage formation in Ge during Ar⁺ implantation at 15 K. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 583-586.	0.8	0
66	The effect of etching on Ge(111) surfaces and Pd Schottky contacts. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 587-590.	0.8	0
67	Microstructural and surface characterization of thin gold films on n-Ge (111). Physica B: Condensed Matter, 2009, 404, 4493-4495.	2.7	0
68	6th South African Conference on Photonic Materials (SACPM 2015). Physica B: Condensed Matter, 2016, 480, iii.	2.7	0
69	7 th South African Conference on Photonic Materials. Physica B: Condensed Matter, 2018, 535, iii.	2.7	0
70	Calibration of an optoelectronic system for the characteristion of ultraviolet sensitive photodiodes. South African Journal of Science and Technology, 2011, 30, .	0.1	0