

Adarsh Sandhu

List of Publications by Year in descending order

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109
papers

1,715
citations

304743

22
h-index

315739

38
g-index

111
all docs

111
docs citations

111
times ranked

2668
citing authors

#	ARTICLE	IF	CITATIONS
1	High photosensitivity few-layered MoSe ₂ back-gated field-effect phototransistors. <i>Nanotechnology</i> , 2014, 25, 365202.	2.6	146
2	Synthesis and applications of magnetic nanoparticles for biorecognition and point of care medical diagnostics. <i>Nanotechnology</i> , 2010, 21, 442001.	2.6	117
3	50 nm Hall Sensors for Room Temperature Scanning Hall Probe Microscopy. <i>Japanese Journal of Applied Physics</i> , 2004, 43, 777-778.	1.5	97
4	Development of novel magnetic nano-carriers for high-performance affinity purification. <i>Colloids and Surfaces B: Biointerfaces</i> , 2008, 64, 162-169.	5.0	95
5	Magneto-Optical Biosensing Platform Based on Light Scattering from Self-Assembled Chains of Functionalized Rotating Magnetic Beads. <i>Nano Letters</i> , 2010, 10, 446-451.	9.1	63
6	High Sensitivity InSb Ultra-Thin Film Micro-Hall Sensors for Bioscreening Applications. <i>Japanese Journal of Applied Physics</i> , 2004, 43, L868-L870.	1.5	54
7	New probes offer much faster results. <i>Nature Nanotechnology</i> , 2007, 2, 746-748.	31.5	54
8	High-performance near-infrared photodetector based on nano-layered MoSe ₂ . <i>Semiconductor Science and Technology</i> , 2017, 32, 065015.	2.0	46
9	The future of ultraviolet LEDs. <i>Nature Photonics</i> , 2007, 1, 38-38.	31.4	45
10	A two-step ligand exchange reaction generates highly water-dispersed magnetic nanoparticles for biomedical applications. <i>Journal of Materials Chemistry</i> , 2011, 21, 5959.	6.7	43
11	Microstructure and optical properties of Ag-doped ZnO nanostructures prepared by a wet oxidation doping process. <i>Nanotechnology</i> , 2011, 22, 105706.	2.6	41
12	High efficiency Hall effect micro-biosensor platform for detection of magnetically labeled biomolecules. <i>Biosensors and Bioelectronics</i> , 2007, 22, 2115-2120.	10.1	38
13	Doping graphene films via chemically mediated charge transfer. <i>Nanoscale Research Letters</i> , 2011, 6, 111.	5.7	37
14	Chemical synthesis of Fe ₃ O ₄ @graphene oxide nanohybrids as building blocks for magnetic and conductive membranes. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2014, 189, 13-20.	3.5	37
15	Thickness dependence on the optoelectronic properties of multilayered GaSe based photodetector. <i>Nanotechnology</i> , 2016, 27, 325202.	2.6	34
16	Preparation of spherical and uniform-sized ferrite nanoparticles with diameters between 50 and 150 nm for biomedical applications. <i>Journal of Magnetism and Magnetic Materials</i> , 2009, 321, 1417-1420.	2.3	33
17	Wide wavelength range tunable one-dimensional silicon nitride nano-grating guided mode resonance filter based on azimuthal rotation. <i>AIP Advances</i> , 2017, 7, .	1.3	28
18	Room Temperature Sub-Micron Magnetic Imaging by Scanning Hall Probe Microscopy. <i>Japanese Journal of Applied Physics</i> , 2001, 40, 4321-4324.	1.5	26

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19	Ecofriendly Route for the Synthesis of Highly Conductive Graphene Using Extremophiles for Green Electronics and Bioscience. Particle and Particle Systems Characterization, 2013, 30, 573-578.	2.3	26
20	Laser Power Dependent Optical Properties of Mono- and Few-Layer MoS ₂ . Journal of Nanoscience and Nanotechnology, 2015, 15, 6843-6846.	0.9	26
21	Room-temperature synthesis and enhanced catalytic performance of silver-reduced graphene oxide nanohybrids. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	25
22	Growth and characterization of GaAs _{0.5} Sb _{0.5} lattice-matched to InP by molecular beam epitaxy. Journal of Crystal Growth, 1988, 91, 655-658.	1.5	23
23	Viral protein-coating of magnetic nanoparticles using simian virus 40 VP1. Journal of Biotechnology, 2013, 167, 8-15.	3.8	23
24	On-chip magnetometer for characterization of superparamagnetic nanoparticles. Lab on A Chip, 2015, 15, 696-703.	6.0	23
25	Direct Magnetic Imaging of Ferromagnetic Domain Structures by Room Temperature Scanning Hall Probe Microscopy Using a Bismuth Micro-Hall Probe. Japanese Journal of Applied Physics, 2001, 40, L524-L527.	1.5	22
26	High Sensitivity InSb Hall Effect Biosensor Platform for DNA Detection and Biomolecular Recognition Using Functionalized Magnetic Nanobeads. Japanese Journal of Applied Physics, 2005, 44, L1494-L1497.	1.5	22
27	Detection of magnetically labeled DNA using pseudomorphic AlGaAs ⁺ InGaAs ⁺ GaAs heterostructure micro-Hall biosensors. Journal of Applied Physics, 2006, 99, 08P103.	2.5	22
28	Properties of High Quality InP Epilayers Grown by Solid Source Molecular Beam Epitaxy using Polycrystalline GaP as a Phosphorous Source. Japanese Journal of Applied Physics, 1996, 35, 2108-2109.	1.5	20
29	A novel variable temperature scanning nano-Hall probe microscope system for large area magnetic imaging incorporating piezoelectric actuators maintained at room temperature. Nanotechnology, 2004, 15, S410-S413.	2.6	19
30	Robust Hall Effect Magnetic Field Sensors for Operation at High Temperatures and in Harsh Radiation Environments. IEEE Transactions on Magnetics, 2012, 48, 4421-4423.	2.1	19
31	Gas Source MBE Growth of GaAs/AlGaAs Heterojunction Bipolar Transistor with a Carbon Doped Base Using Only Gaseous Sources. Japanese Journal of Applied Physics, 1991, 30, 464-465.	1.5	18
32	High temperature scanning Hall probe microscopy using AlGaN ⁺ GaN two dimensional electron gas micro-Hall probes. Journal of Applied Physics, 2007, 101, 09K105.	2.5	18
33	Gate-tunable optoelectronic properties of a nano-layered GaSe photodetector. Optical Materials Express, 2017, 7, 587.	3.0	18
34	InGaP/InGaAs/GaAs High Electron Mobility Transistor Structure Grown by Solid Source Molecular Beam Epitaxy Using GaP as Phosphorous Source. Japanese Journal of Applied Physics, 1997, 36, L647-L649.	1.5	17
35	Effect of low-energy nitrogen molecular-ion impingement during the epitaxial growth of GaAs on the photoluminescence spectra. Applied Physics Letters, 1999, 74, 2675-2677.	3.3	16
36	Magnetic-Particle-Sensing Based Diagnostic Protocols and Applications. Sensors, 2015, 15, 12983-12998.	3.8	16

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37	Room Temperature Scanning Micro-Hall Probe Microscope Imaging of Ferromagnetic Microstructures in the Presence of 2.5 Tesla Pulsed Magnetic Fields Generated by an Integrated Mini Coil. Japanese Journal of Applied Physics, 2002, 41, L1402-L1405.	1.5	12
38	Patterning of Two-Dimensional Graphene Oxide on Silicon Substrates. Japanese Journal of Applied Physics, 2010, 49, 06GC02.	1.5	12
39	Porous Silicon Platform for Optical Detection of Functionalized Magnetic Particles Biosensing. Journal of Nanoscience and Nanotechnology, 2013, 13, 2451-2460.	0.9	12
40	A Study of Cold Dopant Sources for Gas Source MBE: The use of Disilane as an N-Type Dopant of Al _x Ga _{1-x} As (x=0-0.28) and Trimethylgallium as a P-Type Dopant of GaAs. Japanese Journal of Applied Physics, 1990, 29, L1033-L1035.	1.5	11
41	Optimization of Pathway Pattern Size for Programmable Biomolecule Actuation. IEEE Transactions on Magnetics, 2013, 49, 408-413.	2.1	11
42	Carbon-Doped-Base AlGaAs/GaAs HBTs Grown by Gas-Source Molecular Beam Epitaxy Using Only Gaseous Sources. Japanese Journal of Applied Physics, 1991, 30, 3843-3845.	1.5	10
43	Thermal behavior of residual strain in silicon-on-insulator bonded wafer and effects on electron mobility. Solid-State Electronics, 1999, 43, 1117-1120.	1.4	10
44	Proton Irradiation Enhancement of Low-Field Negative Magnetoresistance Sensitivity of AlGa _N /Ga _N -Based Magnetic Sensor at Cryogenic Temperature. IEEE Electron Device Letters, 2014, 35, 1130-1132.	3.9	10
45	Wide range (20–200 nm) size control of spherical ferrite particles grown on seed crystals in aqueous solution added with sucrose. Journal of Materials Research, 2009, 24, 2051-2055.	2.6	9
46	Effect of proton irradiation on AlGa _N /Ga _N micro-Hall sensors. Applied Physics Letters, 2013, 102, 193510.	3.3	9
47	Origin of 1/f noise in graphene produced for large-scale applications in electronics. IET Circuits, Devices and Systems, 2015, 9, 52-58.	1.4	9
48	Growth of carbon-doped base GaAs/AlGaAs HBT by gas-source MBE using TEG, TEA, TMG, AsH ₃ , and Si ₂ H ₆ . Journal of Crystal Growth, 1992, 120, 228-233.	1.5	8
49	Porous-Silicon Photonic-Crystal Platform for the Rapid Detection of Nano-Sized Superparamagnetic Beads for Biosensing Applications. Nanoscience and Nanotechnology Letters, 2011, 3, 612-616.	0.4	8
50	Smartphone based platform for real-time sharing of medical diagnostics information by optical detection of functionalized fluorescent magnetic nanoparticles. Biomedical Physics and Engineering Express, 2019, 5, 035014.	1.2	8
51	Layer-by-Layer Assembled Transparent Conductive Graphene Films for Silicon Thin-Film Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 11PF01.	1.5	8
52	High Current Gain AlGaAs/GaAs Heterojunction Bipolar Transistors with Carbon-Doped Base Grown by Gas Source Molecular Beam Epitaxy Using Trimethylamine Alane as the Aluminum Source. Japanese Journal of Applied Physics, 1993, 32, L309-L311.	1.5	7
53	Strictly nanotubes in Beijing. Nature Nanotechnology, 2009, 4, 398-399.	31.5	7
54	Radical-assisted chemical doping for chemically derived graphene. Nanoscale Research Letters, 2013, 8, 534.	5.7	7

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55	Gas Source Molecular Beam Epitaxy Growth of High Quality AlGaAs Using Trimethylamine Alane as the Aluminum Source. Japanese Journal of Applied Physics, 1991, 30, 3792-3795.	1.5	6
56	A career in carbon. Nature Nanotechnology, 2007, 2, 590-591.	31.5	6
57	Thailand resorts to nanotech. Nature Nanotechnology, 2008, 3, 450-451.	31.5	6
58	A new approach to intellectual property. Nature Nanotechnology, 2009, 4, 7-8.	31.5	6
59	High sensitivity refractive index sensor based on simple diffraction from phase grating. Optics Letters, 2016, 41, 2101.	3.3	6
60	Optoelectronic Characterizations of Two-Dimensional h-BN/MoSe ₂ Heterostructures Based Photodetector. Science of Advanced Materials, 2018, 10, 627-631.	0.7	6
61	Doping Characteristics of Gas-Source MBE-Grown n-Al _x Ga _{1-x} As (x=0-0.28) Doped Using Disilane. Japanese Journal of Applied Physics, 1990, 29, 2386-2387.	1.5	5
62	Fluidity evaluation of cell membrane model formed on graphene oxide with single particle tracking using quantum dot. Japanese Journal of Applied Physics, 2015, 54, 04DL09.	1.5	5
63	Fast and sensitive medical diagnostic protocol based on integrating circular current lines for magnetic washing and optical detection of fluorescent magnetic nanobeads. Sensing and Bio-Sensing Research, 2016, 9, 7-12.	4.2	5
64	Si ₂ H ₆ Doping of InP in Gas-Source Molecular Beam Epitaxy Using Triethylindium and Phosphine. Japanese Journal of Applied Physics, 1991, 30, L1696-L1698.	1.5	4
65	Biosensing Based on Magnetically Induced Self-Assembly of Particles in Magnetic Colloids. Journal of Nanoscience and Nanotechnology, 2012, 12, 2081-2088.	0.9	4
66	Porous Silicon Based Protocol for the Rapid and Real-Time Monitoring of Biorecognition Between Human IgG and Protein A Using Functionalized Superparamagnetic Beads. IEEE Transactions on Magnetism, 2012, 48, 2846-2849.	2.1	4
67	Functionalization of Magnetotactic Bacteria for Microbotic Applications. IEEE Transactions on Magnetism, 2014, 50, 1-4.	2.1	4
68	Low-energy nitrogen-ion doping into GaAs and its optical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 253, 301-305.	5.6	3
69	Probing superconductivity at the nanoscale. Nature Nanotechnology, 2009, 4, 142-142.	31.5	3
70	Determination of Inter-Molecular Forces by Magneto-Optical Transmittance of Molecule-Covered Superparamagnetic Particles in Solution. IEEE Transactions on Magnetism, 2010, 46, 1409-1411.	2.1	3
71	Detection of 8 nm Diameter Superparamagnetic Beads by Magnetically-Induced Manipulation of Micrometer-Sized Magnetic Beads: A Novel Protocol for Magnetically-Labeled Biosensing. Japanese Journal of Applied Physics, 2010, 49, 04DL07.	1.5	3
72	Fabrication and optical characterization of p-type single macro-porous silicon for detection of nano-sized functionalized superparamagnetic beads. Journal of Non-Crystalline Solids, 2012, 358, 2327-2330.	3.1	3

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73	Micro-Hall Sensors Based on Two-Dimensional Molybdenum Diselenide. Journal of Nanoscience and Nanotechnology, 2019, 19, 4330-4332.	0.9	3
74	Global snapshot of the effects of the COVID-19 pandemic on the research activities of materials scientists between Spring and Autumn 2020. Science and Technology of Advanced Materials, 2021, 22, 173-184.	6.1	3
75	High azimuthal angle tolerant dual-channel wavelength filter from visible to NIR using conically mounted guided mode resonance structures. Optics Letters, 2020, 45, 6010.	3.3	3
76	The JSPS 162 committee. III-Vs Review, 2005, 18, 34-36.	0.0	2
77	Variable temperature scanning Hall probe microscopy of ferromagnetic garnet thin films. Journal of Magnetism and Magnetic Materials, 2007, 310, 2693-2695.	2.3	2
78	The birth of nanoChina. Nature Nanotechnology, 2007, 2, 11-12.	31.5	2
79	Setting the standard. Nature Nanotechnology, 2008, 3, 63-64.	31.5	2
80	Contact Mode Scanning Hall Probe Microscopy. IEEE Transactions on Magnetics, 2008, 44, 3252-3254.	2.1	2
81	Highs from lows. Nature Nanotechnology, 2009, 4, 83-83.	31.5	2
82	High-throughput bioscreening system utilizing high-performance affinity magnetic carriers exhibiting minimal non-specific protein binding. Journal of Magnetism and Magnetic Materials, 2009, 321, 1625-1627.	2.3	2
83	Hybrid AlGaIn/GaN-ZnO-Nanowire Gas Sensors. Journal of Nanoscience and Nanotechnology, 2011, 11, 3938-3942.	0.9	2
84	Magnetic Nanoparticle-Based Nano-Grating Guided-Mode Resonance Biosensors. IEEE Transactions on Magnetics, 2018, 54, 1-6.	2.1	2
85	Smartphone enabled medical diagnostics by optically tracking electromagnetically induced harmonic oscillations of magnetic particles suspended in analytes. Sensing and Bio-Sensing Research, 2020, 29, 100347.	4.2	2
86	Solvatochromic peptidic binder obtained via extended phage display acts as a fluororeporter for fragment-based drug discovery (FBDD). Analytical and Bioanalytical Chemistry, 2022, 414, 4803-4807.	3.7	2
87	Thin-Film Semiconductor Hall Effect Biosensors for Medical Applications. IEEE Transactions on Sensors and Micromachines, 2005, 125, 444-447.	0.1	1
88	NEDO GaN HB-LED HVPE project. III-Vs Review, 2006, 19, 36-38.	0.0	1
89	The endoscope of the future. Nature Photonics, 2007, 1, 514-514.	31.4	1
90	Light pipe to the home. Nature Photonics, 2007, 1, 162-162.	31.4	1

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91	Ultrafast imagination. Nature Photonics, 2007, 1, 638-638.	31.4	1
92	Monitoring DNA Hybridization by Quantification of Nitrogen Content Using X-Ray Photoelectron Spectroscopy. Japanese Journal of Applied Physics, 2007, 46, L49-L52.	1.5	1
93	Charge transfer in graphene oxide-dye system for photonic applications. , 2014, , .		1
94	High Proton Radiation Tolerance of InAsSb Quantum-Well-Based micro-Hall Sensors. IEEE Electron Device Letters, 2014, 35, 1305-1307.	3.9	1
95	Micro-Hall Devices for Scanning Hall Probe Microscopy. IEEJ Transactions on Sensors and Micromachines, 2004, 124, 233-237.	0.1	1
96	Formation of nano-oxide regions in p2+-GaAs epilayers by localized atomic force microscope probe oxidation for fabrication of nano-structure devices. Journal of Crystal Growth, 2003, 251, 276-280.	1.5	0
97	Monitoring eyes on Indium Phosphide. III-Vs Review, 2004, 17, 31-33.	0.0	0
98	Quantum-dot venture unveiled. Nature Photonics, 2007, 1, 392-392.	31.4	0
99	South Korea plays to its strengths. Nature Nanotechnology, 2007, 2, 455-456.	31.5	0
100	Layer-by-layer assembled transparent conductive graphene films for solar cells application. Materials Research Society Symposia Proceedings, 2012, 1451, 75-81.	0.1	0
101	Preface: The Irago Conference 2013: A 360 Degree Outlook on Critical Scientific and Technological Challenges for a Sustainable Society. , 2014, , .		0
102	GMR-based PhC biosensor: FOM analysis and experimental studies. , 2014, , .		0
103	Magnetically Induced Self-Assembly of Superparamagnetic Particles for Medical Diagnostics. Funtai Oyobi Fumatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2014, 61, S111-S116.	0.2	0
104	Preface: The Irago Conference 2014: A 360 Degree Outlook at Critical Scientific and Technological Challenges for a Sustainable Society. , 2015, , .		0
105	Preface: The Irago Conference 2017: A 360-degree Outlook on Critical Scientific and Technological Challenges for a Sustainable Society. AIP Conference Proceedings, 2018, , .	0.4	0
106	Preface: The Irago Conference 2018: A 360-degree Outlook on Critical Scientific and Technological Challenges for a Sustainable Society. AIP Conference Proceedings, 2019, , .	0.4	0
107	The Irago Conference 2012. Journal of Physics: Conference Series, 2013, 433, 011001.	0.4	0
108	Raman spectroscopy of nanostructured germanium films deposited by a cluster-beam technique.. Journal of Advanced Science, 1996, 8, 11-14.	0.1	0

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109	Smartphone-based On-chip Homogenous Sensing by Analysis of Dynamics of Oscillating Polystyrene Particles under Dielectrophoretic Forces. Sensors and Materials, 2022, 34, 2089.	0.5	0