

# Puspendu Guha

## List of Publications by Year in descending order

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73  
papers

1,835  
citations

331670

21  
h-index

276875

41  
g-index

75  
all docs

75  
docs citations

75  
times ranked

3085  
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular beam epitaxial growth of Sb <sub>2</sub> Te <sub>3</sub> –Bi <sub>2</sub> Te <sub>3</sub> lateral heterostructures. 2D Materials, 2022, 9, 025006.	4.4	6
2	Fabrication of piezoresistive Si nanorod-based pressure sensor arrays: A promising candidate for portable breath monitoring devices. Nano Energy, 2021, 80, 105537.	16.0	55
3	XTEM study of low-energy ion-beam synthesized Ge nanoclusters inside SiO <sub>x</sub> matrix. Bulletin of Materials Science, 2021, 44, 1.	1.7	0
4	Comparative evaluation of surface-modified zirconia for the growth of bone cells and early osseointegration. Journal of Prosthetic Dentistry, 2021, 126, 92.e1-92.e8.	2.8	6
5	In-situ TEM investigations on temperature-induced structural transition from monoclinic-to-cubic phase of ball-milled yttria. Microscopy and Microanalysis, 2021, 27, 1968-1969.	0.4	1
6	Nitrogen vacancy and hydrogen substitution mediated tunable optoelectronic properties of g-C <sub>3</sub> N <sub>4</sub> 2D layered structures: Applications towards blue LED to broad-band photodetection. Applied Surface Science, 2021, 556, 149773.	6.1	14
7	Defect-Engineered MoO <sub>2</sub> Nanostructures as an Efficient Electrocatalyst for Oxygen Evolution Reaction. ACS Applied Energy Materials, 2020, 3, 5208-5218.	5.1	54
8	Non-enzymatic glucose sensing with hybrid nanostructured Cu <sub>2</sub> O-ZnO prepared by single-step coelectrodeposition technique. Journal of Solid State Electrochemistry, 2020, 24, 1647-1658.	2.5	20
9	Confinement-Induced Growth of Gold Nanocrystals in Hybrid Hierarchical Polymer Nanowire. Journal of Physical Chemistry C, 2019, 123, 20649-20654.	3.1	2
10	Growth of embedded Ge nanoclusters inside spatially confined SiO <sub>2</sub> matrix: An in-situ TEM study. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 114, 113637.	2.7	4
11	Facile synthesized novel hybrid graphene oxide/cobalt ferrite magnetic nanoparticles based surface coating material inhibit bacterial secretion pathway for antibacterial effect. Materials Science and Engineering C, 2019, 104, 109932.	7.3	52
12	Carbohydrate-Coated Gold–Silver Nanoparticles for Efficient Elimination of Multidrug Resistant Bacteria and <i>in Vivo</i> Wound Healing. ACS Applied Materials & Interfaces, 2019, 11, 42998-43017.	8.0	59
13	Experimental and simulation studies on temporal evolution of chemically etched Si surface: Tunable light trapping and cold cathode electron emission properties. Journal of Applied Physics, 2019, 125, .	2.5	4
14	Structural characterization of magnetron sputtered ZnO thin films on Si(100) using RBS, scanning and high resolution transmission electron microscopy methods. Surfaces and Interfaces, 2019, 15, 239-243.	3.0	7
15	Growth of endotaxial Ge nanocrystals in Si(100) matrix via low-energy ion implantation. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	2.3	2
16	Electrodeposition of nanowires of a high copper content thiourea precursor of copper sulfide. RSC Advances, 2019, 9, 31900-31910.	3.6	7
17	Optical band gap, local work function and field emission properties of MBE grown $\hat{I}^2$ -MoO <sub>3</sub> nanoribbons. Applied Surface Science, 2019, 476, 691-700.	6.1	28
18	Microscopy and spectroscopy study of nanostructural phase transformation from $\hat{I}^2$ -MoO <sub>3</sub> to Mo under UHV – MBE conditions. Surface Science, 2019, 682, 64-74.	1.9	9

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19	P-type $i^2$ -MoO <sub>2</sub> nanostructures on n-Si by hydrogenation process: synthesis and application towards self-biased UV-visible photodetection. <i>Nanotechnology</i> , 2019, 30, 035204.	2.6	18
20	MoS <sub>2</sub> Quantum Dots as Efficient Catalyst Materials for the Oxygen Evolution Reaction. <i>ACS Catalysis</i> , 2018, 8, 1683-1689.	11.2	215
21	Low-energy ion beam synthesis of Ag endotaxial nanostructures in silicon. <i>Applied Physics A: Materials Science and Processing</i> , 2018, 124, 1.	2.3	4
22	In Situ/ex Situ Investigations on the Formation of the Mosaic Solid Electrolyte Interface Layer on Graphite Anode for Lithium-Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2018, 122, 28717-28726.	3.1	62
23	Angle dependent localized surface plasmon resonance from near surface implanted silver nanoparticles in SiO <sub>2</sub> thin film. <i>Journal of Applied Physics</i> , 2018, 124, 063107.	2.5	2
24	Facile Synthesis of Semiconducting Ultrathin Layer of Molybdenum Disulfide. <i>Journal of Nanoscience and Nanotechnology</i> , 2018, 18, 614-622.	0.9	1
25	Estimation of intrinsic work function of multilayer graphene by probing with electrostatic force microscopy. <i>Applied Surface Science</i> , 2017, 402, 271-276.	6.1	9
26	Molecular dynamics simulation studies of gold nano-cluster on silicon (001) surface. <i>Indian Journal of Physics</i> , 2017, 91, 853-859.	1.8	7
27	Filled-carbon nanotubes: 1 D nanomagnets possessing uniaxial magnetization axis and reversal magnetization switching. <i>Carbon</i> , 2017, 119, 464-475.	10.3	10
28	Surface protection coating material for controlling the decay of major construction stone. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	2
29	Study of Ag induced bimetallic (Au@Ag) nanowires on silicon (5 5 12) surfaces: Experiment and theoretical aspects. <i>Surface Science</i> , 2017, 664, 29-37.	1.9	5
30	Mercury based drug in ancient India: The red sulfide of mercury in nanoscale. <i>Journal of Ayurveda and Integrative Medicine</i> , 2017, 8, 93-98.	1.7	15
31	Ion beam induced endotaxial silver nanostructures in silicon. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2017, 409, 209-215.	1.4	6
32	Growth of large aspect ratio AuAg bimetallic nanowires on Si(110) substrate. <i>Applied Surface Science</i> , 2017, 407, 337-344.	6.1	6
33	Effect of Au thickness on AuAg bimetallic growth on reconstructed Si(5 5 12) surfaces. <i>Applied Physics A: Materials Science and Processing</i> , 2017, 123, 1.	2.3	3
34	<i>In situ</i> synchrotron X-ray diffraction study of coherently embedded silver nanostructure growth in silicon. <i>CrystEngComm</i> , 2017, 19, 6811-6820.	2.6	3
35	Highly Active 2D Layered MoS <sub>2</sub> -rGO Hybrids for Energy Conversion and Storage Applications. <i>Scientific Reports</i> , 2017, 7, 8378.	3.3	143
36	Ag nanoparticle decorated molybdenum oxide structures: growth, characterization, DFT studies and their application to enhanced field emission. <i>Nanotechnology</i> , 2017, 28, 415602.	2.6	14

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37	Capping Layer (CL) Induced Antidamping in CL/Py/I <sup>2</sup> -W System (CL: Al, I <sup>2</sup> -Ta, Cu, I <sup>2</sup> -W). ACS Applied Materials & Interfaces, 2017, 9, 31005-31017.	8.0	10
38	Growth of Au capped GeO <sub>2</sub> nanowires for visible-light photodetection. Applied Physics Letters, 2016, 109, .	3.3	23
39	Layered Double Hydroxides/Multiwalled Carbon Nanotubes-Based Composite for High-Temperature CO <sub>2</sub> Adsorption. Energy & Fuels, 2016, 30, 4244-4250.	5.1	30
40	Growth of Ag nanostructures on high-index Si (5 5 12) surfaces under UHV conditions: effect of prior surface treatment before deposition. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	2
41	Tuning the work function of randomly oriented ZnO nanostructures by capping with faceted Au nanostructure and oxygen defects: enhanced field emission experiments and DFT studies. Nanotechnology, 2016, 27, 125701.	2.6	36
42	Fe <sub>3</sub> C-filled carbon nanotubes: permanent cylindrical nanomagnets possessing exotic magnetic properties. Nanoscale, 2016, 8, 4299-4310.	5.6	20
43	Adsorption of Ru, Ce and Eu radionuclides within naturally precipitated polycrystalline calcium carbonate under acidic environment. Journal of Radioanalytical and Nuclear Chemistry, 2015, 309, 751.	1.5	0
44	Morphological variations in Au <sub>x</sub> Si <sub>y</sub> nanostructures under variable pressure and annealing conditions. Applied Physics A: Materials Science and Processing, 2015, 118, 1079-1085.	2.3	0
45	Simple Growth of Faceted Au-ZnO Hetero-nanostructures on Silicon Substrates (Nanowires and) Visible Light. ACS Applied Materials & Interfaces, 2015, 7, 9486-9496.	8.0	38
46	Multilayer Ge nanocrystals embedded within Al <sub>2</sub> O <sub>3</sub> matrix for high performance floating gate memory devices. Applied Physics Letters, 2015, 107, .	3.3	24
47	A study of the initial stages of the growth of Au-assisted epitaxial Ge nanowires on a clean Ge(100) surface. CrystEngComm, 2014, 16, 2486.	2.6	7
48	Coherently Embedded Ag Nanostructures in Si: 3D Imaging and their application to SERS. Scientific Reports, 2014, 4, 4633.	3.3	19
49	Substrate Symmetry Driven Endotaxial Silver Nanostructures by Chemical Vapor Deposition. Journal of Physical Chemistry C, 2013, 117, 13247-13251.	3.1	13
50	Nano scale phase separation in Au-Ge system on ultra clean Si(100) surfaces. Journal of Applied Physics, 2012, 111, 104319.	2.5	6
51	Growth of oriented Au nanostructures: Role of oxide at the interface. Journal of Applied Physics, 2012, 111, 064322.	2.5	15
52	Nanodot to nanowire: A strain-driven shape transition in self-organized endotaxial CoSi <sub>2</sub> on Si(100). Applied Physics Letters, 2012, 100, .	3.3	27
53	Thermal stability of gold-PS nanocomposites thin films. Bulletin of Materials Science, 2011, 34, 595-599.	1.7	3
54	Surface modifications of ultra-thin gold films by swift heavy ion irradiation. Indian Journal of Physics, 2010, 84, 1391-1397.	1.8	10

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55	Observation of grain growth in swift heavy ion irradiated NiO thin films. Indian Journal of Physics, 2010, 84, 1399-1404.	1.8	6
56	Strain evolution in Si substrate due to implantation of MeV ion observed by extremely asymmetric x-ray diffraction. Journal of Applied Physics, 2009, 106, 043516.	2.5	5
57	Effects of thermal and athermal processing on the formation of buried SiC layers. Journal of Applied Physics, 2009, 105, 014301.	2.5	6
58	Fabrication, photoemission studies, and sensor of Hg nanoparticles templated on plasmid DNA. Applied Physics Letters, 2009, 94, .	3.3	7
59	Structural evolution of TiO <sub>2</sub> nanocrystalline thin films by thermal annealing and swift heavy ion irradiation. Journal of Applied Physics, 2009, 105, .	2.5	72
60	Thickness dependent lattice expansion in nanogranular Nb thin films. Journal of Applied Physics, 2008, 103, .	2.5	21
61	Bacterial synthesis of silicon/silica nanocomposites. Journal of Materials Chemistry, 2008, 18, 2601.	6.7	57
62	Evolution of Crystallinity and Texturing on 120 MeV Au Ion Irradiation on NiO Thin Films. , 2008, , .		1
63	Axial buckling and compressive behavior of nickel-encapsulated multiwalled carbon nanotubes. Physical Review B, 2007, 76, .	3.2	21
64	Effect of halogen addition to monolayer protected gold nanoparticles. Journal of Materials Chemistry, 2007, 17, 1614.	6.7	46
65	Synthesis and characterization of ZnO thin film grown by electron beam evaporation. Journal of Applied Physics, 2006, 99, 123105.	2.5	118
66	Proton microbeam irradiation effects on PtBA polymer. Bulletin of Materials Science, 2006, 29, 101-105.	1.7	2
67	Ion-beam induced transformations in nanoscale multilayers: Evolution of clusters with preferred length scales. Journal of Applied Physics, 2006, 99, 074301.	2.5	17
68	Strain distribution due to ion implantation revealed by extremely asymmetric x-ray diffraction. E-Journal of Surface Science and Nanotechnology, 2006, 4, 25-31.	0.4	5
69	Size distribution of sputtered particles from Au nanoislands due to MeV self-ion bombardment. Journal of Applied Physics, 2005, 98, 064904.	2.5	10
70	Glass/Ceramic/Metal Nanocomposites Containing a Ferroelectric Phase. Ferroelectrics, 2004, 306, 95-109.	0.6	3
71	Understanding the quantum size effects in ZnO nanocrystals. Journal of Materials Chemistry, 2004, 14, 661.	6.7	297
72	GROWTH OF SELF-ASSEMBLED EPITAXIAL GERMANIUM NANOISLANDS ON SILICON SURFACES BY MOLECULAR BEAM EPITAXY. , 2003, , .		0

#	ARTICLE	IF	CITATIONS
73	Surface and Interface Characterization of Ion Beam Re-crystallized Si. Materials Research Society Symposia Proceedings, 2002, 750, 1.	0.1	1