Shubhra Gangopadhyay

List of Publications by Year
in descending order

104	3,347	172457	161849
papers	citations	29 h-index	54 g-index

105	105	105	4335
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Size and Structure Matter: Enhanced CO₂ Photoreduction Efficiency by Size-Resolved Ultrafine Pt Nanoparticles on TiO₂ Single Crystals. Journal of the American Chemical Society, 2012, 134, 11276-11281.	13.7	691
2	Detection of Nitroaromatic Explosives Using a Fluorescent-Labeled Imprinted Polymer. Analytical Chemistry, 2010, 82, 4015-4019.	6.5	175
3	Nanoenergetic Composites of CuO Nanorods, Nanowires, and Alâ€Nanoparticles. Propellants, Explosives, Pyrotechnics, 2008, 33, 122-130.	1.6	119
4	Nanomaterial processing using self-assembly-bottom-up chemical and biological approaches. Reports on Progress in Physics, 2013, 76, 066501.	20.1	114
5	Galvanic Porous Silicon Composites for High-Velocity Nanoenergetics. Nano Letters, 2011, 11, 803-807.	9.1	108
6	A Versatile Self-Assembly Approach toward High Performance Nanoenergetic Composite Using Functionalized Graphene. Langmuir, 2014, 30, 6556-6564.	3.5	91
7	Experimental realization of epsilon-near-zero metamaterial slabs with metal-dielectric multilayers. Applied Physics Letters, 2013, 103, .	3.3	83
8	Characterization of Nanothermite Material for Solid-Fuel Microthruster Applications. Journal of Propulsion and Power, 2009, 25, 1086-1091.	2.2	80
9	Combustion characteristics of novel hybrid nanoenergetic formulations. Combustion and Flame, 2011, 158, 964-978.	5.2	80
10	Coatings and surface modifications imparting antimicrobial activity to orthopedic implants. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2014, 6, 475-495.	6.1	64
11	Combustion characterization and modeling of novel nanoenergetic composites of Co₃O₄/nAl. RSC Advances, 2015, 5, 21471-21479.	3.6	61
12	Fast-Impulse Nanothermite Solid-Propellant Miniaturized Thrusters. Journal of Propulsion and Power, 2013, 29, 1400-1409.	2.2	60
13	Microwell Device for Targeting Single Cells to Electrochemical Microelectrodes for High-Throughput Amperometric Detection of Quantal Exocytosis. Analytical Chemistry, 2011, 83, 2445-2451.	6.5	56
14	Enhanced Water Photolysis with Pt Metal Nanoparticles on Single Crystal TiO₂ Surfaces. Langmuir, 2012, 28, 7528-7534.	3.5	49
15	Modified Nanoenergetic Composites with Tunable Combustion Characteristics for Propellant Applications. Propellants, Explosives, Pyrotechnics, 2010, 35, 384-394.	1.6	46
16	Controlled on-chip stimulation of quantal catecholamine release from chromaffin cells using photolysis of caged Ca2+on transparent indium-tin-oxide microchip electrodes. Lab on A Chip, 2008, 8, 161-169.	6.0	43
17	Sputter-Deposition of Silver Nanoparticles into Ionic Liquid as a Sacrificial Reservoir in Antimicrobial Organosilicate Nanocomposite Coatings. ACS Applied Materials & Interfaces, 2012, 4, 178-184.	8.0	42
18	Hydrogen spillover at sub-2 nm Pt nanoparticles by electrochemical hydrogen loading. Journal of Materials Chemistry A, 2014, 2, 3954.	10.3	42

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19	A microfluidic cell trap device for automated measurement of quantal catecholamine release from cells. Lab on A Chip, 2009, 9, 3442.	6.0	40
20	Transparent Electrode Materials for Simultaneous Amperometric Detection of Exocytosis and Fluorescence Microscopy. Journal of Biomaterials and Nanobiotechnology, 2012, 03, 243-253.	0.5	40
21	Transient pressure mediated intranuclear delivery of FITC-Dextran into chicken cardiomyocytes by MEMS-based nanothermite reaction actuator. Sensors and Actuators B: Chemical, 2012, 171-172, 1292-1296.	7.8	40
22	Ultrafine sputter-deposited Pt nanoparticles for triiodide reduction in dye-sensitized solar cells: impact of nanoparticle size, crystallinity and surface coverage on catalytic activity. Nanotechnology, 2012, 23, 485405.	2.6	40
23	Magnetron sputtered diamond-like carbon microelectrodes for on-chip measurement of quantal catecholamine release from cells. Biomedical Microdevices, 2008, 10, 623-629.	2.8	39
24	Nanoenergetic Composite of Mesoporous Iron Oxide and Aluminum Nanoparticles. Journal of Energetic Materials, 2006, 24, 341-360.	2.0	37
25	Mechanics of plasma exposed spin-on-glass (SOG) and polydimethyl siloxane (PDMS) surfaces and their impact on bond strength. Applied Surface Science, 2007, 253, 4220-4225.	6.1	37
26	Combustion Characteristics of Silicon-Based Nanoenergetic Formulations with Reduced Electrostatic Discharge Sensitivity. Propellants, Explosives, Pyrotechnics, 2012, 37, 359-372.	1.6	37
27	Enhanced Combustion Characteristics of Bismuth Trioxideâ€Aluminum Nanocomposites Prepared through Graphene Oxide Directed Selfâ€Assembly. Propellants, Explosives, Pyrotechnics, 2015, 40, 729-734.	1.6	35
28	Effect of Nitrocellulose Gasifying Binder on Thrust Performance and Highâ€g Launch Tolerance of Miniaturized Nanothermite Thrusters. Propellants, Explosives, Pyrotechnics, 2014, 39, 374-382.	1.6	33
29	Sub-2 nm size and density tunable platinum nanoparticles using room temperature tilted-target sputtering. Nanotechnology, 2013, 24, 205602.	2.6	31
30	Femtogram-level detection of Clostridium botulinum neurotoxin type A by sandwich immunoassay using nanoporous substrate and ultra-bright fluorescent suprananoparticles. Biosensors and Bioelectronics, 2013, 41, 409-416.	10.1	31
31	Sub-2 nm Size-Tunable High-Density Pt Nanoparticle Embedded Nonvolatile Memory. IEEE Electron Device Letters, 2009, 30, 1362-1364.	3.9	27
32	Preferential cell attachment to nitrogen-doped diamond-like carbon (DLC:N) for the measurement of quantal exocytosis. Biomaterials, 2009, 30, 1604-1612.	11.4	27
33	Automated Targeting of Cells to Electrochemical Electrodes Using a Surface Chemistry Approach for the Measurement of Quantal Exocytosis. ACS Chemical Neuroscience, 2010, 1, 590-597.	3.5	27
34	Combustion of aluminum nanoparticles and exfoliated 2D molybdenum trioxide composites. Combustion and Flame, 2018, 187, 1-10.	5.2	27
35	Plasma Modification of Polymer Surfaces and Their Utility in Building Biomedical Microdevices. Journal of Adhesion Science and Technology, 2010, 24, 2707-2739.	2.6	26
36	Nanoporous organosilicate films as antireflection coatings. Thin Solid Films, 2006, 514, 350-354.	1.8	25

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37	A Novel On-Chip Diagnostic Method to Measure Burn Rates of Energetic Materials. Journal of Energetic Materials, 2006, 24, 1-15.	2.0	24
38	Entropy driven spontaneous formation of highly porous films from polymerâ€“nanoparticle composites. Nanotechnology, 2009, 20, 425602.	2.6	24
39	Large sensitivity enhancement in semiconducting organic field effect transistor sensors through incorporation of ultra-fine platinum nanoparticles. Applied Physics Letters, 2013, 103, .	3.3	24
40	Ultrasensitive detection of lipoarabinomannan with plasmonic grating biosensors in clinical samples of HIV negative patients with tuberculosis. PLoS ONE, 2019, 14, e0214161.	2.5	24
41	Development of a Miniaturized Liquid Core Waveguide System With Nanoporous Dielectric Claddingâ€”A Potential Biosensing Platform. IEEE Sensors Journal, 2009, 9, 1711-1718.	4.7	22
42	Comparison of molecular imprinted particles prepared using precipitation polymerization in water and chloroform for fluorescent detection of nitroaromatics. Analytica Chimica Acta, 2011, 703, 239-244.	5.4	22
43	Plasmonic-enhanced conjugated polymer fluorescence chemosensor for trace nitroaromatic vapor. Sensors and Actuators B: Chemical, 2014, 202, 1088-1096.	7.8	22
44	Room temperature Coulomb blockade effects in Au nanocluster/pentacene single electron transistors. Nanotechnology, 2015, 26, 355204.	2.6	22
45	Reactive nanoenergetic graphene aerogel synthesized by one-step chemical reduction. Combustion and Flame, 2018, 196, 400-406.	5.2	22
46	Electrochemical Properties of Carbon Nanoparticles Entrapped in a Silica Matrix. Journal of the Electrochemical Society, 2008, 155, K91.	2.9	21
47	Characterization of a novel ultra-low refractive index material for biosensor application. Sensors and Actuators B: Chemical, 2009, 141, 227-232.	7.8	21
48	Ionic conductivity enhancement of sputtered gold nanoparticle-in-ionic liquid electrolytes. Journal of Materials Chemistry A, 2014, 2, 792-803.	10.3	21
49	Palladium-Functionalized Nanostructured Platforms for Enhanced Hydrogen Sensing. Nanomaterials and Nanotechnology, 2016, 6, 40.	3.0	21
50	Optimization of Design and Fabrication Processes for Realization of a PDMS-SOG-Silicon DNA Amplification Chip. Journal of Microelectromechanical Systems, 2007, 16, 401-410.	2.5	20
51	Linear Polyethylenimine-DNA Nanoconstruct for Corneal Gene Delivery. Journal of Ocular Pharmacology and Therapeutics, 2019, 35, 23-31.	1.4	20
52	Laser-scribed conductive, photoactive transition metal oxide on soft elastomers for Janus on-skin electronics and soft actuators. Science Advances, 2022, 8, .	10.3	20
53	Intermolecular energy transfer in binary systems of dye polymers. Journal of Applied Physics, 2000, 88, 4860.	2.5	19
54	Size-dependent work function and single electron memory behavior of pentacene non-volatile memory with embedded sub-nanometer platinum nanoparticles. Journal of Applied Physics, 2015, 117, .	2.5	19

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55	Room temperature observation of size dependent single electron tunneling in a sub-2 nm size tunable Pt nanoparticle embedded metalâ€“oxideâ€“semiconductor structure. Nanotechnology, 2011, 22, 465201.	2.6	18
56	Evaluation of hybrid sol-gel incorporated with nanoparticles as nano paint. AIP Conference Proceedings, 2016, , .	0.4	18
57	Multi-Layer Pt Nanoparticle Embedded High Density Non-Volatile Memory Devices. Journal of the Electrochemical Society, 2012, 159, H393-H399.	2.9	16
58	Barrier Modification of Metal-contact on Silicon by Sub-2â€‰nm Platinum Nanoparticles and Thin Dielectrics. Scientific Reports, 2016, 6, 25234.	3.3	16
59	Single-Molecule Surface Plasmon-Coupled Emission with Plasmonic Gratings. ACS Omega, 2017, 2, 2041-2045.	3.5	16
60	Layer-by-layer charging in non-volatile memory devices using embedded sub-2â€‰nm platinum nanoparticles. Applied Physics Letters, 2014, 104, .	3.3	13
61	In Situ Characterization of Photothermal Nanoenergetic Combustion on a Plasmonic Microchip. ACS Applied Materials & Interfaces, 2018, 10, 427-436.	8.0	13
62	Nano Porous Palladium Sensor for Sensitive and Rapid Detection of Hydrogen. Sensor Letters, 2014, 12, 1279-1285.	0.4	13
63	Characterization and versatile applications of low hydrogen content SiOCN grown by plasma-enhanced chemical vapor deposition. Journal of Applied Physics, 2014, 116, .	2.5	12
64	Ultrafine Pt nanoparticle induced doping/strain of single layer graphene: experimental corroboration between conductionÂand Raman characteristics. Journal of Materials Science: Materials in Electronics, 2015, 26, 4746-4753.	2.2	12
65	Confeito-like assembly of organosilicate-caged fluorophores: ultrabright suprananoparticles for fluorescence imaging. Nanotechnology, 2012, 23, 175601.	2.6	11
66	Counting single Rhodamine 6G dye molecules in organosilicate nanoparticles. Chemical Physics, 2012, 406, 41-46.	1.9	11
67	Self-assembled Ordered Energetic Composites of CuO Nanorods and Nanowells and Al Nanoparticles with High Burn Rates. Materials Research Society Symposia Proceedings, 2005, 896, 51.	0.1	10
68	Experimental characterization of optical nonlocality in metal-dielectric multilayer metamaterials. Optics Express, 2014, 22, 22974.	3.4	10
69	Synthesis, characterization and nanoenergetic utilizations of fluorine, oxygen co-functionalized graphene by one-step XeF2 exposure. Combustion and Flame, 2020, 215, 324-332.	5.2	10
70	Plasmonic nano-protrusions: hierarchical nanostructures for single-molecule Raman spectroscopy. Nanotechnology, 2017, 28, 025302.	2.6	9
71	Sub-minute formation of supported nanoporous mesoscale patterns programmed by surface energy. Journal of Colloid and Interface Science, 2011, 364, 546-554.	9.4	8
72	Ultra-rapid elimination of biofilms via the combustion of a nanoenergetic coating. BMC Biotechnology, 2013, 13, 30.	3.3	8

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73	Protease biosensing on novel high surface area organosilicate nanoporous films. Sensors and Actuators B: Chemical, 2013, 176, 351-359.	7.8	8
74	Fast-Impulse Nanothermite Solid-Propellant Miniaturized Thrusters. Journal of Propulsion and Power, 2015, 31, 483-483.	2.2	8
75	Neutron detection with integrated sub-2 nm Pt nanoparticles and 10B enriched dielectricsâ€"A direct conversion device. Sensing and Bio-Sensing Research, 2016, 9, 1-6.	4.2	8
76	Enhanced DNA Detection Through the Incorporation of Nanocones and Cavities Into a Plasmonic Grating Sensor Platform. IEEE Sensors Journal, 2016, 16, 3403-3408.	4.7	8
77	Nanoscale surface reactions by laser irradiation of Al nanoparticles on MoO₃ flakes. Nanotechnology, 2019, 30, 045703.	2.6	8
78	Stability of Subâ€"2 nm Pt Nanoparticles on Different Support Surfaces. Journal of the Electrochemical Society, 2014, 161, F493-F499.	2.9	7
79	Super-Resolution Light Microscopy Using Plasmonic Gratings. Microscopy Today, 2017, 25, 42-47.	0.3	7
80	Synchronized Electromechanical Shock Wave-Induced Bacterial Transformation. ACS Omega, 2019, 4, 8512-8521.	3.5	7
81	On-Chip Initiation and Burn Rate Measurements of Thermite Energetic Reactions. Materials Research Society Symposia Proceedings, 2005, 896, 21.	0.1	6
82	Single-Molecule Detection in Nanogap-Embedded Plasmonic Gratings. Nanobiomedicine, 2015, 2, 8.	5.7	6
83	Primary scintillant fluorescent decay times in binary and ternary scintillators by near UV pulsed laser excitation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1987, 256, 348-354.	1.6	5
84	Enhanced fluorescence for in situ temperature mapping of photothermally heated aluminum nanoparticles enabled by a plasmonic grating substrate. Nanotechnology, 2018, 29, 395501.	2.6	5
85	Surface Plasmon Enhanced Fluorescence Temperature Mapping of Aluminum Nanoparticle Heated by Laser. Sensors, 2021, 21, 1585.	3.8	5
86	Stability study of iodinated reduced graphene oxide and its application in self-assembled Al/Bi₂O₃ nanothermite composites. Nano Futures, 2020, 4, 045002.	2.2	5
87	Ferrihydrite gels derived in the Fe(NO3)3Â·9H2Oâ€"C2H5OHâ€"CH3CHCH2O ternary system. Journal of Non-Crystalline Solids, 2005, 351, 1426-1432.	3.1	4
88	Low temperature crystallization of amorphous silicon carbide thin films for pâ€"n junction devices fabrication. Journal of Materials Science: Materials in Electronics, 2008, 19, 801-804.	2.2	4
89	Influence of Pt Nanoparticle Induced Defects and Surface Coverage in Determining Asymmetric Programming/Erasing Signatures for Nanocrystal Embedded Nonvolatile Memory Applications. Advanced Materials Interfaces, 2016, 3, 1600436.	3.7	4
90	Spontaneous emission rate enhancement with aperiodic Thue-Morse multilayer. Scientific Reports, 2019, 9, 8473.	3.3	4

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91	Novel process for low temperature crystallization of a-SiC:H for optoelectronic applications. Journal of Materials Science: Materials in Electronics, 2009, 20, 412-415.	2.2	3
92	Template-free chemical deposition of highly crystalline ZnO nanorod thin films. Materials Advances, 2022, 3, 5383-5392.	5.4	3
93	Fluorescence Studies on New Epoxypolymerâ€"Dye Compositions for Ultrafast Wavelength Shifters. Applied Spectroscopy, 1996, 50, 1545-1552.	2.2	2
94	Enhanced fluorescence through the incorporation of nanocones/gaps into a plasmonic gratings sensor platform. , 2014, , .		2
95	Extending lipoarabinomannan detection limitations with plasmonic gratings. , 2017, , .		2
96	Single-molecule Imaging of Metallic Nanostructures on a Plasmonic Metal Grating Superlens. , 2018, , .		2
97	Novel nanostructured platform and nanoparticles for sensitive detection of biological materials. , 2010, , .		1
98	A comparative evaluation of microarray slides as substrates for the development of protease assay biosensors. Experimental and Molecular Pathology, 2011, 91, 714-717.	2.1	1
99	Polarization-Induced Transport: A Comparative Study of Ferroelectric and Non-Ferroelectric Dielectric-Gated Organic Field-Effect Transistors. MRS Advances, 2017, 2, 2951-2956.	0.9	1
100	Trypsin Detection Utilizing Peptide Substrates Immobilized on PMMA Nanofibers. Sensor Letters, 2011, 9, 1376-1381.	0.4	1
101	Effect of Incorporating Metal nanoparticles in High-k Dielectrics for NanoFLASH and NanoCMOS. , 2007, , .		0
102	Role of Pt Nanoparticles in Photoreactions on TiO2 Photoelectrodes. Materials Research Society Symposia Proceedings, 2012, 1446, 85.	0.1	0
103	Multilayer thin film capacitors by selective etching of Pt and Ru electrodes. Microelectronic Engineering, 2015, 133, 92-97.	2.4	0
104	Plasma Modification of Polymer Surfaces and Their Utility in Building Biomedical Microdevices. , 2011, , 377-409.		0