

Banshi Dhar Gupta

List of Publications by Year in descending order

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104
papers

5,632
citations

47006

47
h-index

85541

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104
all docs

104
docs citations

104
times ranked

4510
citing authors

#	ARTICLE	IF	CITATIONS
1	Sensitivity enhancement of a surface plasmon resonance based biomolecules sensor using graphene and silicon layers. <i>Sensors and Actuators B: Chemical</i> , 2011, 160, 623-631.	7.8	271
2	SPR based fibre optic ammonia gas sensor utilizing nanocomposite film of PMMA/reduced graphene oxide prepared by in situ polymerization. <i>Sensors and Actuators B: Chemical</i> , 2014, 199, 190-200.	7.8	227
3	Detection of heavy metal ions in contaminated water by surface plasmon resonance based optical fibre sensor using conducting polymer and chitosan. <i>Food Chemistry</i> , 2015, 166, 568-575.	8.2	222
4	[INVITED] Recent advances in surface plasmon resonance based fiber optic chemical and biosensors utilizing bulk and nanostructures. <i>Optics and Laser Technology</i> , 2018, 101, 144-161.	4.6	167
5	Surface plasmon resonance based fiber optic sensor for the detection of low water content in ethanol. <i>Sensors and Actuators B: Chemical</i> , 2011, 153, 194-198.	7.8	151
6	Localized Surface Plasmon Resonance-Based Fiber Optic U-Shaped Biosensor for the Detection of Blood Glucose. <i>Plasmonics</i> , 2012, 7, 261-268.	3.4	144
7	SPR based fiber optic sensor for refractive index sensing with enhanced detection accuracy and figure of merit in visible region. <i>Optics Communications</i> , 2015, 344, 86-91.	2.1	142
8	Fiber optic hydrogen sulfide gas sensors utilizing ZnO thin film/ZnO nanoparticles: A comparison of surface plasmon resonance and lossy mode resonance. <i>Sensors and Actuators B: Chemical</i> , 2015, 218, 196-204.	7.8	138
9	Surface Plasmon Resonance-Based Fiber Optic Methane Gas Sensor Utilizing Graphene-Carbon Nanotubes-Poly(Methyl Methacrylate) Hybrid Nanocomposite. <i>Plasmonics</i> , 2015, 10, 1147-1157.	3.4	134
10	Sensitivity enhancement of a surface plasmon resonance based fibre optic refractive index sensor utilizing an additional layer of oxides. <i>Sensors and Actuators A: Physical</i> , 2013, 193, 136-140.	4.1	127
11	Surface plasmon resonance-based fiber optic hydrogen sulphide gas sensor utilizing Cu/ZnO thin films. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 11868.	2.8	122
12	Surface plasmon resonance based fiber optic sensor for the IR region using a conducting metal oxide film. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2010, 27, 846.	1.5	120
13	Fiber optic profenofos sensor based on surface plasmon resonance technique and molecular imprinting. <i>Biosensors and Bioelectronics</i> , 2016, 79, 150-157.	10.1	100
14	Fabrication and characterization of a surface plasmon resonance based fiber optic sensor using gel entrapment technique for the detection of low glucose concentration. <i>Sensors and Actuators B: Chemical</i> , 2013, 177, 589-595.	7.8	99
15	Fiber optic SPR sensor for the detection of melamine using molecular imprinting. <i>Sensors and Actuators B: Chemical</i> , 2015, 212, 404-410.	7.8	94
16	Surface Plasmon Resonance-Based Fiber Optic Sensors Utilizing Molecular Imprinting. <i>Sensors</i> , 2016, 16, 1381.	3.8	90
17	Fabrication and characterization of a surface plasmon resonance based fiber optic urea sensor for biomedical applications. <i>Sensors and Actuators B: Chemical</i> , 2012, 161, 434-438.	7.8	78
18	Surface plasmon resonance based fiber optic pH sensor utilizing Ag/ITO/Al/hydrogel layers. <i>Analyst</i> , 2013, 138, 2640.	3.5	77

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19	Surface plasmon resonance based fiber optic hydrogen sulphide gas sensor utilizing nickel oxide doped ITO thin film. <i>Sensors and Actuators B: Chemical</i> , 2014, 195, 215-222.	7.8	75
20	Surface plasmon resonance based fiber optic ethanol sensor using layers of silver/silicon/hydrogel entrapped with ADH/NAD. <i>Sensors and Actuators B: Chemical</i> , 2016, 230, 485-492.	7.8	73
21	LSPR- and SPR-Based Fiber-Optic Cholesterol Sensor Using Immobilization of Cholesterol Oxidase Over Silver Nanoparticles Coated Graphene Oxide Nanosheets. <i>IEEE Sensors Journal</i> , 2018, 18, 1039-1046.	4.7	73
22	A novel approach for simultaneous sensing of urea and glucose by SPR based optical fiber multianalyte sensor. <i>Analyst, The</i> , 2014, 139, 1449.	3.5	72
23	Versatile SERS sensing based on black silicon. <i>Optics Express</i> , 2015, 23, 6763.	3.4	71
24	Fiber optic evanescent field absorption sensor: effect of launching condition and the geometry of the sensing region. <i>Optical Engineering</i> , 1994, 33, 1864.	1.0	70
25	Influence of temperature on the sensitivity and signal-to-noise ratio of a fiber-optic surface-plasmon resonance sensor. <i>Applied Optics</i> , 2006, 45, 151.	2.1	69
26	Optical fiber sensor for the detection of tetracycline using surface plasmon resonance and molecular imprinting. <i>Analyst, The</i> , 2013, 138, 7254.	3.5	69
27	Highly sensitive and selective erythromycin nanosensor employing fiber optic SPR/ERY imprinted nanostructure: Application in milk and honey. <i>Biosensors and Bioelectronics</i> , 2017, 90, 516-524.	10.1	69
28	Fabrication and characterization of a highly sensitive surface plasmon resonance based fiber optic pH sensor utilizing high index layer and smart hydrogel. <i>Sensors and Actuators B: Chemical</i> , 2012, 173, 268-273.	7.8	67
29	Fiber optic SPR sensor for the detection of 3-pyridinecarboxamide (vitamin B3) using molecularly imprinted hydrogel. <i>Sensors and Actuators B: Chemical</i> , 2013, 177, 279-285.	7.8	67
30	Urinary p-cresol diagnosis using nanocomposite of ZnO/MoS ₂ and molecular imprinted polymer on optical fiber based lossy mode resonance sensor. <i>Biosensors and Bioelectronics</i> , 2018, 101, 135-145.	10.1	67
31	A contemporary approach for design and characterization of fiber-optic-cortisol sensor tailoring LMR and ZnO/PPY molecularly imprinted film. <i>Biosensors and Bioelectronics</i> , 2017, 87, 178-186.	10.1	64
32	SPR based fibre optic biosensor for phenolic compounds using immobilization of tyrosinase in polyacrylamide gel. <i>Sensors and Actuators B: Chemical</i> , 2013, 186, 388-395.	7.8	63
33	Modeling of Tapered Fiber-Optic Surface Plasmon Resonance Sensor With Enhanced Sensitivity. <i>IEEE Photonics Technology Letters</i> , 2007, 19, 1786-1788.	2.5	62
34	Performance Analysis of Bimetallic Layer With Zinc Oxide for SPR-Based Fiber Optic Sensor. <i>Journal of Lightwave Technology</i> , 2015, 33, 4565-4571.	4.6	62
35	Ultra-selective fiber optic SPR platform for the sensing of dopamine in synthetic cerebrospinal fluid incorporating permselective nafion membrane and surface imprinted MWCNTs-PPy matrix. <i>Biosensors and Bioelectronics</i> , 2019, 133, 205-214.	10.1	62
36	Influence of ions on the surface plasmon resonance spectrum of a fiber optic refractive index sensor. <i>Sensors and Actuators B: Chemical</i> , 2011, 156, 559-562.	7.8	58

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37	Surface Plasmon Resonance-Based Fiber Optic Sensor for the Detection of Low Concentrations of Ammonia Gas. <i>IEEE Sensors Journal</i> , 2015, 15, 1235-1239.	4.7	57
38	Fiber optic manganese ions sensor using SPR and nanocomposite of ZnO@polypyrrole. <i>Sensors and Actuators B: Chemical</i> , 2015, 220, 903-909.	7.8	57
39	Influence of Oxide Overlayer on the Performance of a Fiber Optic SPR Sensor With Al/Cu Layers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2017, 23, 81-88.	2.9	57
40	Fabrication and Characterization of a SPR Based Fiber Optic Sensor for the Detection of Chlorine Gas Using Silver and Zinc Oxide. <i>Materials</i> , 2015, 8, 2204-2216.	2.9	56
41	Surface plasmon resonance based optical fiber sensor for atrazine detection using molecular imprinting technique. <i>Sensors and Actuators B: Chemical</i> , 2016, 227, 204-211.	7.8	55
42	Carbon-Based Nanomaterials for Plasmonic Sensors: A Review. <i>Sensors</i> , 2019, 19, 3536.	3.8	55
43	Highly sensitive surface plasmon resonance based fiber optic pH sensor utilizing rGO-Pani nanocomposite prepared by in situ method. <i>Sensors and Actuators B: Chemical</i> , 2019, 283, 632-642.	7.8	55
44	Surface Plasmon Resonance-Based Fiber-Optic Hydrogen Gas Sensor Utilizing Indium-Tin Oxide (ITO) Thin Films. <i>Plasmonics</i> , 2012, 7, 627-632.	3.4	54
45	Surface plasmon resonance based fiber optic hydrogen peroxide sensor using polymer embedded nanoparticles. <i>Sensors and Actuators B: Chemical</i> , 2013, 182, 330-335.	7.8	54
46	SPR based fiber-optic sensor with enhanced electric field intensity and figure of merit using different single and bimetallic configurations. <i>Optics Communications</i> , 2016, 367, 23-34.	2.1	54
47	Surface-Plasmon-Resonance-Based Fiber-Optic Sensor for the Detection of Low-Density Lipoprotein. <i>IEEE Sensors Journal</i> , 2012, 12, 3460-3466.	4.7	49
48	Fiber Optic SPR-Based Uric Acid Biosensor Using Uricase Entrapped Polyacrylamide Gel. <i>IEEE Photonics Technology Letters</i> , 2016, 28, 2050-2053.	2.5	44
49	Localized and propagating surface plasmon resonance based fiber optic sensor for the detection of tetracycline using molecular imprinting. <i>Materials Research Express</i> , 2015, 2, 035007.	1.6	43
50	FO-SPR based dextrose sensor using Ag/ZnO nanorods/GOx for insulinoma detection. <i>Biosensors and Bioelectronics</i> , 2016, 85, 986-995.	10.1	43
51	Fiber-Optic SPR Based Acetylcholine Biosensor Using Enzyme Functionalized Ta ₂ O ₅ Nanoflakes for Alzheimer's Disease Diagnosis. <i>Journal of Lightwave Technology</i> , 2018, 36, 4018-4024.	4.6	43
52	Highly selective SPR based fiber optic sensor for the detection of hydrogen peroxide. <i>Sensors and Actuators B: Chemical</i> , 2021, 329, 129062.	7.8	41
53	Influence of skew rays on the sensitivity and signal-to-noise ratio of a fiber-optic surface-plasmon-resonance sensor: a theoretical study. <i>Applied Optics</i> , 2007, 46, 4563.	2.1	40
54	Theoretical modeling of a self-referenced dual mode SPR sensor utilizing indium tin oxide film. <i>Optics Communications</i> , 2016, 369, 131-137.	2.1	40

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55	Xanthine oxidase functionalized Ta ₂ O ₅ nanostructures as a novel scaffold for highly sensitive SPR based fiber optic xanthine sensor. <i>Biosensors and Bioelectronics</i> , 2018, 99, 637-645.	10.1	40
56	A localized and propagating SPR, and molecular imprinting based fiber-optic ascorbic acid sensor using an <i>in situ</i> polymerized polyaniline@Ag nanocomposite. <i>Nanotechnology</i> , 2016, 27, 345501.	2.6	39
57	Performance analysis of zinc oxide-implemented lossy mode resonance-based optical fiber refractive index sensor utilizing thin film/nanostructure. <i>Applied Optics</i> , 2017, 56, 5716.	1.8	39
58	Fiber-optic ammonia sensor using Ag/SnO ₂ thin films: optimization of thickness of SnO ₂ film using electric field distribution and reaction factor. <i>Applied Optics</i> , 2015, 54, 8712.	2.1	37
59	Surface Plasmon Resonance-Based Fiber Optic Sensor for the Detection of Ascorbic Acid Utilizing Molecularly Imprinted Polyaniline Film. <i>Plasmonics</i> , 2015, 10, 1853-1861.	3.4	37
60	Semiconductor metal oxide/polymer based fiber optic lossy mode resonance sensors: A contemporary study. <i>Optical Fiber Technology</i> , 2018, 45, 146-166.	2.7	36
61	A lossy mode resonance-based fiber optic hydrogen gas sensor for room temperature using coatings of ITO thin film and nanoparticles. <i>Measurement Science and Technology</i> , 2016, 27, 045103.	2.6	35
62	Integrating nanohybrid membranes of reduced graphene oxide: chitosan: silica sol gel with fiber optic SPR for caffeine detection. <i>Nanotechnology</i> , 2017, 28, 195502.	2.6	34
63	Surface Plasmon Resonance Based Fiber Optic Ammonia Sensor Utilizing Bromocresol Purple. <i>Plasmonics</i> , 2013, 8, 779-784.	3.4	33
64	Fiber-Optic Plasmonic Sensor Utilizing CTAB-Functionalized ZnO Nanoparticle-Decorated Carbon Nanotubes on Silver Films for the Detection of Catechol in Wastewater. <i>ACS Applied Nano Materials</i> , 2020, 3, 2582-2593.	5.0	33
65	Surface plasmon resonance based fiber optic refractive index sensor utilizing silicon layer: Effect of doping. <i>Optics Communications</i> , 2013, 286, 171-175.	2.1	32
66	Simultaneous estimation of vitamin K1 and heparin with low limit of detection using cascaded channels fiber optic surface plasmon resonance. <i>Biosensors and Bioelectronics</i> , 2016, 86, 48-55.	10.1	30
67	Surface plasmon resonance based fiber optic trichloroacetic acid sensor utilizing layer of silver nanoparticles and chitosan doped hydrogel. <i>Nanotechnology</i> , 2017, 28, 065503.	2.6	29
68	Surface plasmon resonance based fiber optic sensor for the detection of triacylglycerides using gel entrapment technique. <i>Sensors and Actuators B: Chemical</i> , 2013, 188, 917-922.	7.8	28
69	A highly selective LSPR biosensor for the detection of taurine realized on optical fiber substrate and gold nanoparticles. <i>Optical Fiber Technology</i> , 2019, 52, 101962.	2.7	28
70	Lossy Mode Resonance Based Fiber Optic Creatinine Sensor Fabricated Using Molecular Imprinting Over Nanocomposite of MoS ₂ /SnO ₂ . <i>IEEE Sensors Journal</i> , 2020, 20, 4251-4259.	4.7	28
71	Gas-Clad Two-Way Fiber Optic SPR Sensor: a Novel Approach for Refractive Index Sensing. <i>Plasmonics</i> , 2015, 10, 1071-1076.	3.4	26
72	Surface Plasmon Resonance-Based Fiber Optic Chlorine Gas Sensor Utilizing Indium-Oxide-Doped Tin Oxide Film. <i>Journal of Lightwave Technology</i> , 2015, 33, 2770-2776.	4.6	26

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73	Experimental studies on the sensitivity of the propagating and localized surface plasmon resonance-based tapered fiber optic refractive index sensors. <i>Applied Optics</i> , 2019, 58, 4149.	1.8	26
74	Surface plasmon resonance based fiber optic sensor for the detection of CrO ₄ ²⁻ using Ag/ITO/hydrogel layers. <i>Analytical Methods</i> , 2014, 6, 5191.	2.7	24
75	A highly sensitive and distinctly selective d-sorbitol biosensor using SDH enzyme entrapped Ta ₂ O ₅ nanoflowers assembly coupled with fiber optic SPR. <i>Sensors and Actuators B: Chemical</i> , 2017, 242, 810-817.	7.8	24
76	Surface plasmon resonance based fiber optic detection of chlorine utilizing polyvinylpyrrolidone supported zinc oxide thin films. <i>Analyst</i> , 2015, 140, 1863-1870.	3.5	23
77	Localized surface plasmon resonance-based fiber-optic sensor for the detection of triacylglycerides using silver nanoparticles. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	23
78	Portable fiber-optic SPR platform for the detection of NS1-antigen for dengue diagnosis. <i>Biosensors and Bioelectronics</i> , 2022, 196, 113720.	10.1	23
79	Zinc oxide thin film/nanorods based lossy mode resonance hydrogen sulphide gas sensor. <i>Materials Research Express</i> , 2015, 2, 095003.	1.6	22
80	Surface Plasmon Resonance Based Highly Selective Fiber Optic Dopamine Sensor Fabricated Using Molecular Imprinted GNP/SnO ₂ Nanocomposite. <i>Journal of Lightwave Technology</i> , 2018, 36, 5956-5962.	4.6	22
81	Simultaneous tuning of electric field intensity and structural properties of ZnO: Graphene nanostructures for FOSPR based nicotine sensor. <i>Biosensors and Bioelectronics</i> , 2017, 91, 762-769.	10.1	21
82	Palladium nanoparticles embedded PPy shell coated CNTs towards a high performance hydrazine detection through optical fiber plasmonic sensor. <i>Sensors and Actuators B: Chemical</i> , 2021, 326, 128717.	7.8	20
83	Ultrasensitive, highly selective, and real-time detection of protein using functionalized CNTs as MIP platform for FOSPR-based biosensor. <i>Nanotechnology</i> , 2017, 28, 355503.	2.6	19
84	SPR and Molecular Imprinting-Based Fiber-Optic Melamine Sensor With High Sensitivity and Low Limit of Detection. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2016, 22, 172-178.	2.9	17
85	Silver nanoparticle nodule ZnO nanowedge fetched novel FO-LMR based H ₂ O ₂ biosensor: A twin regime sensor for in-vivo applications and H ₂ O ₂ generation analysis from polyphenolic daily devouring beverages. <i>Sensors and Actuators B: Chemical</i> , 2017, 241, 129-145.	7.8	17
86	Tuning the field distribution and fabrication of an Al@ZnO core-shell nanostructure for a SPR-based fiber optic phenyl hydrazine sensor. <i>Nanotechnology</i> , 2016, 27, 215501.	2.6	15
87	Fibre Optic SPR Sensor Using Functionalized CNTs for the Detection of SMX: Comparison with Enzymatic Approach. <i>Plasmonics</i> , 2018, 13, 189-202.	3.4	15
88	Optical Biomedical Diagnostics Using Lab-on-Fiber Technology: A Review. <i>Photonics</i> , 2022, 9, 86.	2.0	14
89	A novel method of SPR based SnO ₂ : GNP nano-hybrid decorated optical fiber platform for hexachlorobenzene sensing. <i>Sensors and Actuators B: Chemical</i> , 2017, 246, 927-936.	7.8	13
90	Tailoring the Field Distribution of ZnO by Polyaniline for SPR-Based Fiber Optic Detection of Hardness of the Drinking Water. <i>Plasmonics</i> , 2016, 11, 483-492.	3.4	12

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91	Fiber optic surface plasmon resonance based lactate sensor using co-immobilization of lactate dehydrogenase and NAD ⁺ . Optical Fiber Technology, 2019, 49, 22-27.	2.7	11
92	Highly sensitive and selective localized surface plasmon resonance biosensor for detecting glutamate realized on optical fiber substrate using gold nanoparticles. Photonics and Nanostructures - Fundamentals and Applications, 2019, 37, 100730.	2.0	10
93	Nanotechnology-based fiber-optic chemical and biosensors. , 2020, , 163-195.		10
94	Fiber optic surface-plasmon-resonance-based highly sensitive arsenic sensor prepared using $\text{Fe}_2\text{O}_3/\text{SnO}_2$ core-shell nanostructure with optimized probe parameters. Applied Optics, 2018, 57, 10466.	1.8	10
95	Lossy Mode Resonance-Based Fiber Optic Sensor for the Detection of As (III) Using $\alpha\text{-Fe}_2\text{O}_3/\text{SnO}_2$ Core-Shell Nanostructures. IEEE Sensors Journal, 2018, 18, 7077-7084.	4.7	9
96	Fiber optic surface plasmon resonance based hexachlorobenzene sensor exploiting layer-by-layer coatings of GNP/ SnO_2 dendrites nanocomposite. Materials Research Express, 2017, 4, 115022.	1.6	7
97	Ion-imprinted nanoparticles for the concurrent estimation of Pb(II) and Cu(II) ions over a two channel surface plasmon resonance-based fiber optic platform. Journal of Biomedical Optics, 2018, 23, 1.	2.6	7
98	Lossy mode resonance-based highly sensitive fiber optic refractive index sensor using the bilayer of FTO/ HfO_2 for operation in the visible region. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 3841.	2.1	5
99	Fiber optic surface plasmon resonance based disposable probe for the detection of phosphate ion in soil. Optik, 2021, 243, 167484.	2.9	4
100	SPR based fiber optic two channel sensor in near infrared (NIR) region. AIP Conference Proceedings, 2013, , .	0.4	2
101	Surface plasmon resonance based fiber optic potassium ion disposable sensing probe for soil testing. Optical Fiber Technology, 2021, 64, 102573.	2.7	2
102	Surface plasmon resonance based fiber optic refractive index sensor utilizing Cu/ZnO layer. , 2013, , .		1
103	SPR Based Fiber Optic Quercetin Biosensor Utilizing rGO: PPy: Chitosan Nanocomposite Network. , 2017, , .		1
104	Optical Fiber Probe for the Selective Plasmonic Sensing of Catechol Utilizing ZnO Decorated MWCNTs. , 2019, , .		0