

Arup R. Pal

List of Publications by Year in descending order

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361045

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76
all docs

76
docs citations

76
times ranked

1602
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-Powered Broadband Photodetector using Plasmonic Titanium Nitride. ACS Applied Materials & Interfaces, 2016, 8, 4258-4265.	4.0	109
2	Plasmonic Hot Hole Generation by Interband Transition in Gold-Polyaniline. Scientific Reports, 2016, 5, 18276.	1.6	56
3	Observation of sheath modification in laboratory dusty plasma. Physics of Plasmas, 2007, 14, .	0.7	45
4	Optimization of plasma parameters for high rate deposition of titanium nitride films as protective coating on bell-metal by reactive sputtering in cylindrical magnetron device. Applied Surface Science, 2008, 254, 5760-5765.	3.1	45
5	Unraveling the Catalytic and Plasmonic Roles of g-C ₃ N ₄ Supported Ag and Au Nanoparticles Under Selective Photoexcitation. ACS Sustainable Chemistry and Engineering, 2019, 7, 19295-19302.	3.2	39
6	Pyro-phototronic application in the Au/ZnO interface for the fabrication of a highly responsive ultrafast UV photodetector. Applied Surface Science, 2021, 537, 147893.	3.1	39
7	Highly effective antibiofilm coating of silver-polymer nanocomposite on polymeric medical devices deposited by one step plasma process. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 1223-1235.	1.6	35
8	Tea-Carbon Dots-Reduced Graphene Oxide: An Efficient Conducting Coating Material for Fabrication of an E-Textile. ACS Sustainable Chemistry and Engineering, 2017, 5, 11645-11651.	3.2	35
9	High photosensitivity with enhanced photoelectrical contribution in hybrid nanocomposite flexible UV photodetector. Organic Electronics, 2014, 15, 2107-2115.	1.4	34
10	An efficient fast response and high-gain solar-blind flexible ultraviolet photodetector employing hybrid geometry. Applied Physics Letters, 2014, 104, 193301.	1.5	33
11	RF-PACVD of water repellent and protective HMDSO coatings on bell metal surfaces: Correlation between discharge parameters and film properties. Applied Surface Science, 2011, 257, 8469-8477.	3.1	32
12	Investigation of sheath properties in Ar/SF ₆ dc discharge plasma. Journal Physics D: Applied Physics, 2003, 36, 645-652.	1.3	29
13	Enhancement of hydrophobicity and tensile strength of muga silk fiber by radiofrequency Ar plasma discharge. Applied Surface Science, 2011, 258, 126-135.	3.1	29
14	TiO ₂ /polyaniline nanocomposite films prepared by magnetron sputtering combined with plasma polymerization process. Applied Surface Science, 2011, 258, 1199-1205.	3.1	27
15	Enhanced light harvesting through Förster resonance energy transfer in polymer-small molecule ternary system. Journal of Materials Chemistry C, 2017, 5, 1136-1148.	2.7	26
16	Development of advanced antimicrobial and sterilized plasma polypropylene grafted muga (<i>antheraea assama</i>) silk as suture biomaterial. Biopolymers, 2014, 101, 355-365.	1.2	25
17	Plasmonic Photosensitization of Polyaniline Prepared by a Novel Process for High-Performance Flexible Photodetector. ACS Applied Materials & Interfaces, 2015, 7, 2166-2170.	4.0	25
18	Deposition of nanostructured crystalline and corrosion resistant alumina film on bell metal at low temperature by rf magnetron sputtering. Applied Surface Science, 2009, 255, 7403-7407.	3.1	22

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19	Real-time studies of surface roughness development and reticulation mechanism of advanced photoresist materials during plasma processing. <i>Journal of Applied Physics</i> , 2009, 105, 013311.	1.1	21
20	Growth of nanocrystalline TiO ₂ thin films and crystal anisotropy of anatase phase deposited by direct current reactive magnetron sputtering. <i>Materials Chemistry and Physics</i> , 2013, 139, 979-987.	2.0	21
21	Effect of post-deposition annealing on the growth of nanocrystalline TiO ₂ thin films and elastic anisotropy of rutile phase at different temperatures. <i>Journal of Alloys and Compounds</i> , 2013, 577, 261-268.	2.8	21
22	Extended Conjugation in Polyaniline Like Structure Prepared by Plasma Polymerization Suitable for Optoelectronic Applications. <i>Plasma Chemistry and Plasma Processing</i> , 2011, 31, 741-754.	1.1	20
23	A hybrid heterojunction with reverse rectifying characteristics fabricated by magnetron sputtered TiO _x and plasma polymerized aniline structure. <i>Journal Physics D: Applied Physics</i> , 2012, 45, 275401.	1.3	20
24	Studies of radiofrequency plasma deposition of hexamethyldisiloxane films and their thermal stability and corrosion resistance behavior. <i>Vacuum</i> , 2010, 84, 1327-1333.	1.6	19
25	Pulsed PECVD for Low-temperature Growth of Vertically Aligned Carbon Nanotubes. <i>Chemical Vapor Deposition</i> , 2014, 20, 161-169.	1.4	19
26	Observation of instability in presence of E _z -B flow in a direct current cylindrical magnetron discharge plasma. <i>Physics of Plasmas</i> , 2004, 11, 4719-4726.	0.7	17
27	Study on the influence of nitrogen on titanium nitride in a dc post magnetron sputtering plasma system. <i>Journal Physics D: Applied Physics</i> , 2008, 41, 195205.	1.3	17
28	Plasma process for development of a bulk heterojunction optoelectronic device: A highly sensitive UV detector. <i>Applied Surface Science</i> , 2012, 258, 7897-7906.	3.1	17
29	Biomimetic growth and substrate dependent mechanical properties of bone like apatite nucleated on Ti and magnetron sputtered TiO ₂ nanostructure. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 145304.	1.3	17
30	Biomimetic deposition of carbonate apatite and role of carbonate substitution on mechanical properties at nanoscale. <i>Materials Letters</i> , 2016, 185, 387-390.	1.3	17
31	Mechanistic study of ultralow k-compatible carbon dioxide <i>in situ</i> photoresist ashing processes. I. Process performance and influence on ULK material modification. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010, 28, 952-960.	0.6	16
32	Studies of physical and chemical properties of styrene-based plasma polymer films deposited by radiofrequency Ar/styrene glow discharge. <i>Progress in Organic Coatings</i> , 2011, 70, 75-82.	1.9	16
33	Pulsed DC discharge for synthesis of conjugated plasma polymerized aniline thin film. <i>Applied Surface Science</i> , 2012, 259, 691-697.	3.1	15
34	Role of ion energy on growth and optical dispersion of nanocrystalline TiO ₂ films prepared by magnetron sputtering with ion assistance at the substrate. <i>Applied Surface Science</i> , 2012, 258, 5659-5665.	3.1	14
35	Role of Plasma Parameters on the Conjugated Structure Retention in Polyaniline Thin Film. <i>Plasma Chemistry and Plasma Processing</i> , 2012, 32, 817-832.	1.1	14
36	Low loaded platinum (Pt) based binary catalyst electrode for PEMFC by plasma co-sputtered deposition method. <i>Materials Chemistry and Physics</i> , 2019, 236, 121796.	2.0	14

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37	Hot carrier devices using visible and NIR responsive titanium nitride nanostructures with stoichiometry variation. <i>Optical Materials</i> , 2019, 97, 109379.	1.7	14
38	Influence of low energy ion beam on sheath characteristics in plasma. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2002, 305, 419-426.	0.9	13
39	Influence of electron beam injection on plasma parameters and sheath in a dc discharge plasma. <i>Journal of Applied Physics</i> , 2003, 94, 6328-6333.	1.1	13
40	Ion beam interaction with a potential dip formed in front of an electron-absorbing boundary. <i>Plasma Sources Science and Technology</i> , 2006, 15, 59-63.	1.3	13
41	Effect of oxygen on the characteristics of radio frequency planar magnetron sputtering plasma used for aluminum oxide deposition. <i>Journal of Applied Physics</i> , 2007, 101, 083304.	1.1	13
42	Comparative study of structural and optical properties of pulsed and RF plasma polymerized aniline films. <i>Applied Surface Science</i> , 2014, 313, 286-292.	3.1	13
43	Plasmonic visible-NIR photodetector based on hot electrons extracted from nanostructured titanium nitride. <i>Journal of Applied Physics</i> , 2019, 126, 083108.	1.1	13
44	Effect of impinging ion energy on the substrates during deposition of SiO _x films by radiofrequency plasma enhanced chemical vapor deposition process. <i>Thin Solid Films</i> , 2011, 519, 7864-7870.	0.8	12
45	Sheath and potential characteristics in rf magnetron sputtering plasma. <i>Journal of Applied Physics</i> , 2006, 100, 083303.	1.1	11
46	Contradictory ageing behaviour and optical property of iodine doped and H ₂ SO ₄ doped pulsed DC plasma polymerized aniline thin films. <i>Solid State Sciences</i> , 2013, 24, 71-78.	1.5	11
47	Crystalline rubrene <i>via</i> a novel process and realization of a pyro-phototronic device with a rubrene-based film. <i>Journal of Materials Chemistry C</i> , 2020, 8, 6450-6460.	2.7	11
48	Investigation of the E_{\perp} – B_{\parallel} rotation of electrons and related plasma characteristics in a radio frequency magnetron sputtering discharge. <i>Journal Physics D: Applied Physics</i> , 2007, 40, 6865-6872.	1.3	10
49	Interband transition in plasmonic titanium nitride and its contribution towards ZnO based pyro-phototronic application. <i>Materials Chemistry and Physics</i> , 2022, 275, 125290.	2.0	10
50	Role of hydrogen diffusion in temperature-induced transformation of carbon nanostructures deposited on metallic substrates by using a specially designed fused hollow cathode cold atmospheric pressure plasma source. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 155207.	1.3	9
51	Synthesis and characterization of plasma polymerized styrene films by rf discharge. <i>Journal of Physics: Conference Series</i> , 2010, 208, 012104.	0.3	8
52	Effect of E_{\perp} – B_{\parallel} electron drift and plasma discharge in dc magnetron sputtering plasma. <i>Chinese Physics B</i> , 2011, 20, 014701.	0.7	8
53	Comparative study of nanocomposites prepared by pulsed and dc sputtering combined with plasma polymerization suitable for photovoltaic device applications. <i>Materials Chemistry and Physics</i> , 2014, 148, 540-547.	2.0	8
54	Atomic level understanding of site-specific interactions in Polyaniline/TiO ₂ composite. <i>Chemical Physics Letters</i> , 2016, 645, 144-149.	1.2	8

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55	Synergistic Effect of Au Interband Transition on Graphene Oxide/ZnO Heterostructure: Experimental Analysis with FDTD Simulation. ACS Omega, 2022, 7, 7662-7674.	1.6	8
56	Characteristics of presheath in multicomponent plasma with negative ions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 333, 102-109.	0.9	7
57	Effect of Radiofrequency Plasma Assisted Grafting of Polypropylene on the Properties of Muga Silk Yarn. Plasma Chemistry and Plasma Processing, 2012, 32, 1293-1306.	1.1	7
58	Enhanced light sensing performance of a hybrid device developed using as-grown vertically aligned multiwalled carbon nanotubes on TCO substrates. RSC Advances, 2014, 4, 46970-46975.	1.7	7
59	Plasma Based Synthesis of Nanomaterials for Development of Plasmon Enhanced Infrared Responsive Optoelectronic Device. Plasma Chemistry and Plasma Processing, 2019, 39, 277-292.	1.1	7
60	Single-Step Preparation of Graphene Oxide Transparent Electrode by PECVD and its Application in a Fast-Response UV-A-Selective Pyrophototronic Device. Journal of Electronic Materials, 2020, 49, 5467-5477.	1.0	7
61	Self-similarity of electrostatic fluctuations in a linear magnetised plasma system. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 350, 380-385.	0.9	6
62	Investigations of the hydrophobic and scratch resistance behavior of polystyrene films deposited on bell metal using RF-PACVD process. Applied Surface Science, 2011, 257, 4211-4218.	3.1	6
63	Immobilization of trypsin on plasma prepared Ag/PPAni nanocomposite film for efficient digestion of protein. Materials Science and Engineering C, 2014, 43, 237-242.	3.8	6
64	Investigations on the transformation of vertically aligned CNTs to intramolecular junctions by atmospheric pressure PECVD. Materials Today Communications, 2018, 16, 178-185.	0.9	6
65	A hybrid system for plasmonic and surface polarization induced pyro-phototronic harvesting of light. Optical Materials, 2021, 122, 111733.	1.7	6
66	Fabrication of a heterostructure device with Au/PPAni/TiO ₂ /ITO configuration and study of device parameters including current conduction mechanism. Journal Physics D: Applied Physics, 2013, 46, 325301.	1.3	5
67	Sheath characteristics in multi-component plasma with negative ions. Pramana - Journal of Physics, 2004, 62, 1091-1098.	0.9	4
68	The influence of RF power and gas pressure on the surface characteristics of aluminium oxide deposited by RF magnetron sputtering plasma. Journal of Physics: Conference Series, 2010, 208, 012102.	0.3	4
69	Enhancement of proton conductivity of sulfonated polystyrene membrane prepared by plasma polymerization process. Bulletin of Materials Science, 2014, 37, 1613-1624.	0.8	4
70	An all metal nitride nanostructure configuration: Study and exploitation in efficient photo-detection. Journal of Alloys and Compounds, 2021, 879, 160460.	2.8	4
71	Mechanistic study of ultralow k-compatible carbon dioxide <i>in situ</i> photoresist ashing processes. II. Interaction with preceding fluorocarbon plasma ultralow k etching processes. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, 961-967.	0.6	3
72	Pulsed Plasma Assisted Growth of Vertically Aligned Carbon Nanotubes at Low Temperature on Mo Substrate. Plasma Chemistry and Plasma Processing, 2015, 35, 247-257.	1.1	2

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73	Plasmon Thin Film Transistor Using Plasma Polymerized Anilineâ€“Rubreneâ€“Gold Nanocomposite in One-Step Process. Plasma Chemistry and Plasma Processing, 2020, 40, 371-386.	1.1	2
74	Microstructural, optical, and dielectric properties of nanocrystalline TiO ₂ films prepared via ion-assisted magnetron sputtering. International Journal of Materials Research, 2012, 103, 564-570.	0.1	1
75	One-step grown multi-walled carbon nanotubes with Ni filling and decoration. Journal Physics D: Applied Physics, 2015, 48, 225303.	1.3	1
76	Gold Nanoparticle-Crystalline rubrene hybrid nanocomposite via plasma processing and realization of Plasmon-enhanced organic thin film transistor with high responsivity. Applied Surface Science, 2022, 599, 153883.	3.1	1