Bibhuti Bhusan Sahu

List of Publications by Year
in descending order

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57 papers	930 citations	394421 19 h-index	526287 27 g-index
57 all docs	57 docs citations	57 times ranked	713 citing authors

#	Article	IF	Citations
1	Langmuir probe and optical emission spectroscopy studies in magnetron sputtering plasmas for Al-doped ZnO film deposition. Journal of Applied Physics, 2015, 117, .	2.5	49
2	Simultaneous enhancement of carrier mobility and concentration via tailoring of Al-chemical states in Al-ZnO thin films. Applied Physics Letters, 2015, 106, .	3.3	43
3	Advantage of dual-confined plasmas over conventional and facing-target plasmas for improving transparent-conductive properties in Al doped ZnO thin films. Surface and Coatings Technology, 2015, 284, 85-89.	4.8	40
4	Study on the electrical, optical, structural, and morphological properties of highly transparent and conductive AZO thin films prepared near room temperature. Applied Surface Science, 2019, 473, 649-656.	6.1	40
5	A new structure for RF-compensated Langmuir probes with external filters tunable in the absence of plasma. Plasma Sources Science and Technology, 2008, 17, 015003.	3.1	33
6	Study of Plasma Properties for the Lowâ€Temperature Deposition of Highly Conductive Aluminum Doped ZnO Film Using ICP Assisted DC Magnetron Sputtering. Plasma Processes and Polymers, 2016, 13, 134-146.	3.0	33
7	Flexible OLED fabrication with ITO thin film on polymer substrate. Japanese Journal of Applied Physics, 2015, 54, 090301.	1.5	32
8	Effectiveness of plasma diagnostic in ultra high frequency and radio frequency hybrid plasmas for synthesis of silicon nitride film at low temperature. Journal of Applied Physics, 2014, 116, .	2.5	31
9	Shaping thin film growth and microstructure pathways via plasma and deposition energy: a detailed theoretical, computational and experimental analysis. Physical Chemistry Chemical Physics, 2017, 19, 5591-5610.	2.8	30
10	Development and characterization of a multi-electrode cold atmospheric pressure DBD plasma jet aiming plasma application. Journal of Analytical Atomic Spectrometry, 2017, 32, 782-795.	3.0	26
11	Plasma diagnostic approach for high rate nanocrystalline Si synthesis in RF/UHF hybrid plasmas using a PECVD process. Plasma Sources Science and Technology, 2015, 24, 025019.	3.1	25
12	Highly conductive flexible ultra thin ITO nanoclusters prepared by 3-D confined magnetron sputtering at a low temperature. Scripta Materialia, 2018, 149, 98-102.	5.2	25
13	Investigation of absorption mechanisms in helicon discharges in conducting waveguides. Plasma Sources Science and Technology, 2011, 20, 015021.	3.1	23
14	Experimental evidence of warm electron populations in magnetron sputtering plasmas. Journal of Applied Physics, 2015, 117, .	2.5	23
15	The role of plasma chemistry on functional silicon nitride film properties deposited at low-temperature by mixing two frequency powers using PECVD. Physical Chemistry Chemical Physics, 2016, 18, 13033-13044.	2.8	22
16	Integrated approach for low-temperature synthesis of high-quality silicon nitride films in PECVD using RFâ€“UHF hybrid plasmas. Plasma Sources Science and Technology, 2016, 25, 015017.	3.1	22
17	Understanding helicon plasmas. Physics of Plasmas, 2012, 19, .	1.9	21
18	Controlling conductivity of carbon film for L-929 cell biocompatibility using magnetron sputtering plasmas. Journal of Materials Chemistry B, 2015, 3, 3267-3278.	5.8	21

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19	Nitrogen Radical and Plasma Diagnostics in Dual Frequency Hybrid Plasmas to Investigate N₂/SiH₄ PECVD Process. Plasma Processes and Polymers, 2016, 13, 447-458.	3.0	20
20	Effect of plasma parameters on characteristics of silicon nitride film deposited by single and dual frequency plasma enhanced chemical vapor deposition. Physics of Plasmas, 2016, 23, .	1.9	19
21	Helicon wave modes, their damping and absorption in lossy plasma loaded conducting waveguide. Physics of Plasmas, 2007, 14, 113503.	1.9	18
22	Observation of multiple current free helicon double layers. Applied Physics Letters, 2013, 103, .	3.3	18
23	Tailoring of microstructure in hydrogenated nanocrystalline Si thin films by ICP-assisted RF magnetron sputtering. Journal Physics D: Applied Physics, 2015, 48, 475303.	2.8	18
24	Comparison of plasma excitation, ionization, and energy influx in single and dual frequency capacitive discharges. Physics of Plasmas, 2016, 23, .	1.9	18
25	Controlled Growth, Microstructure, and Properties of Functional Si Quantum Dot Films via Plasma Chemistry and Activated Radicals. Journal of Physical Chemistry C, 2017, 121, 10194-10209.	3.1	17
26	Development and utility of a new 3-D magnetron source for high rate deposition of highly conductive ITO thin films near room temperature. Physical Chemistry Chemical Physics, 2018, 20, 4818-4830.	2.8	17
27	Low temperature synthesis of silicon quantum dots with plasma chemistry control in dual frequency non-thermal plasmas. Physical Chemistry Chemical Physics, 2016, 18, 15697-15710.	2.8	16
28	Evidence of current free double layer in high density helicon discharge. Physics of Plasmas, 2013, 20, .	1.9	15
29	Electron heating mode transition induced by mixing radio frequency and ultrahigh frequency dual frequency powers in capacitive discharges. Physics of Plasmas, 2016, 23, .	1.9	15
30	Warm electrons are responsible for helicon plasma production. Plasma Sources Science and Technology, 2014, 23, 065050.	3.1	14
31	Simple realization of efficient barrier performance of a single layer silicon nitride film via plasma chemistry. Physical Chemistry Chemical Physics, 2016, 18, 32198-32209.	2.8	14
32	Effect of inductively coupled plasma and plasma parameters on magnetron sputtered Al-Doped ZnO highly conductive thin films at low-temperature. Journal of Applied Physics, 2018, 123, .	2.5	13
33	Utility of dual frequency hybrid source for plasma and radical generation in plasma enhanced chemical vapor deposition process. Japanese Journal of Applied Physics, 2015, 54, 076201.	1.5	12
34	Study of plasma characteristic and properties of flexible ultra-thin ITO films prepared by large area 3-D confined and planar magnetron sputtering. Vacuum, 2019, 165, 246-253.	3.5	12
35	Experimental investigation of current free double layers in helicon plasmas. Physics of Plasmas, 2014, 21, 023504.	1.9	11
36	Improving the gas barrier and mechanical properties of a-SiO x films synthesized at low temperature by using high energy and hydrogen flow rate control. Journal of the Korean Physical Society, 2015, 66, 1410-1415.	0.7	10

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37	Making porous conductive carbon films with unbalanced magnetron sputtering. Japanese Journal of Applied Physics, 2015, 54, 010304.	1.5	10
38	Effect of the RF power on the characteristic properties of high-performance silicon nitride single-layer permeation barriers. Surface and Coatings Technology, 2019, 364, 63-69.	4.8	10
39	Plasma engineering of silicon quantum dots and their properties through energy deposition and chemistry. Physical Chemistry Chemical Physics, 2016, 18, 25837-25851.	2.8	9
40	Study of the effect of normal load on friction coefficient and wear properties of CNx thin films. AIP Advances, 2020, 10, .	1.3	9
41	Effectiveness of hydrogen dilution for designing amorphous to crystalline Si thin film in inductively coupled plasma assisted magnetron sputtering. Japanese Journal of Applied Physics, 2015, 54, 060303.	1.5	8
42	Growth of Multiorientated Polycrystalline MoS2 Using Plasma-Enhanced Chemical Vapor Deposition for Efficient Hydrogen Evolution Reactions. Nanomaterials, 2020, 10, 1465.	4.1	8
43	Comparison of plasma properties in normal and multiple holes hollow cathode RF PECVD and their utility in a-SiNx:H thin film deposition. Vacuum, 2019, 160, 316-324.	3.5	7
44	Room temperature deposition of very thin and flexible crystalline ITO thin film using 3-D facing-magnetron sputtering plasma source. Vacuum, 2021, 193, 110520.	3.5	7
45	Instabilities and Plasma Flares in Moderate-Current Confined Magnetron Sputtering in Three Dimensions. Physical Review Applied, 2018, 10, .	3.8	6
46	Factors affecting the properties of highly conductive flexible ultrathin ITO films in confined large area magnetron sputtering in three dimensions. AIP Advances, 2018, 8, 105112.	1.3	6
47	Plasma diagnostic approach for the low-temperature deposition of silicon quantum dots using dual frequency PECVD. Journal Physics D: Applied Physics, 2016, 49, 395203.	2.8	5
48	Development and plasma characterization of an 850 MHz surface-wave plasma source. AIP Advances, 2017, 7, 105213.	1.3	5
49	Approach for the optimization of characteristic properties of very high conductive ITO thin films using advanced magnetron plasma process. Materials Research Express, 2018, 5, 066415.	1.6	5
50	Study of optical emission spectroscopy using modified Boltzmann plot in dual-frequency synchronized pulsed capacitively coupled discharges with DC bias at low-pressure in Ar/O₂/C₄F₈ plasma etching process. Physical Chemistry Chemical Physics, 2022, 24, 13883-13896.	2.8	5
51	Direct synthesis of magnetron sputtered nanostructured Cu films with desired properties via plasma chemistry for their efficient antibacterial application. Plasma Processes and Polymers, 2018, 15, 1800009.	3.0	4
52	Plasma diagnostic in LiMn2O4 thin film process for Li-ion battery application. Surface and Coatings Technology, 2020, 397, 126066.	4.8	3
53	Effect of helium incorporation on plasma parameters and characteristic properties of hydrogen free carbon films deposited using DC magnetron sputtering. Journal of Applied Physics, 2020, 127, .	2.5	3
54	Effectiveness of plasma and radical control for the low temperature synthesis and properties of a-SiNx:H films using RF-near microwave PECVD. Physics of Plasmas, 2018, 25, 023511.	1.9	2

#	Article	IF	Citations
55	Role of plasma parameters on the characteristics properties of flexible transparent ITO films deposited by 3D facing and planar facing magnetron sources. AIP Advances, 2020, 10, 105231.	1.3	2
56	ECCD performance analysis of future KSTAR ECH systems for extended applications. Journal of the Korean Physical Society, 2014, 65, 1282-1289.	0.7	0
57	Issue of particle formation in the high rate film deposition by plasma assisted deposition processes. , 2015, , .		0