Neeraj Dwivedi

List of Publications by Year
in descending order

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55 papers	2,411 citations	218381 26 h-index	205818 48 g-index
55 all docs	55 docs citations	55 times ranked	3262 citing authors

#	Article	IF	Citations
1	Methods and strategies for the synthesis of diverse nanoparticles and their applications: a comprehensive overview. RSC Advances, 2015, 5, 105003-105037.	1.7	519
2	Bio-inspired in situ crosslinking and mineralization of electrospun collagen scaffolds for bone tissue engineering. Biomaterials, 2016, 104, 323-338.	5.7	166
3	Understanding the Role of Nitrogen in Plasma-Assisted Surface Modification of Magnetic Recording Media with and without Ultrathin Carbon Overcoats. Scientific Reports, 2015, 5, 7772.	1.6	131
4	Correlation of sp3 and sp2 fraction of carbon with electrical, optical and nano-mechanical properties of argon-diluted diamond-like carbon films. Applied Surface Science, 2011, 257, 6804-6810.	3.1	113
5	Potential of graphene-based materials to combat COVID-19: properties, perspectives, and prospects. Materials Today Chemistry, 2020, 18, 100385.	1.7	86
6	Simulation approach for optimization of device structure and thickness of HIT solar cells to achieve â^¼27% efficiency. Solar Energy, 2013, 88, 31-41.	2.9	81
7	Nanostructured Titanium/Diamond-Like Carbon Multilayer Films: Deposition, Characterization, and Applications. ACS Applied Materials & Interfaces, 2011, 3, 4268-4278.	4.0	73
8	Multifunctional Antimicrobial Nanofiber Dressings Containing Îµ-Polylysine for the Eradication of Bacterial Bioburden and Promotion of Wound Healing in Critically Colonized Wounds. ACS Applied Materials & Interfaces, 2020, 12, 15989-16005.	4.0	69
9	Multifunctional Polyphenols- and Catecholamines-Based Self-Defensive Films for Health Care Applications. ACS Applied Materials & Interfaces, 2016, 8, 1220-1232.	4.0	68
10	Investigation of properties of Cu containing DLC films produced by PECVD process. Journal of Physics and Chemistry of Solids, 2012, 73, 308-316.	1.9	66
11	Emergent 2D materials for combating infectious diseases: the potential of MXenes and MXeneâ€“graphene composites to fight against pandemics. Materials Advances, 2021, 2, 2892-2905.	2.6	65
12	Studies of nanostructured copper/hydrogenated amorphous carbon multilayer films. Journal of Alloys and Compounds, 2011, 509, 1285-1293.	2.8	51
13	Nanoindentation measurements on modified diamond-like carbon thin films. Applied Surface Science, 2011, 257, 9953-9959.	3.1	49
14	Superhard behaviour, low residual stress, and unique structure in diamond-like carbon films by simple bilayer approach. Journal of Applied Physics, 2012, 112, .	1.1	46
15	Structural and Electronic Characterization of Nanocrystalline Diamondlike Carbon Thin Films. ACS Applied Materials & Interfaces, 2012, 4, 5309-5316.	4.0	45
16	Probing the Role of an Atomically Thin SiNx Interlayer on the Structure of Ultrathin Carbon Films. Scientific Reports, 2014, 4, 5021.	1.6	45
17	Interface Engineering and Controlling the Friction and Wear of Ultrathin Carbon Films: High sp³ Versus High sp² Carbons. Advanced Functional Materials, 2016, 26, 1526-1542.	7.8	44
18	Influence of Silver Incorporation on the Structural and Electrical Properties of Diamond-Like Carbon Thin Films. ACS Applied Materials & Interfaces, 2013, 5, 2725-2732.	4.0	43

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19	Band gap optimization of pâ€“iâ€“n layers of a-Si:H by computer aided simulation for development of efficient solar cell. Solar Energy, 2012, 86, 1470-1476.	2.9	40
20	Studies of pure and nitrogen-incorporated hydrogenated amorphous carbon thin films and their possible application for amorphous silicon solar cells. Journal of Applied Physics, 2012, 111, .	1.1	36
21	Ultrathin Carbon with Interspersed Graphene/Fullerene-like Nanostructures: A Durable Protective Overcoat for High Density Magnetic Storage. Scientific Reports, 2015, 5, 11607.	1.6	33
22	Strange hardness characteristic of hydrogenated diamond-like carbon thin film by plasma enhanced chemical vapor deposition process. Applied Physics Letters, 2013, 102, .	1.5	32
23	Photoconductivity and characterization of nitrogen incorporated hydrogenated amorphous carbon thin films. Journal of Applied Physics, 2012, 112, .	1.1	31
24	Latent Oxidative Polymerization of Catecholamines as Potential Cross-linkers for Biocompatible and Multifunctional Biopolymer Scaffolds. ACS Applied Materials & Interfaces, 2016, 8, 32266-32281.	4.0	29
25	The rise of carbon materials for field emission. Journal of Materials Chemistry C, 2021, 9, 2620-2659.	2.7	28
26	Oxygen modified diamond-like carbon as window layer for amorphous silicon solar cells. Solar Energy, 2012, 86, 220-230.	2.9	27
27	Role of Metallic Nïî£¿Cr Dots on the Adhesion, Electrical, Optical and Mechanical Properties of Diamondâ€like Carbon Thin Films. Plasma Processes and Polymers, 2011, 8, 100-107.	1.6	26
28	Optimization of band gap, thickness and carrier concentrations for the development of efficient microcrystalline silicon solar cells: A theoretical approach. Solar Energy, 2013, 97, 176-185.	2.9	25
29	Nanoindentation testing on copper/diamond-like carbon bi-layer films. Current Applied Physics, 2012, 12, 247-253.	1.1	24
30	Enhanced Tribological, Corrosion, and Microstructural Properties of an Ultrathin (<2 nm) Silicon Nitride/Carbon Bilayer Overcoat for High Density Magnetic Storage. ACS Applied Materials & Interfaces, 2014, 6, 9376-9385.	4.0	24
31	Field emission, morphological and mechanical properties of variety of diamond-like carbon thin films. Applied Physics A: Materials Science and Processing, 2011, 105, 417-425.	1.1	22
32	Boosting contact sliding and wear protection via atomic intermixing and tailoring of nanoscale interfaces. Science Advances, 2019, 5, eaau7886.	4.7	22
33	Wound healing properties of magnesium mineralized antimicrobial nanofibre dressings containing chondroitin sulphate â€“ a comparison between blend and coreâ€“shell nanofibres. Biomaterials Science, 2020, 8, 3454-3471.	2.6	22
34	Surface characteristics and antimicrobial properties of modified catheter surfaces by polypyrogallol and metal ions. Materials Science and Engineering C, 2018, 90, 673-684.	3.8	21
35	Atomic Scale Interface Manipulation, Structural Engineering, and Their Impact on Ultrathin Carbon Films in Controlling Wear, Friction, and Corrosion. ACS Applied Materials & Interfaces, 2016, 8, 17606-17621.	4.0	20
36	Mussel-Inspired Durable Antimicrobial Contact Lenses: The Role of Covalent and Noncovalent Attachment of Antimicrobials. ACS Biomaterials Science and Engineering, 2020, 6, 3162-3173.	2.6	20

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37	Direct observation of thickness and foreign interlayer driven abrupt structural transformation in ultrathin carbon and hybrid silicon nitride/carbon films. Carbon, 2017, 115, 701-719.	5.4	18
38	Slippery and Wear-Resistant Surfaces Enabled by Interface Engineered Graphene. Nano Letters, 2020, 20, 905-917.	4.5	18
39	Role of base pressure on the structural and nano-mechanical properties of metal/diamond-like carbon bilayers. Applied Surface Science, 2013, 274, 282-287.	3.1	17
40	Durable ultrathin silicon nitride/carbon bilayer overcoats for magnetic heads: The role of enhanced interfacial bonding. Journal of Applied Physics, 2015, 117, .	1.1	15
41	Mussel-inspired chemistry to design biodegradable food packaging films with antimicrobial properties. Chemical Engineering Research and Design, 2022, 162, 17-29.	2.7	15
42	Combating Microbial Contamination with Robust Polymeric Nanofibers: Elemental Effect on the Mussel-Inspired Cross-Linking of Electrospun Gelatin. ACS Applied Bio Materials, 2019, 2, 807-823.	2.3	13
43	Simulating the Role of TCO Materials, their Surface Texturing and Band Gap of Amorphous Silicon Layers on the Efficiency of Amorphous Silicon Thin Film Solar Cells. Silicon, 2017, 9, 59-68.	1.8	12
44	Improved surface properties of Î²-SiAlON by diamond-like carbon coatings. Diamond and Related Materials, 2013, 36, 44-50.	1.8	11
45	Structurally Driven Enhancement of Resonant Tunneling and Nanomechanical Properties in Diamond-like Carbon Superlattices. ACS Applied Materials & Interfaces, 2015, 7, 20726-20735.	4.0	10
46	Room-Temperature Patterning of Nanoscale MoS₂ under an Electron Beam. ACS Applied Materials & Interfaces, 2020, 12, 16772-16781.	4.0	10
47	Cost Effective Deposition System for Nitrogen Incorporated Diamondâ€like Carbon Coatings. Plasma Processes and Polymers, 2012, 9, 890-903.	1.6	6
48	Angstrom-Scale Transparent Overcoats: Interfacial Nitrogen-Driven Atomic Intermingling Promotes Lubricity and Surface Protection of Ultrathin Carbon. Nano Letters, 2021, 21, 8960-8969.	4.5	5
49	Electrical transport in metalâ€“carbon hybrid multijunction devices. Diamond and Related Materials, 2014, 48, 82-87.	1.8	4
50	Competing and decisive roles of 1D/2D/3D sp2-carbons in controlling the shape switching, contact sliding, and functional properties of polymers. Materials Today Chemistry, 2022, 25, 100960.	1.7	4
51	Solution Processable High Performance Multiwall Carbon Nanotubeâ€“Si Heterojunctions. Advanced Electronic Materials, 2020, 6, 2000617.	2.6	3
52	Anomalous characteristics of nanostructured hydrogenated carbon thin films. Materials Chemistry and Physics, 2021, 262, 124316.	2.0	3
53	Unusual High Hardness and Load-Dependent Mechanical Characteristics of Hydrogenated Carbonâ€“Nitrogen Hybrid Films. ACS Applied Materials & Interfaces, 2022, 14, 20220-20229.	4.0	3
54	Anomalous electron transport in metal/carbon multijunction devices by engineering of the carbon thickness and selecting metal layer. Journal of Applied Physics, 2017, 121, .	1.1	2

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55	Fast Tracking of Adulterants and Bacterial Contamination in Food via Raman and Infrared Spectroscopies: Paving the Way for a Healthy and Safe World. Sensors & Diagnostics, 0, , .	1.9	0