Raju Khan

List of Publications by Year
in descending order

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		87843	98753
101	4,859	38	67
papers	citations	h-index	g-index

101	101	101	6157
all docs	docs citations	times ranked	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	Iron oxide nanoparticlesâ€“chitosan composite based glucose biosensor. Biosensors and Bioelectronics, 2008, 24, 676-683.	5.3	422
3	Zinc oxide nanoparticles-chitosan composite film for cholesterol biosensor. Analytica Chimica Acta, 2008, 616, 207-213.	2.6	250
4	Nanostructured MoS₂-Based Advanced Biosensors: A Review. ACS Applied Nano Materials, 2018, 1, 2-25.	2.4	238
5	Bio-inspired in situ crosslinking and mineralization of electrospun collagen scaffolds for bone tissue engineering. Biomaterials, 2016, 104, 323-338.	5.7	166
6	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
7	Point-of-Care Biosensor-Based Diagnosis of COVID-19 Holds Promise to Combat Current and Future Pandemics. ACS Applied Bio Materials, 2020, 3, 7326-7343.	2.3	123
8	SERS Based Lateral Flow Immunoassay for Point-of-Care Detection of SARS-CoV-2 in Clinical Samples. ACS Applied Bio Materials, 2021, 4, 2974-2995.	2.3	119
9	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
10	Chitosan/polyaniline hybrid conducting biopolymer base impedimetric immunosensor to detect Ochratoxin-A. Biosensors and Bioelectronics, 2009, 24, 1700-1705.	5.3	107
11	Grapheneâ€“polyaniline nanocomposite based biosensor for detection of antimalarial drug artesunate in pharmaceutical formulation and biological fluids. Talanta, 2013, 111, 47-53.	2.9	90
12	Role of size of drug delivery carriers for pulmonary and intravenous administration with emphasis on cancer therapeutics and lung-targeted drug delivery. RSC Advances, 2014, 4, 32673-32689.	1.7	85
13	Nanocrystalline bioactive TiO2â€“chitosan impedimetric immunosensor for ochratoxin-A. Electrochemistry Communications, 2008, 10, 492-495.	2.3	77
14	Nanostructured Titanium/Diamond-Like Carbon Multilayer Films: Deposition, Characterization, and Applications. ACS Applied Materials & Interfaces, 2011, 3, 4268-4278.	4.0	73
15	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
16	Multifunctional Polyphenols- and Catecholamines-Based Self-Defensive Films for Health Care Applications. ACS Applied Materials & Interfaces, 2016, 8, 1220-1232.	4.0	68
17	Electrochemical detection of monosodium glutamate in foodstuffs based on Au@MoS2/chitosan modified glassy carbon electrode. Food Chemistry, 2019, 276, 350-357.	4.2	68
18	Biosensor-based diagnostic approaches for various cellular biomarkers of breast cancer: A comprehensive review. Analytical Biochemistry, 2020, 610, 113996.	1.1	68

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19	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
20	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
21	Electrochemical studies of novel chitosan/TiO2 bioactive electrode for biosensing application. Electrochemistry Communications, 2008, 10, 263-267.	2.3	58
22	Rapid diagnosis of SARS-CoV-2 using potential point-of-care electrochemical immunosensor: Toward the future prospects. International Reviews of Immunology, 2021, 40, 126-142.	1.5	57
23	High-performance antiviral nano-systems as a shield to inhibit viral infections: SARS-CoV-2 as a model case study. Journal of Materials Chemistry B, 2021, 9, 4620-4642.	2.9	56
24	Electrochemical immunosensor based on poly (3,4-ethylenedioxythiophene) modified with gold nanoparticle to detect aflatoxin B1. Materials Science and Engineering C, 2017, 76, 802-809.	3.8	53
25	Next-Generation Intelligent MXene-Based Electrochemical Aptasensors for Point-of-Care Cancer Diagnostics. Nano-Micro Letters, 2022, 14, 100.	14.4	53
26	Studies of nanostructured copper/hydrogenated amorphous carbon multilayer films. Journal of Alloys and Compounds, 2011, 509, 1285-1293.	2.8	51
27	Graphene oxide layer decorated gold nanoparticles based immunosensor for the detection of prostate cancer risk factor. Analytical Biochemistry, 2017, 536, 51-58.	1.1	47
28	Perspectives on 2D-borophene flatland for smart bio-sensing. Materials Letters, 2022, 308, 131089.	1.3	47
29	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
30	Structural and Electronic Characterization of Nanocrystalline Diamondlike Carbon Thin Films. ACS Applied Materials & Interfaces, 2012, 4, 5309-5316.	4.0	45
31	Probing the Role of an Atomically Thin SiNx Interlayer on the Structure of Ultrathin Carbon Films. Scientific Reports, 2014, 4, 5021.	1.6	45
32	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
33	Fluorescence immunosensor for cardiac troponin T based on FÃ¶rster resonance energy transfer (FRET) between carbon dot and MoS₂ nano-couple. Physical Chemistry Chemical Physics, 2018, 20, 16501-16509.	1.3	44
34	Highly Sensitive Electrochemical Immunosensor Platforms for Dual Detection of SARS-CoV-2 Antigen and Antibody based on Gold Nanoparticle Functionalized Graphene Oxide Nanocomposites. ACS Applied Bio Materials, 2022, 5, 2421-2430.	2.3	44
35	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
36	Synthesis of electrically active biopolymerâ€“SiO2 nanocomposite aerogel. Materials Letters, 2007, 61, 4587-4590.	1.3	42

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37	NIR upconversion characteristics of carbon dots for selective detection of glutathione. New Journal of Chemistry, 2018, 42, 6399-6407.	1.4	42
38	High throughput molecularly imprinted polymers based electrochemical nanosensors for point-of-care diagnostics of COVID-19. Materials Letters, 2022, 306, 130898.	1.3	41
39	Antibacterial and antiviral high-performance nanosystems to mitigate new SARS-CoV-2 variants of concern. Current Opinion in Biomedical Engineering, 2022, 21, 100363.	1.8	41
40	Detection of anticancer drug tamoxifen using biosensor based on polyaniline probe modified with horseradish peroxidase. Materials Science and Engineering C, 2013, 33, 583-587.	3.8	39
41	Impedimetric immunosensor for detection of cardiovascular disorder risk biomarker. Materials Science and Engineering C, 2016, 68, 52-58.	3.8	39
42	Au/NiFe₂O₄ nanoparticle-decorated graphene oxide nanosheets for electrochemical immunosensing of amyloid beta peptide. Nanoscale Advances, 2020, 2, 239-248.	2.2	39
43	Natural polyhydroxyalkanoateâ€“gold nanocomposite based biosensor for detection of antimalarial drug artemisinin. Materials Science and Engineering C, 2014, 37, 314-320.	3.8	38
44	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
45	An Electrochemical Immunosensor Based on Gold-Graphene Oxide Nanocomposites with Ionic Liquid for Detecting the Breast Cancer CD44 Biomarker. ACS Applied Materials & Interfaces, 2022, 14, 20802-20812.	4.0	34
46	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
47	Nanomolar Detection of Glutamate at a Biosensor Based on Screenâ€Printed Electrodes Modified with Carbon Nanotubes. Electroanalysis, 2011, 23, 2357-2363.	1.5	32
48	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
49	From Nanosystems to a Biosensing Prototype for an Efficient Diagnostic: A Special Issue in Honor of Professor Bansi D. Malhotra. Biosensors, 2021, 11, 359.	2.3	32
50	Photoconductivity and characterization of nitrogen incorporated hydrogenated amorphous carbon thin films. Journal of Applied Physics, 2012, 112, .	1.1	31
51	Borophene as an emerging 2D flatland for biomedical applications: current challenges and future prospects. Journal of Materials Chemistry B, 2022, 10, 1146-1175.	2.9	31
52	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
53	The rise of carbon materials for field emission. Journal of Materials Chemistry C, 2021, 9, 2620-2659.	2.7	28
54	Influence of bonding environment on nano-mechanical properties of nitrogen containing hydrogenated amorphous carbon thin films. Materials Chemistry and Physics, 2011, 130, 775-785.	2.0	26

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55	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
56	Facile synthesis of 2-dimensional transparent graphene flakes for nucleic acid detection. Sensors and Actuators B: Chemical, 2015, 210, 281-289.	4.0	25
57	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
58	Evidence for Chemicals Intermingling at Silicon/Titanium Oxide (TiO_x) Interface and Existence of Multiple Bonding States in Monolithic TiO_x. Advanced Functional Materials, 2018, 28, 1707018.	7.8	23
59	Fluorescence biosensor based on gold-carbon dot probe for efficient detection of cholesterol. Synthetic Metals, 2018, 244, 92-98.	2.1	23
60	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
61	Investigation of radio frequency plasma for the growth of diamond like carbon films. Physics of Plasmas, 2012, 19, 033515.	0.7	22
62	Boosting contact sliding and wear protection via atomic intermixing and tailoring of nanoscale interfaces. Science Advances, 2019, 5, eaau7886.	4.7	22
63	Influence of consumed power on structural and nano-mechanical properties of nano-structured diamond-like carbon thin films. Applied Surface Science, 2014, 300, 141-148.	3.1	21
64	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
65	3D printed human organoids: High throughput system for drug screening and testing in current COVIDâ€19 pandemic. Biotechnology and Bioengineering, 2022, 119, 2669-2688.	1.7	21
66	Role of ex-situ oxygen plasma treatments on the mechanical and optical properties of diamond-like carbon thin films. Materials Chemistry and Physics, 2012, 134, 7-12.	2.0	20
67	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
68	Antimicrobial quaternary ammonium organosilane cross-linked nanofibrous collagen scaffolds for tissue engineering. International Journal of Nanomedicine, 2018, Volume 13, 4473-4492.	3.3	20
69	Multifunctional carbon nanomaterials decorated molecularly imprinted hybrid polymers for efficient electrochemical antibiotics sensing. Journal of Environmental Chemical Engineering, 2022, 10, 107703.	3.3	20
70	Mycotoxin detection on antibody-immobilized conducting polymer-supported electrochemically polymerized acacia gum. Analytical Biochemistry, 2011, 410, 185-190.	1.1	19
71	Probing the Role of Carbon Microstructure on the Thermal Stability and Performance of Ultrathin (<2 nm) Overcoats on L1₀ FePt Media for Heat-Assisted Magnetic Recording. ACS Applied Materials & Interfaces, 2015, 7, 158-165.	4.0	19
72	Slippery and Wear-Resistant Surfaces Enabled by Interface Engineered Graphene. Nano Letters, 2020, 20, 905-917.	4.5	18

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73	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
74	Enhanced characteristics of pulsed DC sputtered ultrathin (<2nm) amorphous carbon overcoats on hard disk magnetic media. Diamond and Related Materials, 2015, 51, 14-23.	1.8	15
75	Ratiometric fluorescence response of a dual light emitting reduced carbon dot/graphene quantum dot nanohybrid towards As(<scp>iii</scp>). Journal of Materials Chemistry C, 2019, 7, 10309-10317.	2.7	15
76	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
77	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
78	Functional Ionic Liquids Decorated Carbon Hybrid Nanomaterials for the Electrochemical Biosensors. Biosensors, 2021, 11, 414.	2.3	12
79	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
80	Functional Nanomaterials for Electronics, Optoelectronics, and Bioelectronics. Journal of Nanomaterials, 2015, 2015, 1-2.	1.5	8
81	Biomarkers associated with different types of cancer as a potential candidate for early diagnosis of oncological disorders. , 2022, , 47-57.		8
82	A Highly Sensitive Immunosensor Based on In Situ Reduced Gold-Chitosan Nanocomposite for Detection of Monosodium L-glutamate. Journal of Biosystems Engineering, 2022, 47, 28-38.	1.2	8
83	Cytotoxicity and DNA fragmentation-mediated apoptosis response of hexagonal ZnO nanorods against human prostate cancer cells. Applied Surface Science Advances, 2022, 9, 100237.	2.9	8
84	Cost Effective Deposition System for Nitrogen Incorporated Diamondâ€like Carbon Coatings. Plasma Processes and Polymers, 2012, 9, 890-903.	1.6	6
85	Supported TritonX-100 Polyaniline Nano-Porous Electrically Active Film onto Indium-Tin-Oxide Probe for Sensors Application. Advances in Chemical Engineering and Science, 2011, 01, 140-146.	0.2	5
86	Electrical transport in metalâ€“carbon hybrid multijunction devices. Diamond and Related Materials, 2014, 48, 82-87.	1.8	4
87	Natural products as a therapy to combat against SARS-CoV-2 virus infection. , 2022, , 115-145.		3
88	Advanced high-throughput biosensor-based diagnostic approaches for detection of severe acute respiratory syndrome-coronavirus-2. , 2022, , 147-169.		3
89	Structural and nano-mechanical properties of nanostructured diamond-like carbon thin films. Metals and Materials International, 2013, 19, 405-410.	1.8	2
90	Chemistry of two-dimensional nanomaterials. , 2020, , 1-33.		2

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91	Graphene-based nanostructures for biomedical applications. , 2020, , 101-135.		2
92	Physical and chemical properties of carbon dots. , 2022, , 117-133.		2
93	Effect of metallic interfacial layers on the properties of diamond-like carbon thin films. Metals and Materials International, 2012, 18, 231-236.	1.8	1
94	Biosensor platforms for detection of cardiovascular disease risk biomarkers. , 2019, , 397-431.		1
95	Currently available biosensor-based approaches for severe acute respiratory syndrome-coronavirus 2 detection. , 2022, , 373-390.		1
96	Immunoinformatics and reverse vaccinomic approaches for effective design. , 2022, , 357-378.		1
97	Postharvest applications of carbon dots in agriculture: food safety. , 2022, , 241-261.		1
98	Growth and Composition of Atomic Layer Deposited Titanium Oxide Films for c-Si Solar Cell Applications. , 2018, , .		0
99	Approaches for fabrication of point-of-care biosensors for viral infection. , 2022, , 353-371.		0
100	Miniaturized analytical system for point-of-care coronavirus infection diagnostics. , 2022, , 305-340.		0
101	Carbon dotsâ€”an overview. , 2022, , 1-19.		0