

# Shyam R Polaki

## List of Publications by Year in descending order

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56  
papers

989  
citations

430874

18  
h-index

477307

29  
g-index

56  
all docs

56  
docs citations

56  
times ranked

1200  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolution and defect analysis of vertical graphene nanosheets. Journal of Raman Spectroscopy, 2014, 45, 642-649.	2.5	109
2	Influence of substrate on nucleation and growth of vertical graphene nanosheets. Applied Surface Science, 2015, 349, 576-581.	6.1	67
3	Plasma-tuneable oxygen functionalization of vertical graphenes enhance electrochemical capacitor performance. Energy Storage Materials, 2018, 14, 297-305.	18.0	63
4	Process-specific mechanisms of vertically oriented graphene growth in plasmas. Beilstein Journal of Nanotechnology, 2017, 8, 1658-1670.	2.8	52
5	Enhanced supercapacitance of activated vertical graphene nanosheets in hybrid electrolyte. Journal of Applied Physics, 2017, 122, .	2.5	42
6	Scalable transfer of vertical graphene nanosheets for flexible supercapacitor applications. Nanotechnology, 2017, 28, 415702.	2.6	39
7	Designing metal oxide-vertical graphene nanosheets structures for 2.6 V aqueous asymmetric electrochemical capacitor. Journal of Industrial and Engineering Chemistry, 2019, 72, 107-116.	5.8	37
8	Aging effects on vertical graphene nanosheets and their thermal stability. Indian Journal of Physics, 2018, 92, 337-342.	1.8	35
9	Temporal-stability of plasma functionalized vertical graphene electrodes for charge storage. Journal of Power Sources, 2018, 401, 37-48.	7.8	34
10	Interpretation of friction and wear in DLC film: role of surface chemistry and test environment. Journal Physics D: Applied Physics, 2016, 49, 445302.	2.8	26
11	Tribological behavior of hydrogenated DLC film: Chemical and physical transformations at nano-scale. Wear, 2015, 338-339, 105-113.	3.1	25
12	Tribological properties of chemically modified diamond like carbon films in hydrogen plasma. Tribology International, 2015, 81, 283-290.	5.9	24
13	Electrochemical capacitor performance of TiO <sub>2</sub> decorated vertical graphene nanosheets electrode. Journal Physics D: Applied Physics, 2019, 52, 375501.	2.8	24
14	Flipping growth orientation of nanographitic structures by plasma enhanced chemical vapor deposition. RSC Advances, 2015, 5, 91922-91931.	3.6	22
15	Plasma-electric field controlled growth of oriented graphene for energy storage applications. Journal Physics D: Applied Physics, 2018, 51, 145303.	2.8	22
16	Engineering high-defect densities across vertically-aligned graphene nanosheets to induce photocatalytic reactivity. Carbon, 2020, 168, 32-41.	10.3	22
17	Study of ZrO <sub>2</sub> thin films deposited at glancing angle by radio frequency magnetron sputtering under varying substrate rotation. Thin Solid Films, 2018, 645, 290-299.	1.8	20
18	Insights into the electrochemical capacitor performance of transition metal-“vertical graphene nanosheet hybrid electrodes. Physical Chemistry Chemical Physics, 2019, 21, 25196-25205.	2.8	20

#	ARTICLE	IF	CITATIONS
19	Synergetic Effect of NiO <sub>x</sub> Decoration and Oxygen Plasma Treatment on Electrochemical Capacitor Performance of Vertical Graphene Nanosheets. ACS Applied Energy Materials, 2021, 4, 791-800.	5.1	19
20	High performance asymmetric supercapacitors based on Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> MXene and electrodeposited spinel NiCo <sub>2</sub> S <sub>4</sub> nanostructures. RSC Advances, 2022, 12, 10788-10799.	3.6	19
21	Excitation dependent Raman studies of self-seeded grown InN nanoparticles with different carrier concentration. Physical Chemistry Chemical Physics, 2016, 18, 18584-18589.	2.8	17
22	Engineering the edge-terminations and defect-density to enhance the electrochemical capacitance performance of vertical graphene nanosheets. Applied Surface Science, 2021, 545, 149045.	6.1	17
23	Surface area of nanoporous gold: Effect on temperature. Electrochimica Acta, 2015, 182, 565-572.	5.2	15
24	Nanoparticle-enhanced multifunctional nanocarbonsâ€”recent advances on electrochemical energy storage applications. Journal Physics D: Applied Physics, 2022, 55, 413001.	2.8	15
25	Tribological properties of N <sup>+</sup> ion implanted ultrananocrystalline diamond films. Tribology International, 2013, 57, 124-136.	5.9	14
26	Optical Properties of Monodispersed AlGa <sub>N</sub> Nanowires in the Single-Prong Growth Mechanism. Crystal Growth and Design, 2015, 15, 1311-1318.	3.0	14
27	Growth of InN quantum dots to nanorods: a competition between nucleation and growth rates. CrystEngComm, 2015, 17, 3139-3147.	2.6	14
28	Evaluation of the mechanical and corrosion protection performance of electrodeposited hydroxyapatite on the high energy electron beam treated titanium alloy. Journal of Alloys and Compounds, 2014, 616, 498-504.	5.5	13
29	Oblique angle deposition of HfO <sub>2</sub> thin films: quantitative assessment of indentation modulus and micro structural properties. Materials Research Express, 2015, 2, 035010.	1.6	13
30	Electrophoretically deposited graphene oxideâ€”polymer bilayer coating on Cu-Ni alloy with enhanced corrosion resistance in simulated chloride environment. Journal of Coatings Technology Research, 2019, 16, 1317-1335.	2.5	13
31	Effect of N <sup>+</sup> ion implantation on micro/nanotribological properties of nanocrystalline diamond films. Tribology International, 2013, 57, 184-194.	5.9	10
32	On the evolution of residual stress at different substrate temperatures in sputter-deposited polycrystalline Mo thin films by x-ray diffraction. Materials Research Express, 2014, 1, 036401.	1.6	10
33	Influence of nitrogen on the growth of vertical graphene nanosheets under plasma. Journal of Materials Science, 2018, 53, 7316-7325.	3.7	10
34	Molybdenum sulfo-selenides grown on surface engineered vertically aligned graphitic petal arrays for solid-state supercapacitors. Journal of Energy Storage, 2022, 52, 105007.	8.1	10
35	On the scaling behavior of hardness with ligament diameter of nanoporous-Au: Constrained motion of dislocations along the ligaments. Applied Physics Letters, 2014, 104, .	3.3	9
36	The role of substrate bias and nitrogen doping on the structural evolution and local elastic modulus of diamond-like carbon films. Journal Physics D: Applied Physics, 2017, 50, 175601.	2.8	9

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37	Effect of Annealing on the Structural Properties of Vertical Graphene Nanosheets. <i>Advanced Science, Engineering and Medicine</i> , 2016, 8, 146-149.	0.3	9
38	Plasmonic effect of diffused Ag nanoparticles in EB evaporated Ag/TiO <sub>2</sub> bilayer thin films and role of oxygen pressure. <i>Journal of Alloys and Compounds</i> , 2020, 849, 156553.	5.5	8
39	Raoult's Formalism in Understanding Low-Temperature Growth of GaN Nanowires Using Binary Precursor. <i>Journal of Physical Chemistry C</i> , 2013, 117, 21930-21935.	3.1	6
40	Microwave plasma induced surface modification of diamond-like carbon films. <i>Surface Topography: Metrology and Properties</i> , 2017, 5, 045005.	1.6	6
41	Ultrahigh sensitive and ultrafast relative humidity sensing using surface enhanced microcantilevers. <i>Smart Materials and Structures</i> , 2020, 29, 095006.	3.5	6
42	Determination of surface area of nanoporous metals: Insights from double layer charging. <i>AIP Conference Proceedings</i> , 2015, , .	0.4	5
43	A Fast and Facile Fabrication of PTFE Based Superhydrophobic and Ultra Wideband Angle Insensitive Anti-Reflection Coatings. <i>Physica Status Solidi - Rapid Research Letters</i> , 2018, 12, 1800041.	2.4	5
44	Evolution of Structural and Mechanical Properties of TiN Films on SS 304 LN. <i>International Journal of Applied Ceramic Technology</i> , 2013, 10, 45-50.	2.1	4
45	Experimental investigation on sodium compatibility of magnesia during corium relocation in SFR for core catcher application. <i>Annals of Nuclear Energy</i> , 2022, 176, 109263.	1.8	4
46	Optical, Photocatalytic and Wetting Behavior of GLAD N <sub>2</sub> TiO <sub>2</sub> Films. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019, 216, 1900021.	1.8	3
47	Microstructure and friction behaviour in nanocrystalline diamond films. <i>Philosophical Magazine</i> , 2015, 95, 886-905.	1.6	2
48	Aluminum induced crystallization of amorphous Ge thin films on insulating substrate. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	2
49	Emerging Vertical Nanostructures for High-Performance Supercapacitor Applications. <i>Environmental Chemistry for A Sustainable World</i> , 2019, , 163-187.	0.5	2
50	Failure of Printed Circuit Boards during Storage and Service: Leaked Capacitors and White Residue. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 6402-6411.	2.5	2
51	Formation of nanocrystalline SiGe in Polycrystalline-Ge/Si thin film without any metal induced crystallization. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	1
52	A facile route for room temperature synthesis of alumina nanostructures. , 2011, , .		0
53	Polymer supported porous Pd nanocatalyst. , 2011, , .		0
54	An easy route to make superhydrophobic surface. , 2012, , .		0

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55	Self-catalyzed growth of novel AlGaIn hexagonal microrods. AIP Conference Proceedings, 2015, , .	0.4	0
56	A Fast and Facile Fabrication of PTFE Based Superhydrophobic and Ultra Wideband Angle Insensitive Anti-Reflection Coatings (Phys. Status Solidi RRL 6/2018). Physica Status Solidi - Rapid Research Letters, 2018, 12, 1870320.	2.4	0