Anirudha V Sumant

List of Publications by Year
in descending order

39 papers	6,009 citations	218592 26 h-index	302012 39 g-index
39 all docs	39 docs citations	39 times ranked	6069 citing authors

#	Article	IF	Citations
1	Photogating-driven enhanced responsivity in a few-layered ReSe₂ phototransistor. Journal of Materials Chemistry C, 2021, 9, 12168-12176.	2.7	7
2	Cryogenic operation of planar ultrananocrystalline diamond field emission source in SRF injector. Applied Physics Letters, 2021, 118, .	1.5	3
3	Achieving superlubricity with 2D transition metal carbides (MXenes) and MXene/graphene coatings. Materials Today Advances, 2021, 9, 100133.	2.5	44
4	Correlation of zeta potential and contact angle of oxygen and fluorine terminated nitrogen incorporated ultrananocrystalline diamond (N-UNCD) thin films. Materials Letters, 2021, 295, 129823.	1.3	7
5	High broadband photoconductivity of few-layered MoS2 field-effect transistors measured using multi-terminal methods: effects of contact resistance. Nanoscale, 2020, 12, 22904-22916.	2.8	5
6	Demonstration of nitrogen-incorporated ultrananocrystalline diamond photocathodes in a RF gun environment. Applied Physics Letters, 2020, 117, .	1.5	8
7	Towards developing robust solid lubricant operable in multifarious environments. Scientific Reports, 2020, 10, 15390.	1.6	28
8	Superlubricity in rolling/sliding contacts. Applied Physics Letters, 2019, 115, .	1.5	22
9	Ironâ€Nanoparticle Driven Tribochemistry Leading to Superlubric Sliding Interfaces. Advanced Materials Interfaces, 2019, 6, 1901416.	1.9	41
10	Graphene - MoS2 ensembles to reduce friction and wear in DLC-Steel contacts. Carbon, 2019, 146, 524-527.	5.4	108
11	Raman and electrical transport properties of few-layered arsenic-doped black phosphorus. Nanoscale, 2019, 11, 18449-18463.	2.8	27
12	Approaches for Achieving Superlubricity in Two-Dimensional Materials. ACS Nano, 2018, 12, 2122-2137.	7.3	364
13	Nanodiamond Thin Film Field Emitter Cartridge for Miniature High-Gradient Radio Frequency ${X}$ -Band Electron Injector. IEEE Transactions on Electron Devices, 2018, 65, 1132-1138.	1.6	6
14	Operando tribochemical formation of onion-like-carbon leads to macroscale superlubricity. Nature Communications, 2018, 9, 1164.	5.8	199
15	Strain engineering in two-dimensional nanomaterials beyond graphene. Nano Today, 2018, 22, 14-35.	6.2	252
16	Locally Resolved Electron Emission Area and Unified View of Field Emission from Ultrananocrystalline Diamond Films. ACS Applied Materials & Interfaces, 2017, 9, 33229-33237.	4.0	34
17	Studies on measuring surface adhesion between sidewalls in boron doped ultrananocrystalline diamond based microelectromechanical devices. Diamond and Related Materials, 2015, 55, 22-31.	1.8	11
18	Macroscale superlubricity enabled by graphene nanoscroll formation. Science, 2015, 348, 1118-1122.	6.0	665

#	Article	IF	Citations
19	Nanoscale friction properties of graphene and graphene oxide. Diamond and Related Materials, 2015, 54, 91-96.	1.8	108
20	Graphene as a protective coating and superior lubricant for electrical contacts. Applied Physics Letters, 2014, 105, .	1.5	75
21	Graphene: a new emerging lubricant. Materials Today, 2014, 17, 31-42.	8.3	1,115
22	All Two-Dimensional, Flexible, Transparent, and Thinnest Thin Film Transistor. Nano Letters, 2014, 14, 2861-2866.	4.5	328
23	Planar ultrananocrystalline diamond field emitter in accelerator radio frequency electron injector: Performance metrics. Applied Physics Letters, 2014, 105, .	1.5	28
24	Extraordinary Macroscale Wear Resistance of One Atom Thick Graphene Layer. Advanced Functional Materials, 2014, 24, 6640-6646.	7.8	251
25	Toward Lithium Ion Batteries with Enhanced Thermal Conductivity. ACS Nano, 2014, 8, 7202-7207.	7.3	54
26	MEMS/NEMS based on mono-, nano-, and ultrananocrystalline diamond films. MRS Bulletin, 2014, 39, 511-516.	1.7	45
27	Effect of hydrogen flow during cooling phase to achieve uniform and repeatable growth of bilayer graphene on copper foils over large area. Carbon, 2014, 77, 341-350.	5.4	18
28	High quantum efficiency ultrananocrystalline diamond photocathode for photoinjector applications. Applied Physics Letters, 2014, 105, .	1.5	42
29	Reduced wear and friction enabled by graphene layers on sliding steel surfaces in dry nitrogen. Carbon, 2013, 59, 167-175.	5.4	417
30	Few layer graphene to reduce wear and friction on sliding steel surfaces. Carbon, 2013, 54, 454-459.	5.4	607
31	Making the diamond age a reality. Materials Today, 2012, 15, 358.	8.3	1
32	Graphene-on-Diamond Devices with Increased Current-Carrying Capacity: Carbon sp²-on-sp³ Technology. Nano Letters, 2012, 12, 1603-1608.	4.5	163
33	Direct Lowâ€Temperature Integration of Nanocrystalline Diamond with GaN Substrates for Improved Thermal Management of Highâ€Power Electronics. Advanced Functional Materials, 2012, 22, 1525-1530.	7.8	56
34	Electroplate and Lift Lithography for Patterned Micro/Nanowires Using Ultrananocrystalline Diamond (UNCD) as a Reusable Template. ACS Applied Materials & Interfaces, 2011, 3, 925-930.	4.0	14
35	Status review of the science and technology of ultrananocrystalline diamond (UNCDâ„¢) films and application to multifunctional devices. Diamond and Related Materials, 2010, 19, 699-718.	1.8	219
36	Ultrananocrystalline and Nanocrystalline Diamond Thin Films for MEMS/NEMS Applications. MRS Bulletin, 2010, 35, 281-288.	1.7	121

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37	The CVD of Nanodiamond Materials. Chemical Vapor Deposition, 2008, 14, 145-160.	1.4	314
38	Nanoscale Friction Varied by Isotopic Shifting of Surface Vibrational Frequencies. Science, 2007, 318, 780-783.	6.0	125
39	Are Diamonds a MEMS' Best Friend?. IEEE Microwave Magazine, 2007, 8, 61-75.	0.7	77