Anirudha V Sumant

List of Publications by Year
in descending order

39	6,009	26	39
papers	citations	h-index	g-index
		218592	302012

39	39	39	6069
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Graphene: a new emerging lubricant. Materials Today, 2014, 17, 31-42.	8.3	1,115
2	Macroscale superlubricity enabled by graphene nanoscroll formation. Science, 2015, 348, 1118-1122.	6.0	665
3	Few layer graphene to reduce wear and friction on sliding steel surfaces. Carbon, 2013, 54, 454-459.	5.4	607
4	Reduced wear and friction enabled by graphene layers on sliding steel surfaces in dry nitrogen. Carbon, 2013, 59, 167-175.	5.4	417
5	Approaches for Achieving Superlubricity in Two-Dimensional Materials. ACS Nano, 2018, 12, 2122-2137.	7.3	364
6	All Two-Dimensional, Flexible, Transparent, and Thinnest Thin Film Transistor. Nano Letters, 2014, 14, 2861-2866.	4.5	328
7	The CVD of Nanodiamond Materials. Chemical Vapor Deposition, 2008, 14, 145-160.	1.4	314
8	Strain engineering in two-dimensional nanomaterials beyond graphene. Nano Today, 2018, 22, 14-35.	6.2	252
9	Extraordinary Macroscale Wear Resistance of One Atom Thick Graphene Layer. Advanced Functional Materials, 2014, 24, 6640-6646.	7.8	251
10	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
11	Operando tribochemical formation of onion-like-carbon leads to macroscale superlubricity. Nature Communications, 2018, 9, 1164.	5.8	199
12	Graphene-on-Diamond Devices with Increased Current-Carrying Capacity: Carbon sp²-on-sp³ Technology. Nano Letters, 2012, 12, 1603-1608.	4.5	163
13	Nanoscale Friction Varied by Isotopic Shifting of Surface Vibrational Frequencies. Science, 2007, 318, 780-783.	6.0	125
14	Ultrananocrystalline and Nanocrystalline Diamond Thin Films for MEMS/NEMS Applications. MRS Bulletin, 2010, 35, 281-288.	1.7	121
15	Nanoscale friction properties of graphene and graphene oxide. Diamond and Related Materials, 2015, 54, 91-96.	1.8	108
16	Graphene - MoS2 ensembles to reduce friction and wear in DLC-Steel contacts. Carbon, 2019, 146, 524-527.	5.4	108
17	Are Diamonds a MEMS' Best Friend?. IEEE Microwave Magazine, 2007, 8, 61-75.	0.7	77
18	Graphene as a protective coating and superior lubricant for electrical contacts. Applied Physics Letters, 2014, 105, .	1.5	75

#	ARTICLE	IF	CITATIONS
19	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
20	Toward Lithium Ion Batteries with Enhanced Thermal Conductivity. ACS Nano, 2014, 8, 7202-7207.	7.3	54
21	MEMS/NEMS based on mono-, nano-, and ultrananocrystalline diamond films. MRS Bulletin, 2014, 39, 511-516.	1.7	45
22	Achieving superlubricity with 2D transition metal carbides (MXenes) and MXene/graphene coatings. Materials Today Advances, 2021, 9, 100133.	2.5	44
23	High quantum efficiency ultrananocrystalline diamond photocathode for photoinjector applications. Applied Physics Letters, 2014, 105, .	1.5	42
24	Ironâ€Nanoparticle Driven Tribochemistry Leading to Superlubric Sliding Interfaces. Advanced Materials Interfaces, 2019, 6, 1901416.	1.9	41
25	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
26	Planar ultrananocrystalline diamond field emitter in accelerator radio frequency electron injector: Performance metrics. Applied Physics Letters, 2014, 105, .	1.5	28
27	Towards developing robust solid lubricant operable in multifarious environments. Scientific Reports, 2020, 10, 15390.	1.6	28
28	Raman and electrical transport properties of few-layered arsenic-doped black phosphorus. Nanoscale, 2019, 11, 18449-18463.	2.8	27
29	Superlubricity in rolling/sliding contacts. Applied Physics Letters, 2019, 115, .	1.5	22
30	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
31	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
32	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
33	Demonstration of nitrogen-incorporated ultrananocrystalline diamond photocathodes in a RF gun environment. Applied Physics Letters, 2020, 117, .	1.5	8
34	Photogating-driven enhanced responsivity in a few-layered ReSe₂ phototransistor. Journal of Materials Chemistry C, 2021, 9, 12168-12176.	2.7	7
35	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
36	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

#	Article	IF	Citations
37	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
38	Cryogenic operation of planar ultrananocrystalline diamond field emission source in SRF injector. Applied Physics Letters, 2021, 118, .	1.5	3
39	Making the diamond age a reality. Materials Today, 2012, 15, 358.	8.3	1