

Om P Khatri

List of Publications by Year in descending order

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96
papers

5,297
citations

87886

38
h-index

88628

70
g-index

98
all docs

98
docs citations

98
times ranked

5607
citing authors

#	ARTICLE	IF	CITATIONS
1	Adsorptive removal and photocatalytic degradation of organic pollutants using metal oxides and their composites: A comprehensive review. <i>Advances in Colloid and Interface Science</i> , 2019, 272, 102009.	14.7	490
2	Reduced graphene oxide@CuO nanocomposites for photocatalytic conversion of CO ₂ into methanol under visible light irradiation. <i>Applied Catalysis B: Environmental</i> , 2016, 181, 352-362.	20.2	286
3	Graphene oxide: an efficient and reusable carbocatalyst for aza-Michael addition of amines to activated alkenes. <i>Chemical Communications</i> , 2011, 47, 12673.	4.1	263
4	Reduced graphene oxide as an effective adsorbent for removal of malachite green dye: Plausible adsorption pathways. <i>Journal of Colloid and Interface Science</i> , 2017, 501, 11-21.	9.4	230
5	Dispersion of alkylated graphene in organic solvents and its potential for lubrication applications. <i>Journal of Materials Chemistry</i> , 2012, 22, 21032.	6.7	229
6	Chemically Functionalized Reduced Graphene Oxide as a Novel Material for Reduction of Friction and Wear. <i>Journal of Physical Chemistry C</i> , 2014, 118, 14394-14402.	3.1	210
7	Grafting of oxo-vanadium Schiff base on graphene nanosheets and its catalytic activity for the oxidation of alcohols. <i>Journal of Materials Chemistry</i> , 2012, 22, 5427.	6.7	191
8	Hierarchical Microspheres of MoS ₂ Nanosheets: Efficient and Regenerative Adsorbent for Removal of Water-Soluble Dyes. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 7124-7131.	3.7	179
9	Alkyl-Chain-Grafted Hexagonal Boron Nitride Nanoplatelets as Oil-Dispersible Additives for Friction and Wear Reduction. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 3708-3716.	8.0	145
10	Recent advances in adsorptive removal of heavy metal and metalloid ions by metal oxide-based nanomaterials. <i>Coordination Chemistry Reviews</i> , 2021, 445, 214100.	18.8	131
11	Covalently attached graphene@ionic liquid hybrid nanomaterials: synthesis, characterization and tribological application. <i>Journal of Materials Chemistry A</i> , 2016, 4, 926-937.	10.3	129
12	Halogen-Free Bis(imidazolium)/Bis(ammonium)-Di[bis(salicylato)borate] Ionic Liquids As Energy-Efficient and Environmentally Friendly Lubricant Additives. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 15318-15328.	8.0	126
13	Graphene-like porous carbon nanostructure from Bengal gram bean husk and its application for fast and efficient adsorption of organic dyes. <i>Applied Surface Science</i> , 2019, 476, 647-657.	6.1	103
14	Ultrasound assisted shape regulation of CuO nanorods in ionic liquids and their use as energy efficient lubricant additives. <i>Journal of Materials Chemistry A</i> , 2013, 1, 5612.	10.3	95
15	Fatty acid ionic liquids as environmentally friendly lubricants for low friction and wear. <i>RSC Advances</i> , 2016, 6, 3462-3469.	3.6	95
16	Fatty-Acid-Constituted Halogen-Free Ionic Liquids as Renewable, Environmentally Friendly, and High-Performance Lubricant Additives. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 856-865.	3.7	90
17	Fast and efficient adsorptive removal of organic dyes and active pharmaceutical ingredient by microporous carbon: Effect of molecular size and charge. <i>Chemical Engineering Journal</i> , 2019, 378, 122218.	12.7	89
18	Surface chemistry of graphene and graphene oxide: A versatile route for their dispersion and tribological applications. <i>Advances in Colloid and Interface Science</i> , 2020, 283, 102215.	14.7	76

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19	Self-Assembly of Ionic Liquid (BMI-PF ₆)-Stabilized Gold Nanoparticles on a Silicon Surface: Chemical and Structural Aspects. <i>Langmuir</i> , 2008, 24, 7785-7792.	3.5	74
20	Synthesis, dispersion and lubrication potential of basal plane functionalized alkylated graphene nanosheets. <i>RSC Advances</i> , 2015, 5, 25565-25571.	3.6	71
21	Hexamolybdenum clusters supported on graphene oxide: Visible-light induced photocatalytic reduction of carbon dioxide into methanol. <i>Carbon</i> , 2015, 94, 91-100.	10.3	69
22	Halogen-free imidazolium/ammonium-bis(salicylato)borate ionic liquids as high performance lubricant additives. <i>RSC Advances</i> , 2014, 4, 1293-1301.	3.6	63
23	Fruit waste-derived cellulose and graphene-based aerogels: Plausible adsorption pathways for fast and efficient removal of organic dyes. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 2870-2883.	9.4	63
24	Structural Organization of Gold Nanoparticles onto the ITO Surface and Its Optical Properties as a Function of Ensemble Size. <i>Langmuir</i> , 2008, 24, 3787-3793.	3.5	60
25	Alkylated graphene oxide and reduced graphene oxide: Grafting density, dispersion stability to enhancement of lubrication properties. <i>Journal of Colloid and Interface Science</i> , 2019, 541, 150-162.	9.4	60
26	Chemically functionalized graphene for lubricant applications: Microscopic and spectroscopic studies of contact interfaces to probe the role of graphene for enhanced tribo-performance. <i>Journal of Colloid and Interface Science</i> , 2018, 513, 666-676.	9.4	59
27	Grafting of a rhenium-oxo complex on Schiff base functionalized graphene oxide: an efficient catalyst for the oxidation of amines. <i>Dalton Transactions</i> , 2014, 43, 8054.	3.3	57
28	Hydrothermal Deoxygenation of Graphene Oxide: Chemical and Structural Evolution. <i>Chemistry - an Asian Journal</i> , 2013, 8, 2070-2078.	3.3	55
29	PEG-mediated hydrothermal synthesis of hierarchical microspheres of MoS ₂ nanosheets and their potential for lubrication application. <i>Journal of Industrial and Engineering Chemistry</i> , 2016, 42, 87-94.	5.8	55
30	Hydrothermal deoxygenation of graphene oxide in sub- and supercritical water. <i>RSC Advances</i> , 2014, 4, 22589.	3.6	52
31	Halogen-free ionic liquids: effect of chelated orthoborate anion structure on their lubrication properties. <i>RSC Advances</i> , 2015, 5, 25287-25294.	3.6	50
32	Physicochemical and tribophysical properties of trioctylalkylammonium bis(salicylato)borate (N888n-BScB) ionic liquids: effect of alkyl chain length. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 6433-6442.	2.8	50
33	Fatty acids-derived protic ionic liquids as lubricant additive to synthetic lube base oil for enhancement of tribological properties. <i>Journal of Molecular Liquids</i> , 2019, 293, 111444.	4.9	49
34	Nitrogen-doped graphene-supported copper complex: a novel photocatalyst for CO ₂ reduction under visible light irradiation. <i>RSC Advances</i> , 2015, 5, 54929-54935.	3.6	47
35	Octadecanethiol-grafted molybdenum disulfide nanosheets as oil-dispersible additive for reduction of friction and wear. <i>FlatChem</i> , 2017, 3, 16-25.	5.6	44
36	Graphene-Based Aqueous Lubricants: Dispersion Stability to the Enhancement of Tribological Properties. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 51785-51796.	8.0	41

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37	Effects of Chain Length and Heat Treatment on the Nanotribology of Alkylsilane Monolayers Self-Assembled on a Rough Aluminum Surface. <i>Journal of Physical Chemistry B</i> , 2005, 109, 23405-23414.	2.6	39
38	Graphene Oxide Supported Molybdenum Cluster: First Heterogenized Homogeneous Catalyst for the Synthesis of Dimethylcarbonate from CO ₂ and Methanol. <i>Chemistry - A European Journal</i> , 2015, 21, 3488-3494.	3.3	39
39	Fatty acid-derived ionic liquids as renewable lubricant additives: Effect of chain length and unsaturation. <i>Journal of Molecular Liquids</i> , 2020, 301, 112322.	4.9	38
40	Synergistic lubrication performance by incommensurately stacked ZnO-decorated reduced graphene oxide/MoS ₂ heterostructure. <i>Journal of Colloid and Interface Science</i> , 2020, 580, 730-739.	9.4	38
41	A scanning electron microscope based new method for determining degree of substitution of sodium carboxymethyl cellulose. <i>Journal of Microscopy</i> , 2012, 246, 43-52.	1.8	34
42	Self-Assembly of Graphene Oxide on Silicon Substrate via Covalent Interaction: Low Friction and Remarkable Wear-Resistivity. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500410.	3.7	33
43	Copper matrix composites reinforced by rGO-MoS ₂ hybrid: Strengthening effect to enhancement of tribological properties. <i>Composites Part B: Engineering</i> , 2019, 173, 106931.	12.0	33
44	Direct growth of nanostructural MoS ₂ over the h-BN nanoplatelets: An efficient heterostructure for visible light photoreduction of CO ₂ to methanol. <i>Journal of CO₂ Utilization</i> , 2020, 42, 101345.	6.8	33
45	Metal-free one-pot synthesis of amides using graphene oxide as an efficient catalyst. <i>RSC Advances</i> , 2014, 4, 41690-41695.	3.6	31
46	Single Cell Oil from Oleaginous Yeast Grown on Sugarcane Bagasse-Derived Xylose: An Approach toward Novel Biolubricant for Low Friction and Wear. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 275-283.	6.7	31
47	Structural-Defect-Mediated Grafting of Alkylamine on Few-Layer MoS ₂ and Its Potential for Enhancement of Tribological Properties. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 30720-30730.	8.0	30
48	Alkylamine-functionalized hexagonal boron nitride nanoplatelets as a novel material for the reduction of friction and wear. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 22879-22888.	2.8	29
49	Frictional Responses of Octadecyltrichlorosilane (OTS) and 1H, 1H, 2H, 2H-Perfluorooctyltrichlorosilane (FOTS) Monolayers Self-assembled on Aluminium over Six Orders of Contact Length Scale. <i>Tribology Letters</i> , 2005, 20, 235-246.	2.6	28
50	Boundary lubrication additives for aluminium: A journey from nano to macrotribology. <i>Tribology International</i> , 2005, 38, 1022-1034.	5.9	27
51	Charge-driven interaction for adsorptive removal of organic dyes using ionic liquid-modified graphene oxide. <i>Journal of Colloid and Interface Science</i> , 2022, 607, 1973-1985.	9.4	27
52	Catalytic cracking of jatropha-derived fast pyrolysis oils with VGO and their NMR characterization. <i>RSC Advances</i> , 2015, 5, 398-409.	3.6	26
53	Molecular pillar supported graphene oxide framework: conformational heterogeneity and tunable d-spacing. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 20822-20829.	2.8	26
54	Organophosphate anion based low viscosity ionic liquids as oil-miscible additives for lubrication enhancement. <i>Journal of Molecular Liquids</i> , 2018, 272, 430-438.	4.9	26

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55	Regulation of Pattern Dimension as a Function of Vacuum Pressure: Alkyl Monolayer Lithography. <i>Langmuir</i> , 2008, 24, 12077-12084.	3.5	25
56	Oil-miscible, halogen-free, and surface-active lauryl sulphate-derived ionic liquids for enhancement of tribological properties. <i>Journal of Molecular Liquids</i> , 2020, 318, 114005.	4.9	23
57	Evaluation of tribological performance of copper-based composites containing nano-structural 2D materials and their hybrid. <i>Tribology International</i> , 2021, 153, 106645.	5.9	23
58	Self-Assembly Guided One-Dimensional Arrangement of Gold Nanoparticles: A Facile Approach. <i>Journal of Physical Chemistry C</i> , 2008, 112, 16182-16185.	3.1	22
59	Fabrication of reduced graphene oxide micro patterns by vacuum-ultraviolet irradiation: From chemical and structural evolution to improving patterning precision by light collimation. <i>Carbon</i> , 2017, 119, 82-90.	10.3	22
60	Pristine and Alkylated MoS ₂ Nanosheets for Enhancement of Tribological Performance of Paraffin Grease Under Boundary Lubrication Regime. <i>Journal of Tribology</i> , 2019, 141, .	1.9	22
61	Thermophysical properties of trioctylalkylammonium bis(salicylato)borate ionic liquids: Effect of alkyl chain length. <i>Journal of Molecular Liquids</i> , 2018, 269, 540-546.	4.9	21
62	Thermal stability of octadecyltrichlorosilane self-assembled on a polycrystalline aluminium surface. <i>Surface Science</i> , 2004, 572, 228-238.	1.9	20
63	Chemically functionalized 2D/2D hexagonal boron Nitride/Molybdenum disulfide heterostructure for enhancement of lubrication properties. <i>Applied Surface Science</i> , 2022, 579, 152157.	6.1	20
64	Boundary lubrication capabilities of alkylsilane monolayer self-assembled on aluminium as investigated using FTIR spectroscopy and nanotribometry. <i>Surface Science</i> , 2006, 600, 4399-4404.	1.9	19
65	Ionic Liquid Functionalized Copper Oxide Nanorods for Photocatalytic Splitting of Water. <i>ChemPlusChem</i> , 2016, 81, 489-495.	2.8	18
66	Self-assembled thin film of imidazolium ionic liquid on a silicon surface: Low friction and remarkable wear-resistivity. <i>Applied Surface Science</i> , 2016, 364, 878-885.	6.1	18
67	Graphene-polyaniline nanocomposite based coatings: Role of convertible forms of polyaniline to mitigate steel corrosion. <i>Applied Surface Science</i> , 2022, 599, 153939.	6.1	18
68	Tribological Performance of Cu@rGO@MoS ₂ Nanocomposites Under Dry Sliding. <i>Tribology Letters</i> , 2020, 68, 1.	2.6	17
69	Tuning the band-gap of h-boron nitride nanoplatelets by covalent grafting of imidazolium ionic liquids. <i>RSC Advances</i> , 2016, 6, 21119-21126.	3.6	16
70	Mechano-adaptive thin film of graphene-based polymeric nanocomposite for enhancement of lubrication properties. <i>Applied Surface Science</i> , 2021, 538, 148041.	6.1	16
71	Effect of Graphene-Based Nanoadditives on the Tribological and Rheological Performance of Paraffin Grease. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 2235-2247.	2.5	15
72	Fractional distribution of graphene oxide and its potential as an efficient and reusable solid catalyst for esterification reactions. <i>Journal of Physical Organic Chemistry</i> , 2014, 27, 944-951.	1.9	14

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73	Synergistic effect of binary systems of nanostructured MoS_2 and SiO_2 and GO/SiO_2 as additives to coconut oil-derived grease: Enhancement of physicochemical and lubrication properties. <i>Lubrication Science</i> , 2021, 33, 290-307.	2.1	14
74	Alkali-Assisted Hydrothermal Exfoliation and Surfactant-Driven Functionalization of <i>h</i> -BN Nanosheets for Lubrication Enhancement. <i>ACS Applied Nano Materials</i> , 2021, 4, 9143-9154.	5.0	14
75	<i>h</i> -BN and graphene-based ultralight hybrid aerogels: Highly efficient sorbent for recovery of hydrocarbon oils and organic solvents. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 106788.	6.7	14
76	Friction of Octadecyltrichlorosilane Monolayer Self-Assembled on Silicon Wafer in 0% Relative Humidity. <i>Journal of Physical Chemistry C</i> , 2007, 111, 2696-2701.	3.1	13
77	Reductive patterning of graphene oxide by vacuum-ultraviolet irradiation in high vacuum. <i>Applied Physics Express</i> , 2014, 7, 075101.	2.4	12
78	Nanofluid lubrication and high pressure Raman studies of oxygen functionalized graphene nanosheets. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 61, 97-105.	5.8	12
79	Spatially Controlled Functionalization and Chemical Manipulation to Fabricate Two-Dimensional Arrays of Gold Nanoparticles onto Indium Tin Oxide. <i>Japanese Journal of Applied Physics</i> , 2008, 47, 5048-5052.	1.5	11
80	UV induced covalent assembly of gold nanoparticles in linear patterns on oxide free silicon surface. <i>Journal of Materials Chemistry</i> , 2012, 22, 16546.	6.7	10
81	Antimicrobial and lubrication properties of 1-acetyl-3-hexylbenzotriazolium benzoate/sorbate ionic liquids. <i>RSC Advances</i> , 2016, 6, 46567-46572.	3.6	10
82	Aminoguanidine-based deep eutectic solvents as environmentally-friendly and high-performance lubricant additives. <i>Journal of Molecular Liquids</i> , 2021, 339, 116829.	4.9	10
83	Surface Functionalization of WS_2 Nanosheets with Alkyl Chains for Enhancement of Dispersion Stability and Tribological Properties. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 1334-1346.	8.0	10
84	Covalent assembly of silver nanoparticles on hydrogen-terminated silicon surface. <i>Journal of Colloid and Interface Science</i> , 2012, 382, 22-27.	9.4	8
85	Microtribological properties of a spin-coated thin film of 1-butyl-3-(propyltrimethoxysilane)imidazolium bis(mandelato)borate ionic liquid. <i>RSC Advances</i> , 2016, 6, 78296-78302.	3.6	8
86	Ionic Liquids-Based Aqueous Lubricants: Emulsion Stability to Enhancement of Surface Wettability and Tribological Properties. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 333-342.	3.7	8
87	Reinforcing the Near Eutectic Aluminum-Silicon Alloy with Graphene: An Approach toward Self-Lubricating Composite. <i>Advanced Engineering Materials</i> , 2021, 23, 2000910.	3.5	6
88	Tribological Investigations of Two-Dimensional Nanostructured Lamellar Materials as Additives to Castor-Oil-Derived Lithium Grease. <i>Journal of Tribology</i> , 2022, 144, .	1.9	6
89	Efficient friction and wear reduction of Al-Si alloy via tribofilms generated from synergistic interaction of ZDDP and chemically functionalized <i>h</i> -BN additives. <i>Applied Surface Science</i> , 2022, 595, 153520.	6.1	6
90	Frictional Response of a Silane Monolayer to Sliding in a Humid Environment. <i>Journal of Physical Chemistry C</i> , 2007, 111, 16339-16344.	3.1	5

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91	Graphene Oxide Tribofilms Enhance the Scratch Resistance of Silica Glasses. ACS Applied Nano Materials, 2022, 5, 4812-4822.	5.0	4
92	Load Induced Microstructure Evolution and Friction in an Organic Monolayer Self-assembled on a Silicon Substrate. Tribology Letters, 2008, 32, 179-188.	2.6	3
93	Self-alignment of Gold Nanoparticles through the Control of Particle-substrate and Particle-particle Interactions. Procedia Engineering, 2012, 36, 374-381.	1.2	3
94	Wear and friction behavior of copper based nano hybrid composites fabricated by spark plasma sintering. Materials Research Express, 2019, 6, 0850h2.	1.6	3
95	Nanostructured Layered Materials as Novel Lubricant Additives for Tribological Applications. Materials Forming, Machining and Tribology, 2020, , 157-178.	1.1	3
96	Probing the diffusion of vacuum ultraviolet ($\lambda=172\text{nm}$) induced oxidants by nanoparticles immobilization. Applied Surface Science, 2009, 255, 9817-9821.	6.1	2