

# Liwen Mu

## List of Publications by Year in descending order

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85  
papers

2,793  
citations

159525

30  
h-index

197736

49  
g-index

86  
all docs

86  
docs citations

86  
times ranked

3264  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal transport in polymeric materials and across composite interfaces. <i>Applied Materials Today</i> , 2018, 12, 92-130.	2.3	299
2	Superamphiphobic and Electroactive Nanocomposite toward Self-Cleaning, Antiwear, and Anticorrosion Coatings. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 12481-12493.	4.0	145
3	Cotton fabric derived hierarchically porous carbon and nitrogen doping for sustainable capacitor electrode. <i>Carbon</i> , 2017, 111, 839-848.	5.4	140
4	A biomimetic spherical cactus superhydrophobic coating with durable and multiple anti-corrosion effects. <i>Chemical Engineering Journal</i> , 2018, 338, 670-679.	6.6	98
5	Facile synthesis of mesoporous carbon nanocomposites from natural biomass for efficient dye adsorption and selective heavy metal removal. <i>RSC Advances</i> , 2016, 6, 2259-2269.	1.7	74
6	Non-corrosive green lubricants: strengthened lignin-choline amino acid ionic liquids interaction via reciprocal hydrogen bonding. <i>RSC Advances</i> , 2015, 5, 66067-66072.	1.7	68
7	In-situ reduction of Ag nanoparticles on oxygenated mesoporous carbon fabric: Exceptional catalyst for nitroaromatics reduction. <i>Applied Catalysis B: Environmental</i> , 2016, 182, 306-315.	10.8	68
8	Holistically Engineered Polymer-Polymer-Ion Interactions in Biocompatible Polyvinyl Alcohol Blends for High-Performance Triboelectric Devices in Self-Powered Wearable Cardiovascular Monitorings. <i>Advanced Materials</i> , 2020, 32, e2002878.	11.1	66
9	The tribological behavior of nanometer and micrometer TiO <sub>2</sub> particle-filled polytetrafluoroethylene/polyimide. <i>Materials &amp; Design</i> , 2011, 32, 964-970.	5.1	62
10	The stiffness-thermal conduction relationship at the composite interface: the effect of particle alignment on the long-range confinement of polymer chains monitored by scanning thermal microscopy. <i>Nanoscale</i> , 2018, 10, 1695-1703.	2.8	56
11	Green processing of plant biomass into mesoporous carbon as catalyst support. <i>Chemical Engineering Journal</i> , 2016, 295, 301-308.	6.6	55
12	Lignin in Ethylene Glycol and Poly(ethylene glycol): Fortified Lubricants with Internal Hydrogen Bonding. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 1840-1849.	3.2	54
13	The effect of thermal conductivity and friction coefficient on the contact temperature of polyimide composites: Experimental and finite element simulation. <i>Tribology International</i> , 2012, 53, 45-52.	3.0	53
14	Molecular Origin of Efficient Phonon Transfer in Modulated Polymer Blends: Effect of Hydrogen Bonding on Polymer Coil Size and Assembled Microstructure. <i>Journal of Physical Chemistry C</i> , 2017, 121, 14204-14212.	1.5	53
15	Structurally tuning microwave absorption of core/shell structured CNT/polyaniline catalysts for energy efficient saccharide-HMF conversion. <i>Applied Catalysis B: Environmental</i> , 2018, 220, 581-588.	10.8	50
16	Developing heat conduction pathways through short polymer chains in a hydrogen bonded polymer system. <i>Composites Science and Technology</i> , 2017, 148, 97-105.	3.8	49
17	Expedited Phonon Transfer in Interfacially Constrained Polymer Chain along Self-Organized Amino Acid Crystals. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 12138-12145.	4.0	49
18	Sorption mechanism of organic dyes on a novel self-nitrogen-doped porous graphite biochar: Coupling DFT calculations with experiments. <i>Chemical Engineering Science</i> , 2021, 242, 116739.	1.9	47

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19	Superamphiphobicity and electroactivity enabled dual physical/chemical protections in novel anticorrosive nanocomposite coatings. <i>Polymer</i> , 2016, 85, 37-46.	1.8	46
20	Ionic Grease Lubricants: Protic [Triethanolamine][Oleic Acid] and Aprotic [Choline][Oleic Acid]. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 4977-4984.	4.0	45
21	Machine learning prediction of bio-oil characteristics quantitatively relating to biomass compositions and pyrolysis conditions. <i>Fuel</i> , 2022, 312, 122812.	3.4	45
22	Moisture driven thermal conduction in polymer and polymer blends. <i>Composites Science and Technology</i> , 2017, 151, 115-123.	3.8	44
23	TiO <sub>2</sub> nanofibers heterogeneously wrapped with reduced graphene oxide as efficient Pt electrocatalyst supports for methanol oxidation. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 3679-3688.	3.8	42
24	Comparative Study of Tribological Properties of Different Fibers Reinforced PTFE/PEEK Composites at Elevated Temperatures. <i>Tribology Transactions</i> , 2010, 53, 189-194.	1.1	41
25	Techno-economic analysis of biomass processing with dual outputs of energy and activated carbon. <i>Bioresource Technology</i> , 2021, 319, 124108.	4.8	41
26	Excellent performance of Pt-C/TiO <sub>2</sub> for methanol oxidation: Contribution of mesopores and partially coated carbon. <i>Applied Surface Science</i> , 2017, 426, 890-896.	3.1	38
27	Lignin from Hardwood and Softwood Biomass as a Lubricating Additive to Ethylene Glycol. <i>Molecules</i> , 2018, 23, 537.	1.7	37
28	[N-Methyl-2-pyrrolidone][C <sub>1</sub> -C <sub>4</sub> carboxylic acid]: a novel solvent system with exceptional lignin solubility. <i>Chemical Communications</i> , 2015, 51, 13554-13557.	2.2	36
29	Enriching Heteroelements in Lignin as Lubricating Additives for Bioionic Liquids. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 3877-3887.	3.2	36
30	Paving the Thermal Highway with Self-Organized Nanocrystals in Transparent Polymer Composites. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 29080-29087.	4.0	35
31	Enhancing Energy Efficiency in Saccharide-HMF Conversion with Core/shell Structured Microwave Responsive Catalysts. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 4352-4358.	3.2	32
32	Pore size dependent molecular adsorption of cationic dye in biomass derived hierarchically porous carbon. <i>Journal of Environmental Management</i> , 2017, 196, 168-177.	3.8	29
33	Synthesis of hollow fullerene-like molybdenum disulfide/reduced graphene oxide nanocomposites with excellent lubricating properties. <i>Carbon</i> , 2018, 134, 423-430.	5.4	29
34	Superhydrophobic polyaniline hollow spheres with mesoporous brain-like convex-fold shell textures. <i>Journal of Materials Chemistry A</i> , 2015, 3, 19299-19303.	5.2	28
35	Carbon nanofiber reinforced Co-continuous HDPE/PMMA composites: Exploring the role of viscosity ratio on filler distribution and electrical/thermal properties. <i>Composites Science and Technology</i> , 2019, 184, 107859.	3.8	28
36	Two important factors of selecting lignin as efficient lubricating additives in poly (ethylene glycol): Hydrogen bond and molecular weight. <i>International Journal of Biological Macromolecules</i> , 2019, 129, 564-570.	3.6	28

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37	Friction and Wear Behavior of CF/PTFE Composites Lubricated by Choline Chloride Ionic Liquids. <i>Tribology Letters</i> , 2013, 49, 413-420.	1.2	25
38	Organosilane grafted silica: Quantitative correlation of microscopic surface characters and macroscopic surface properties. <i>Applied Surface Science</i> , 2017, 399, 565-572.	3.1	25
39	Tribological behavior of carbon nanotube and polytetrafluoroethylene filled polyimide composites under different lubricated conditions. <i>Journal of Applied Polymer Science</i> , 2011, 121, 1574-1578.	1.3	24
40	Tribological properties of polyimide coating filled with carbon nanotube at elevated temperatures. <i>Polymer Composites</i> , 2020, 41, 2652-2661.	2.3	24
41	Tribological properties of polyimide-graphene composite coatings at elevated temperatures. <i>Progress in Organic Coatings</i> , 2020, 142, 105602.	1.9	24
42	Durable Self-Healing Superhydrophobic Coating with Biomimic "Chloroplast" Analogous Structure. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600040.	1.9	23
43	Engineering Hydrogen Bonding Interaction and Charge Separation in Bio-Polymers for Green Lubrication. <i>Journal of Physical Chemistry B</i> , 2017, 121, 5669-5678.	1.2	23
44	Self-Lubricating Polytetrafluoroethylene/Polyimide Blends Reinforced with Zinc Oxide Nanoparticles. <i>Journal of Nanomaterials</i> , 2015, 2015, 1-8.	1.5	22
45	Turning the solubility and lubricity of ionic liquids by absorbing CO <sub>2</sub> . <i>Tribology International</i> , 2018, 121, 223-230.	3.0	22
46	Polyelectrolyte cellulose gel with PEG/water: Toward fully green lubricating grease. <i>Carbohydrate Polymers</i> , 2020, 230, 115670.	5.1	22
47	Unveiling Mesopore Evolution in Carbonized Wood: Interfacial Separation, Migration, and Degradation of Lignin Phase. <i>ACS Sustainable Chemistry and Engineering</i> , 2015, 3, 2489-2495.	3.2	21
48	Localizing microwave heat by surface polarization of titanate nanostructures for enhanced catalytic reaction efficiency. <i>Applied Catalysis B: Environmental</i> , 2018, 227, 266-275.	10.8	21
49	Influences of geometrical topography and surface chemistry on the stable immobilization of adenosine deaminase on mesoporous TiO <sub>2</sub> . <i>Chemical Engineering Science</i> , 2016, 139, 142-151.	1.9	19
50	Grafting heteroelement-rich groups on graphene oxide: Tuning polarity and molecular interaction with bio-ionic liquid for enhanced lubrication. <i>Journal of Colloid and Interface Science</i> , 2017, 498, 47-54.	5.0	19
51	Stable Dispersed Zeolitic Imidazolate Framework/Graphene Oxide Nanocomposites in Ionic Liquids Resulting in High Lubricating Performance. <i>Advanced Materials Interfaces</i> , 2020, 7, 1902194.	1.9	18
52	A negative-carbon footprint process with mixed biomass feedstock maximizes conversion efficiency, product value and CO <sub>2</sub> mitigation. <i>Bioresource Technology</i> , 2022, 351, 127004.	4.8	18
53	Elastohydrodynamic Performance of a Bio-Based, Non-Corrosive Ionic Liquid. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 996.	1.3	17
54	Novel Biorefinery Approach Aimed at Vegetarians Reduces the Dependency on Marine Fish Stocks for Obtaining Squalene and Docosahexaenoic Acid. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 8803-8813.	3.2	17

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55	High load capacity with ionic liquid-lubricated tribological system. Tribology International, 2016, 94, 315-322.	3.0	16
56	Interface-strengthened Polyimide/Carbon Nanofibers Nanocomposites with Superior Mechanical and Tribological Properties. Macromolecular Chemistry and Physics, 2014, 215, 1407-1414.	1.1	15
57	Tribological behaviors of carbon series additions reinforced <sc>CF/PTFE</sc> composites at high speed. Journal of Applied Polymer Science, 2016, 133, .	1.3	15
58	Boosting Energy Efficiency of Nickel Cobaltite via Interfacial Engineering in Hierarchical Supercapacitor Electrode. Journal of Physical Chemistry C, 2016, 120, 23377-23388.	1.5	14
59	Versatile Ionic Gel Driven by Dual Hydrogen Bond Networks: Toward Advanced Lubrication and Self-Healing. ACS Applied Polymer Materials, 2021, 3, 5932-5941.	2.0	14
60	CO <sub>2</sub> -negative biomass conversion: An economic route with co-production of green hydrogen and highly porous carbon. Applied Energy, 2022, 311, 118685.	5.1	14
61	Concanavalin A induced orientation immobilization of Nuclease P 1 : The effect of lectin agglutination. Process Biochemistry, 2018, 64, 160-169.	1.8	13
62	Advanced Material-oriented Biomass Precise Reconstruction: A Review on Porous Carbon with Inherited Natural Structure and Created Artificial Structure by Post-treatment. Macromolecular Bioscience, 2022, 22, e2100479.	2.1	13
63	Effect of the Composition of Biomass on the Quality of Syngas Produced from Thermochemical Conversion Based on Thermochemical Data Prediction. Energy & Fuels, 2019, 33, 5253-5262.	2.5	12
64	Structural strategies to design bio-ionic liquid: Tuning molecular interaction with lignin for enhanced lubrication. Journal of Molecular Liquids, 2019, 280, 49-57.	2.3	12
65	A study of tribological and mechanical properties of PTFE composites filled with surface treated K <sub>2</sub> Ti <sub>6</sub> O <sub>13</sub> whisker. Journal of Applied Polymer Science, 2012, 124, 1456-1463.	1.3	11
66	Durable polytetrafluoroethylene composites in harsh environments: Tribology and corrosion investigation. Journal of Applied Polymer Science, 2012, 124, 4307-4314.	1.3	9
67	Tuning nitrogen species on natural biomass derived porous carbon for efficient acetone adsorption. Materials Chemistry and Physics, 2020, 253, 123338.	2.0	9
68	Friction and Wear Behaviors of Solid Lubricants/Polyimide Composites in Liquid Mediums. Materials Science Forum, 2010, 654-656, 2763-2766.	0.3	8
69	Heterogeneous nucleation/growth of silver nanoparticles onto oxygenated mesoporous carbon: Alcohol effect and catalytic property. Catalysis Communications, 2016, 77, 65-69.	1.6	8
70	Single-Cell Oils from Oleaginous Microorganisms as Green Bio-Lubricants: Studies on Their Tribological Performance. Energies, 2021, 14, 6685.	1.6	8
71	A facile and green strategy to synthesize N/P co-doped bio-char as VOCs adsorbent: Through efficient biogas slurry treatment and struvite transform. Fuel, 2022, 322, 124156.	3.4	8
72	Confined molecular motion across liquid/liquid interfaces in a triphasic reaction towards free-standing conductive polymer tube arrays. Journal of Materials Chemistry A, 2016, 4, 6290-6294.	5.2	7

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73	Carbon coated Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> fibers: Relying on the lithium diffusivity in TiO <sub>2</sub> crystal structure for high rate lithium battery. <i>Journal of Alloys and Compounds</i> , 2017, 721, 545-553.	2.8	7
74	Thermal Conduction in Polymer Composites. , 2019, , 77-110.		7
75	Critical Role of Carbonized Cellulose in the Evolution of Highly Porous Biocarbon: Seeing the Structural and Compositional Changes of Spent Mushroom Substrate by Deconvoluted Thermogravimetric Analysis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 22541-22548.	1.8	7
76	Hollow IF-MoS <sub>2</sub> /r-GO Nanocomposite Filled Polyimide Coating with Improved Mechanical, Thermal and Tribological Properties. <i>Coatings</i> , 2021, 11, 25.	1.2	7
77	Synthesis of biogas-residue-based mesoporous carbons via one-step template-free method for organic and inorganic pollutants removal. <i>Fuel</i> , 2022, 311, 122516.	3.4	6
78	Poly(alkylimidazolium bis(trifluoromethylsulfonyl)imide)-Based Polymerized Ionic Liquids: A Potential High-Performance Lubricating Grease. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801796.	1.9	5
79	Surfactant assisted and in situ formed micro liquid metal as excellent lubricant additive in polyimide coating. <i>Tribology International</i> , 2021, 159, 106953.	3.0	5
80	Valorization of industrial lignin as lubricating additives by C-C Bond Cleavage and doping heteroelement-rich groups. <i>Biomass and Bioenergy</i> , 2022, 161, 106470.	2.9	5
81	Fat mimicking compounds as grease thickeners in Poly(ethylene glycol)/water: Adopting the solution from history. <i>Journal of Colloid and Interface Science</i> , 2020, 578, 619-628.	5.0	4
82	Cycling pressure-switching process enriches micropores in activated carbon by accelerating reactive gas internal diffusion in porous channels. <i>Sustainable Materials and Technologies</i> , 2021, 28, e00248.	1.7	2
83	Naturally dispersed ash components in bio-carbon composites: integrated ammonia nitrogen removal and specific surface area augment. <i>Biomass Conversion and Biorefinery</i> , 0, , 1.	2.9	1
84	Biomass-derived mesoporous and super-hydrophilic carbon manufactured by cycling-pressure-switching air activation process towards ultrahigh adsorption efficiency of tetracycline. <i>Sustainable Materials and Technologies</i> , 2022, , e00430.	1.7	1
85	Molecular Transformation, Diffusion, and Assembling into Three-Dimensional Freestanding Tube Arrays via a Triphasic Reaction. <i>Langmuir</i> , 2016, 32, 11525-11531.	1.6	0