Xiangbo Meng

List of Publications by Year
in descending order

83 papers	6,038 citations	70961 41 h-index	69108 77 g-index
86 all docs	86 docs citations	86 times ranked	8582 citing authors

#	Article	IF	Citations
1	Single-atom Catalysis Using Pt/Graphene Achieved through Atomic Layer Deposition. Scientific Reports, 2013, 3, .	1.6	719
2	Emerging Applications of Atomic Layer Deposition for Lithiumâ€Ion Battery Studies. Advanced Materials, 2012, 24, 3589-3615.	11.1	493
3	Tin Oxide with Controlled Morphology and Crystallinity by Atomic Layer Deposition onto Graphene Nanosheets for Enhanced Lithium Storage. Advanced Functional Materials, 2012, 22, 1647-1654.	7.8	384
4	Superior cycle stability of nitrogen-doped graphene nanosheets as anodes for lithium ion batteries. Electrochemistry Communications, 2011, 13, 822-825.	2.3	315
5	Significant impact on cathode performance of lithium-ion batteries by precisely controlled metal oxide nanocoatings via atomic layer deposition. Journal of Power Sources, 2014, 247, 57-69.	4.0	212
6	Ultrathin Lithium-Ion Conducting Coatings for Increased Interfacial Stability in High Voltage Lithium-Ion Batteries. Chemistry of Materials, 2014, 26, 3128-3134.	3.2	192
7	An overview of molecular layer deposition for organic and organicâ€“inorganic hybrid materials: mechanisms, growth characteristics, and promising applications. Journal of Materials Chemistry A, 2017, 5, 18326-18378.	5.2	187
8	Understanding the high-electrocatalytic performance of two-dimensional MoS₂ nanosheets and their composite materials. Journal of Materials Chemistry A, 2017, 5, 24540-24563.	5.2	183
9	Atomic Layer Deposition of Metal Sulfide Materials. Accounts of Chemical Research, 2015, 48, 341-348.	7.6	178
10	High concentration nitrogen doped carbon nanotube anodes with superior Li+ storage performance for lithium rechargeable battery application. Journal of Power Sources, 2012, 197, 238-245.	4.0	158
11	Atomic layer deposition for nanomaterial synthesis and functionalization in energy technology. Materials Horizons, 2017, 4, 133-154.	6.4	141
12	Vapor-Phase Atomic-Controllable Growth of Amorphous Li₂S for High-Performance Lithiumâ€“Sulfur Batteries. ACS Nano, 2014, 8, 10963-10972.	7.3	114
13	Surface Modification for Suppressing Interfacial Parasitic Reactions of a Nickel-Rich Lithium-Ion Cathode. Chemistry of Materials, 2019, 31, 2723-2730.	3.2	114
14	Atomic Layer Deposition of Li_{<i>x</i>}Al_{<i>y</i>}S Solidâ€State Electrolytes for Stabilizing Lithiumâ€Metal Anodes. ChemElectroChem, 2016, 3, 858-863.	1.7	104
15	Gallium Sulfideâ€“Singleâ€Walled Carbon Nanotube Composites: Highâ€Performance Anodes for Lithiumâ€Ion Batteries. Advanced Functional Materials, 2014, 24, 5435-5442.	7.8	102
16	Atomic Layer Deposition of Two-Dimensional Layered Materials: Processes, Growth Mechanisms, and Characteristics. Matter, 2020, 2, 587-630.	5.0	93
17	Controllable synthesis of graphene-based titanium dioxide nanocomposites by atomic layer deposition. Nanotechnology, 2011, 22, 165602.	1.3	90
18	Effect of interface modifications on voltage fade in 0.5Li2MnO3Â·0.5LiNi0.375Mn0.375Co0.25O2 cathode materials. Journal of Power Sources, 2014, 249, 509-514.	4.0	89

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19	Nitrogen-doped carbon nanotubes coated by atomic layer deposited SnO2 with controlled morphology and phase. Carbon, 2011, 49, 1133-1144.	5.4	80
20	Atomic Layer Deposition of Gallium Sulfide Films Using Hexakis(dimethylamido)digallium and Hydrogen Sulfide. Chemistry of Materials, 2014, 26, 1029-1039.	3.2	79
21	A general empirical formula of currentâ€“voltage characteristics for point-to-plane geometry corona discharges. Journal Physics D: Applied Physics, 2008, 41, 065209.	1.3	78
22	Non-Aqueous Approach to Synthesize Amorphous/Crystalline Metal Oxide-Graphene Nanosheet Hybrid Composites. Journal of Physical Chemistry C, 2010, 114, 18330-18337.	1.5	75
23	Metallic 1T-MoS2 nanosheets and their composite materials: Preparation, properties and emerging applications. Materials Today Energy, 2018, 10, 264-279.	2.5	75
24	Atomic-scale surface modifications and novel electrode designs for high-performance sodium-ion batteries via atomic layer deposition. Journal of Materials Chemistry A, 2017, 5, 10127-10149.	5.2	65
25	Insight into the correlation of Ptâ€“support interactions with electrocatalytic activity and durability in fuel cells. Journal of Materials Chemistry A, 2020, 8, 9420-9446.	5.2	62
26	Atomic layer deposition derived amorphous TiO2 thin film decorating graphene nanosheets with superior rate capability. Electrochemistry Communications, 2015, 57, 43-47.	2.3	61
27	Nanoscale Investigation of Solid Electrolyte Interphase Inhibition on Li-Ion Battery MnO Electrodes via Atomic Layer Deposition of Al₂O₃. Chemistry of Materials, 2014, 26, 935-940.	3.2	60
28	Controllable atomic layer deposition of one-dimensional nanotubular TiO2. Applied Surface Science, 2013, 266, 132-140.	3.1	58
29	Achieving High-Performance Silicon Anodes of Lithium-Ion Batteries via Atomic and Molecular Layer Deposited Surface Coatings: an Overview. Electrochimica Acta, 2017, 251, 710-728.	2.6	58
30	Atomic layer deposition assisted Pt-SnO2 hybrid catalysts on nitrogen-doped CNTs with enhanced electrocatalytic activities for low temperature fuel cells. International Journal of Hydrogen Energy, 2011, 36, 11085-11092.	3.8	57
31	Atomic Layer Deposition of MnS: Phase Control and Electrochemical Applications. ACS Applied Materials & Interfaces, 2016, 8, 2774-2780.	4.0	57
32	Tunable core-shell single-walled carbon nanotube-Cu2S networked nanocomposites as high-performance cathodes for lithium-ion batteries. Journal of Power Sources, 2015, 280, 621-629.	4.0	56
33	Controlled synthesis of Zirconium Oxide on graphene nanosheets by atomic layer deposition and its growth mechanism. Carbon, 2013, 52, 74-82.	5.4	55
34	Atomic layer deposited Li4Ti5O12 on nitrogen-doped carbon nanotubes. RSC Advances, 2013, 3, 7285.	1.7	54
35	TiSi₂O_x Coated N-Doped Carbon Nanotubes as Pt Catalyst Support for the Oxygen Reduction Reaction in PEMFCs. Journal of Physical Chemistry C, 2013, 117, 15457-15467.	1.5	53
36	Lithium Self-Discharge and Its Prevention: Direct Visualization through <i>In Situ</i> Electrochemical Scanning Transmission Electron Microscopy. ACS Nano, 2017, 11, 11194-11205.	7.3	53

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37	CuS and Cu₂S as Cathode Materials for Lithium Batteries: A Review. ChemElectroChem, 2019, 6, 2825-2840.	1.7	52
38	Atomic and Molecular Layer Deposition for Superior Lithiumâ€Sulfur Batteries: Strategies, Performance, and Mechanisms. Batteries and Supercaps, 2018, 1, 41-68.	2.4	50
39	Atomic layer deposition of solid-state electrolytes for next-generation lithium-ion batteries and beyond: Opportunities and challenges. Energy Storage Materials, 2020, 30, 296-328.	9.5	49
40	Three growth modes and mechanisms for highly structure-tunable SnO2 nanotube arrays of template-directed atomic layer deposition. Journal of Materials Chemistry, 2011, 21, 12321.	6.7	46
41	Modifying the Surface of a High-Voltage Lithium-Ion Cathode. ACS Applied Energy Materials, 2018, 1, 2254-2260.	2.5	46
42	Ptâ€“SnO2/nitrogen-doped CNT hybrid catalysts for proton-exchange membrane fuel cells (PEMFC): Effects of crystalline and amorphous SnO2 by atomic layer deposition. Journal of Power Sources, 2013, 238, 144-149.	4.0	44
43	Atomic Layer Deposition of Aluminum Sulfide: Growth Mechanism and Electrochemical Evaluation in Lithium-Ion Batteries. Chemistry of Materials, 2017, 29, 9043-9052.	3.2	43
44	Atomic Layer Deposition of Highâ€Capacity Anodes for Nextâ€Generation Lithiumâ€Ion Batteries and Beyond. Energy and Environmental Materials, 2021, 4, 363-391.	7.3	43
45	Facile assembly of Ni(OH)2 nanosheets on nitrogen-doped carbon nanotubes network as high-performance electrocatalyst for oxygen evolution reaction. Journal of Alloys and Compounds, 2018, 731, 766-773.	2.8	42
46	Heterostructural coaxial nanotubes of CNT@Fe2O3 via atomic layer deposition: effects of surface functionalization and nitrogen-doping. Journal of Nanoparticle Research, 2011, 13, 1207-1218.	0.8	40
47	A revisit to atomic layer deposition of zinc oxide using diethylzinc and water as precursors. Journal of Materials Science, 2019, 54, 5236-5248.	1.7	40
48	Crystallinity-Controlled Synthesis of Zirconium Oxide Thin Films on Nitrogen-Doped Carbon Nanotubes by Atomic Layer Deposition. Journal of Physical Chemistry C, 2012, 116, 14656-14664.	1.5	34
49	Unravelling the synergy effects of defect-rich 1T-MoS₂/carbon nanotubes for the hydrogen evolution reaction by experimental and calculational studies. Sustainable Energy and Fuels, 2019, 3, 2100-2110.	2.5	34
50	Nanoporous tree-like SiO2 films fabricated by solâ€“gel assisted electrostatic spray deposition. Microporous and Mesoporous Materials, 2012, 151, 488-494.	2.2	33
51	Cobalt oxide nanosheets anchored onto nitrogen-doped carbon nanotubes as dual purpose electrodes for lithium-ion batteries and oxygen evolution reaction. International Journal of Energy Research, 2018, 42, 853-862.	2.2	30
52	Atomic-scale tuned interface of nickel-rich cathode for enhanced electrochemical performance in lithium-ion batteries. Journal of Materials Science and Technology, 2020, 54, 77-86.	5.6	29
53	Synchrotron-based X-ray diffraction and absorption spectroscopy studies on layered LiNixMnyCozO2 cathode materials: A review. Energy Storage Materials, 2022, 49, 181-208.	9.5	29
54	Electrochemical characterization of voltage fade of Li1.2Ni0.2Mn0.6O2 cathode. Solid State Ionics, 2014, 268, 231-235.	1.3	27

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55	Molecular Layer Deposition of Crosslinked Polymeric Lithicone for Superior Lithium Metal Anodes. Energy Material Advances, 2021, 2021, .	4.7	27
56	Nitrogen-doped graphene-wrapped Cu2S as a superior anode in sodium-ion batteries. Carbon, 2020, 170, 430-438.	5.4	26
57	The characteristics of particle charging and deposition during powder coating processes with ultrafine powder. Journal Physics D: Applied Physics, 2009, 42, 065201.	1.3	24
58	Influences of different powders on the characteristics of particle charging and deposition in powder coating processes. Journal of Electrostatics, 2009, 67, 663-671.	1.0	24
59	Highâ€Performance Highâ€Loading Lithiumâ€“Sulfur Batteries by Low Temperature Atomic Layer Deposition of Aluminum Oxide on Nanophase S Cathodes. Advanced Materials Interfaces, 2017, 4, 1700096.	1.9	22
60	Atomic and molecular layer deposition in pursuing better batteries. Journal of Materials Research, 2021, 36, 2-25.	1.2	22
61	Characterization of particle size evolution of the deposited layer during electrostatic powder coating processes. Powder Technology, 2009, 195, 264-270.	2.1	19
62	Towards high-energy and durable lithium-ion batteries via atomic layer deposition: elegantly atomic-scale material design and surface modification. Nanotechnology, 2015, 26, 020501.	1.3	19
63	Atomic layer deposition of zirconium oxide thin films. Journal of Materials Research, 2020, 35, 804-812.	1.2	19
64	Spatially Sequential Growth of Various WSi₂ Networked Nanostructures and Mechanisms. Journal of Physical Chemistry C, 2013, 117, 19189-19194.	1.5	15
65	The characteristics of particle charging and deposition during powder coating processes with coarse powder. Journal Physics D: Applied Physics, 2008, 41, 195207.	1.3	13
66	Batteries: Tin Oxide with Controlled Morphology and Crystallinity by Atomic Layer Deposition onto Graphene Nanosheets for Enhanced Lithium Storage (Adv. Funct. Mater. 8/2012). Advanced Functional Materials, 2012, 22, 1646-1646.	7.8	13
67	Atomic-scale constituting stable interface for improved LiNi_{0.6}Mn_{0.2}Co_{0.2}O₂ cathodes of lithium-ion batteries. Nanotechnology, 2021, 32, 115401.	1.3	12
68	Atomic layer deposition of lithium zirconium oxides for the improved performance of lithium-ion batteries. Dalton Transactions, 2022, 51, 2737-2749.	1.6	12
69	High-performance LiNi0.8Mn0.1Co0.1O2 cathode by nanoscale lithium sulfide coating via atomic layer deposition. Journal of Energy Chemistry, 2022, 69, 531-540.	7.1	11
70	Novel nanostructured materials by atomic and molecular layer deposition. AIMS Materials Science, 2018, 5, 957-999.	0.7	10
71	The characteristics of current density distribution during corona charging processes of different particulates. Journal Physics D: Applied Physics, 2008, 41, 172007.	1.3	8
72	Highâ€Performance 3D Pineconeâ€Like LiNi 1/3 Co 1/3 Mn 1/3 O 2 Cathode for Lithiumâ€Ion Batteries. Energy Technology, 2019, 7, 1800769.	1.8	8

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73	Fabrication and Testing of Bioinspired Surface Designs for Friction Reduction at the Piston Ring and Liner Interface. Journal of Tribology, 2021, 143, .	1.0	8
74	Energy Storage: Highâ€Performance Highâ€Loading Lithiumâ€"Sulfur Batteries by Low Temperature Atomic Layer Deposition of Aluminum Oxide on Nanophase S Cathodes (Adv. Mater. Interfaces 17/2017). Advanced Materials Interfaces, 2017, 4, .	1.9	2
75	Atomic Force Microscopy Study of Surfactant Treated CVD Graphene. , 2018, , .		2
76	Atomic and Molecular Layer Deposition for Superior Lithium-Sulfur Batteries: Strategies, Performance, and Mechanisms. Batteries and Supercaps, 2018, 1, 40-40.	2.4	2
77	Fabrication and friction characteristics of arbitrary biosurfaces. Biointerphases, 2020, 15, 061016.	0.6	2
78	Editorial for focus on nanophase materials for next-generation lithium-ion batteries and beyond. Nanotechnology, 2021, , .	1.3	1
79	Atomic and molecular layer deposition in pursuing better batteries. Journal of Materials Research, 0, , 1-24.	1.2	1
80	Optical and Atomic Force Microscopy Study of Noncovalently functionalized CVD Graphene. , 2019, , .		0
81	Interfacial Stabilization of a Graphene-Wrapped Cu2S Anode for High-Performance Sodium-Ion Batteries via Atomic Layer Deposition. Journal of Composites Science, 2020, 4, 184.	1.4	0
82	Synthesis of nanostructured materials via atomic and molecular layer deposition. , 2022, , .		0
83	Constituting robust interfaces for better lithium-ion batteries and beyond using atomic and molecular layer deposition. , 2022, , .		0