Jingxu Kent Zheng

List of Publications by Year
in descending order

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54 papers	3,693 citations	218677 26 h-index	175258 52 g-index
54 all docs	54 docs citations	54 times ranked	3367 citing authors

#	Article	IF	Citations
1	Reversible epitaxial electrodeposition of metals in battery anodes. Science, 2019, 366, 645-648.	12.6	1,097
2	Regulating electrodeposition morphology of lithium: towards commercially relevant secondary Li metal batteries. Chemical Society Reviews, 2020, 49, 2701-2750.	38.1	310
3	Controlling electrochemical growth of metallic zinc electrodes: Toward affordable rechargeable energy storage systems. Science Advances, 2021, 7, .	10.3	209
4	Solid electrolyte interphases for high-energy aqueous aluminum electrochemical cells. Science Advances, 2018, 4, eaau8131.	10.3	186
5	Regulating electrodeposition morphology in high-capacity aluminium and zinc battery anodes using interfacial metalâ€“substrate bonding. Nature Energy, 2021, 6, 398-406.	39.5	169
6	Spontaneous and field-induced crystallographic reorientation of metal electrodeposits at battery anodes. Science Advances, 2020, 6, eabb1122.	10.3	143
7	Proton Intercalation/Deâ€Intercalation Dynamics in Vanadium Oxides for Aqueous Aluminum Electrochemical Cells. Angewandte Chemie - International Edition, 2020, 59, 3048-3052.	13.8	122
8	Quantitative Control of Pore Size of Mesoporous Carbon Nanospheres through the Selfâ€Assembly of Diblock Copolymer Micelles in Solution. Small, 2016, 12, 3155-3163.	10.0	117
9	Experimental and DFT characterization of Î·â€² nano-phase and its interfaces in Al Zn Mg Cu alloys. Acta Materialia, 2019, 164, 207-219.	7.9	113
10	Precipitation in an Al-Zn-Mg-Cu alloy during isothermal aging: Atomic-scale HAADF-STEM investigation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 691, 60-70.	5.6	112
11	Designing electrolytes with polymerlike glass-forming properties and fast ion transport at low temperatures. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26053-26060.	7.1	82
12	Physical Orphaning versus Chemical Instability: Is Dendritic Electrodeposition of Li Fatal?. ACS Energy Letters, 2019, 4, 1349-1355.	17.4	80
13	On the crystallography and reversibility of lithium electrodeposits at ultrahigh capacity. Nature Communications, 2021, 12, 6034.	12.8	70
14	Facile template-free synthesis of vertically aligned polypyrrole nanosheets on nickel foams for flexible all-solid-state asymmetric supercapacitors. Nanoscale, 2016, 8, 8650-8657.	5.6	64
15	Textured Electrodes: Manipulating Builtâ€in Crystallographic Heterogeneity of Metal Electrodes via Severe Plastic Deformation. Advanced Materials, 2022, 34, e2106867.	21.0	62
16	Precipitation in Mg-Gd-Y-Zr Alloy: Atomic-scale insights into structures and transformations. Materials Characterization, 2016, 117, 76-83.	4.4	61
17	Stabilizing Zinc Electrodeposition in a Battery Anode by Controlling Crystal Growth. Small, 2021, 17, e2101798.	10.0	58
18	Nano-scale precipitation and phase growth in Mg-Gd binary alloy: An atomic-scale investigation using HAADF-STEM. Materials and Design, 2018, 137, 316-324.	7.0	56

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19	Interphases in Lithiumâ€“Sulfur Batteries: Toward Deployable Devices with Competitive Energy Density and Stability. ACS Energy Letters, 2018, 3, 2104-2113.	17.4	54
20	AZ91 Magnesium Alloy/Porous Hydroxyapatite Composite for Potential Application in Bone Repair. Journal of Materials Science and Technology, 2016, 32, 858-864.	10.7	49
21	On the Reversibility and Fragility of Sodium Metal Electrodes. Advanced Energy Materials, 2019, 9, 1901651.	19.5	48
22	Production of fast-charge Zn-based aqueous batteries via interfacial adsorption of ion-oligomer complexes. Nature Communications, 2022, 13, 2283.	12.8	47
23	Interactions between long-period stacking ordered phase and Î²â€² precipitate in Mgâ€“Gdâ€“Yâ€“Znâ€“Zr alloy: Atomic-scale insights from HAADF-STEM. Materials Letters, 2016, 176, 223-227.	2.6	32
24	Nonplanar Electrode Architectures for Ultrahigh Areal Capacity Batteries. ACS Energy Letters, 2019, 4, 271-275.	17.4	32
25	Novel structures observed in Mgâ€“Gdâ€“Yâ€“Zr during isothermal ageing by atomic-scale HAADF-STEM. Materials Letters, 2015, 152, 287-289.	2.6	29
26	Regulating the growth of aluminum electrodeposits: towards anode-free Al batteries. Journal of Materials Chemistry A, 2020, 8, 23231-23238.	10.3	29
27	Unravelling the Structure of Î³â€³ in Mg-Gd-Zn: An Atomic-scale HAADF-STEM Investigation. Materials Characterization, 2016, 120, 345-348.	4.4	26
28	Precipitation in Mg-Sm binary alloy during isothermal ageing: atomic-scale insights from scanning transmission electron microscopy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 669, 304-311.	5.6	25
29	Engineering Multiscale Coupled Electron/Ion Transport in Battery Electrodes. ACS Nano, 2021, 15, 19014-19025.	14.6	23
30	Degradation of precipitation hardening in 7075 alloy subject to thermal exposure: A Cs-corrected STEM study. Journal of Alloys and Compounds, 2018, 741, 656-660.	5.5	21
31	Precipitation of T₁ phase in 2198 Alâ€“Li alloy studied by atomic-resolution HAADF-STEM. Journal of Materials Research, 2019, 34, 3535-3544.	2.6	18
32	Microscopic Origins of Caging and Equilibration of Self-Suspended Hairy Nanoparticles. Macromolecules, 2019, 52, 8187-8196.	4.8	15
33	Segregation of solute atoms in Mgâ€“Ce binary alloy: atomic-scale novel structures observed by HAADF-STEM. Philosophical Magazine, 2017, 97, 1498-1508.	1.6	14
34	Proton Intercalation/Deâ€Intercalation Dynamics in Vanadium Oxides for Aqueous Aluminum Electrochemical Cells. Angewandte Chemie, 2020, 132, 3072-3076.	2.0	13
35	The Effect of Thermal Exposure on the Microstructures and Mechanical Properties of 2198 Alâ€“Li Alloy. Advanced Engineering Materials, 2016, 18, 1225-1233.	3.5	12
36	Thermodynamic re-assessment of the Mgâ€“Gd binary system coupling the microstructure evolution during ageing process. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2020, 68, 101712.	1.6	12

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37	On the strengthening precipitate structures in Mg-Gd-Ag alloy: An atomic-resolution investigation using Cs-corrected STEM. Materials Letters, 2019, 238, 66-69.	2.6	11
38	Nano-Sized Cuboid-Shaped Phase in Mgâ€“Ndâ€“Y Alloy and its Behavior During Isothermal Aging. Microscopy and Microanalysis, 2016, 22, 1244-1250.	0.4	9
39	Atomic-scale characterization of interfaces between 2A70 aluminum alloy matrix and Cu-enriched layer after electropolishing. Materials Characterization, 2019, 150, 150-154.	4.4	8
40	Precipitation in Mgâ€“Ndâ€“Yâ€“Zrâ€“Ca Alloy during Isothermal Aging: A Comprehensive Atomicâ€Scaled Study by Means of HAADFâ€STEM. Advanced Engineering Materials, 2017, 19, 1600244.	3.5	7
41	Atomic-scale observation on the precipitates in various aging stages of Mgâ€“Gdâ€“Yâ€“Cu alloy. Journal of Alloys and Compounds, 2021, 887, 161423.	5.5	7
42	Atomicâ€scale characterization of the equilibrium Î² phase in Mgâ€Ndâ€Y alloy by means of HAADFâ€STEM. Scanning, 2016, 38, 743-746.	1.5	6
43	Segregation of rare earth atoms in Mg-Gd-Y-Zr alloy after a 6-year natural ageing at room temperature: Atomic-scale direct imaging. Materials Letters, 2016, 174, 86-90.	2.6	6
44	Mechanical Properties and Deformation Mechanisms of Mg-Gd-Y-Zr Alloy at Cryogenic and Elevated Temperatures. Journal of Materials Engineering and Performance, 2017, 26, 590-600.	2.5	6
45	Cluster on interface of LPSO phase and matrix in Mg-Gd-Y-Ni alloy: Atomic scale insight from HAADF-STEM. Materials Letters, 2019, 235, 71-75.	2.6	6
46	Study on the precipitates in various aging stages and composite strengthening effect of precipitates and long-period stacking ordered structure of Mgâ€“Gdâ€“Yâ€“Ni alloy. Journal of Materials Research, 2020, 35, 172-184.	2.6	4
47	Atomic imaging of the coherent interface between orientedly-attached Mn3O4 nanoparticles. Materials Characterization, 2016, 117, 144-148.	4.4	3
48	Unexpected Feâ€enriched compounds observed in Mgâ€“Ce alloy: An atomicâ€scale STEM investigation. Scanning, 2016, 38, 783-791.	1.5	2
49	Nanoâ€Size Zirconiumâ€Enriched Cores in Mgâ€“Gdâ€“Yâ€“Zr: An Atomicâ€Scale HAADFâ€“STEM Study. Advanced Engineering Materials, 2016, 18, 1332-1336.	3.5	2
50	Electro-deposited calcium phosphate compounds on graphene sheets: Blossoming flowers. Materials Letters, 2016, 179, 122-125.	2.6	2
51	Unveiling the Interfaces between Î²â€² Precipitates in Mgâ€“Gdâ€“Yâ€“Zr Alloy: Insights from Atomicâ€Scale HAADFâ€STEM. Advanced Engineering Materials, 2018, 20, 1700730.	3.5	2
52	Alignment and strengthening effect of Î²^{â€²} precipitates in Mg-Gd-Y-Zr during ageing process studied by HAADF-STEM and GPA. Philosophical Magazine Letters, 2022, 102, 71-80.	1.2	2
53	(Electrodeposition Division Early Career Investigator Award Address) Regulating Electrochemical Deposition of Metals at Rechargeable Battery Electrodes. ECS Meeting Abstracts, 2021, MA2021-02, 690-690.	0.0	0
54	Understanding the Reversible Electrodeposition of Al in Low-Cost Room Temperature Molten Salts. ECS Meeting Abstracts, 2022, MA2022-01, 1919-1919.	0.0	0