

Hui-Chia Yu

List of Publications by Year in descending order

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28
papers

1,151
citations

567281

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552781

26
g-index

28
all docs

28
docs citations

28
times ranked

1834
citing authors

#	ARTICLE	IF	CITATIONS
1	Tracking lithium transport and electrochemical reactions in nanoparticles. Nature Communications, 2012, 3, 1201.	12.8	254
2	Simulation of coarsening in three-phase solid oxide fuel cell anodes. Journal of Power Sources, 2011, 196, 1333-1337.	7.8	105
3	Vacancy mediated substitutional diffusion in binary crystalline solids. Progress in Materials Science, 2010, 55, 61-105.	32.8	95
4	Mapping the Inhomogeneous Electrochemical Reaction Through Porous LiFePO ₄ -Electrodes in a Standard Coin Cell Battery. Chemistry of Materials, 2015, 27, 2374-2386.	6.7	93
5	Extended smoothed boundary method for solving partial differential equations with general boundary conditions on complex boundaries. Modelling and Simulation in Materials Science and Engineering, 2012, 20, 075008.	2.0	86
6	Dynamics of the self-assembly of nanovoids and nanobubbles in solids. Acta Materialia, 2005, 53, 1799-1807.	7.9	81
7	Particle-Level Modeling of the Charge-Discharge Behavior of Nanoparticulate Phase-Separating Li-Ion Battery Electrodes. Journal of the Electrochemical Society, 2014, 161, A535-A546.	2.9	69
8	Localized concentration reversal of lithium during intercalation into nanoparticles. Science Advances, 2018, 4, eaao2608.	10.3	50
9	Architecture Dependence on the Dynamics of Nano-LiFePO ₄ Electrodes. Electrochimica Acta, 2014, 137, 245-257.	5.2	43
10	Theory of grain boundary diffusion induced by the Kirkendall effect. Applied Physics Letters, 2008, 93, .	3.3	38
11	Three-dimensional phase field sintering simulations accounting for the rigid-body motion of individual grains. Computational Materials Science, 2021, 186, 109963.	3.0	32
12	Substitutional diffusion and Kirkendall effect in binary crystalline solids containing discrete vacancy sources and sinks. Acta Materialia, 2007, 55, 6690-6704.	7.9	29
13	Effect of a Size-Dependent Equilibrium Potential on Nano-LiFePO ₄ Particle Interactions. Journal of the Electrochemical Society, 2015, 162, A1718-A1724.	2.9	29
14	Kinetics of Nanoparticle Interactions in Battery Electrodes. Journal of the Electrochemical Society, 2015, 162, A965-A973.	2.9	28
15	Deformation and stresses in solid-state composite battery cathodes. Journal of Power Sources, 2019, 440, 227116.	7.8	26
16	Simulations of the Kirkendall-Effect-Induced Deformation of Thermodynamically Ideal Binary Diffusion Couples with General Geometries. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3481-3500.	2.2	15
17	Simulation of the diffusional impedance and application to the characterization of electrodes with complex microstructures. Electrochimica Acta, 2020, 354, 136534.	5.2	14
18	Continuum simulations of the formation of Kirkendall-effect-induced hollow cylinders in a binary substitutional alloy. Acta Materialia, 2009, 57, 5348-5360.	7.9	13

#	ARTICLE	IF	CITATIONS
19	A Phase-Field Model and Simulation of Kinetically Asymmetric Ternary Conversion-Reconversion Transformation in Battery Electrodes. <i>Journal of Phase Equilibria and Diffusion</i> , 2016, 37, 86-99.	1.4	11
20	Smoothed Boundary Method for simulating bulk and grain boundary transport in complex polycrystalline microstructures. <i>Computational Materials Science</i> , 2016, 121, 14-22.	3.0	10
21	Development of an 18-item abbreviated Chinese version of Berger's HIV Stigma Scale. <i>International Journal of Nursing Practice</i> , 2019, 25, e12708.	1.7	10
22	Simulation of Electrochemical Double Layer Formation with Complex Geometries. <i>Journal of the Electrochemical Society</i> , 2020, 167, 140515.	2.9	5
23	Smoothed boundary method for simulating incompressible flow in complex geometries. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 399, 115312.	6.6	5
24	Ordering of Nanovoids in an Anisotropic Solid Driven by Surface Misfit. <i>Journal of Computational and Theoretical Nanoscience</i> , 2005, 2, 256-262.	0.4	4
25	Effects of low-energy impact and thermal cycling loadings on fatigue behavior of the quasi-isotropic carbon/epoxy composites. <i>Journal of Polymer Research</i> , 1998, 5, 143-151.	2.4	3
26	Complex Electrode Microstructure Simulations using a Smoothed Boundary Method with Adaptive Mesh Refinement. <i>Journal of the Electrochemical Society</i> , 2022, 169, 070527.	2.9	3
27	Rate-dependent Reversal of Lithium Concentration During Intercalation into Li_xFePO_4 Nanoparticles. <i>Microscopy and Microanalysis</i> , 2018, 24, 1482-1483.	0.4	0
28	Smoothed Boundary Method Electrochemical Simulation Framework for Complex Electrode Microstructures. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 1968-1968.	0.0	0