Huck Beng Chew

List of Publications by Year
in descending order

41 papers	753 citations	516710 16 h-index	552781 26 g-index
41 all docs	41 docs citations	41 times ranked	916 citing authors

#	Article	IF	Citations
1	A review of the multiscale mechanics of silicon electrodes in high-capacity lithium-ion batteries. Journal Physics D: Applied Physics, 2022, 55, 063001.	2.8	9
2	Sliding energy landscape governs interfacial failure of nanotube-reinforced ceramic nanocomposites. Scripta Materialia, 2022, 210, 114413.	5.2	5
3	In situ monitoring of dislocation, twinning, and detwinning modes in an extruded magnesium alloy under cyclic loading conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 806, 140860.	5.6	11
4	Micromechanical origin of the enhanced ductility in twinless duplex Mgâ€“Li alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 815, 141305.	5.6	15
5	Strain-Controlled Dynamic Rotation of Twisted 2D Atomic Layers for Tunable Nanomechanical Systems. ACS Applied Nano Materials, 2020, 3, 10878-10884.	5.0	3
6	Microstructure effects on fatigue crack growth in additively manufactured Tiâ€“6Alâ€“4V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 795, 139993.	5.6	20
7	Bending and interlayer shear moduli of ultrathin boron nitride nanosheet. Journal Physics D: Applied Physics, 2019, 52, 465301.	2.8	26
8	A simple numerical approach for reconstructing the atomic stresses at grain boundaries from quantum-mechanical calculations. Journal of Chemical Physics, 2019, 150, 144702.	3.0	5
9	Nanofibrillar Si Helices for Low-Stress, High-Capacity Li⁺ Anodes with Large Affine Deformations. ACS Applied Materials & Interfaces, 2019, 11, 11715-11721.	8.0	3
10	Multi-scale thermal response modeling of an AVCOAT-like thermal protection material. International Journal of Heat and Mass Transfer, 2019, 133, 1176-1195.	4.8	13
11	Direct nanomechanical measurements of boron nitride nanotubeâ€”ceramic interfaces. Nanotechnology, 2019, 30, 025706.	2.6	16
12	Direct nanomechanical characterization of carbon nanotubes - titanium interfaces. Carbon, 2018, 132, 548-555.	10.3	34
13	Micro-scale thermal response modeling of Avcoat-like TPS. , 2018, , .		3
14	Ablative thermal protection systems: Pyrolysis modeling by scale-bridging molecular dynamics. Carbon, 2018, 130, 315-324.	10.3	42
15	Characterizing the tensile behavior of additively manufactured Ti-6Al-4V using multiscale digital image correlation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 724, 536-546.	5.6	32
16	Oxidation effect on the shear strength of graphene on aluminum and titanium surfaces. Physical Review B, 2018, 98, .	3.2	16
17	Local stress analysis of partial dislocation interactions with symmetrical-tilt grain boundaries containing E-structural units. Philosophical Magazine, 2018, 98, 2345-2366.	1.6	6
18	Interfacial load transfer mechanisms in carbon nanotube-polymer nanocomposites. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170705.	2.1	7

#	Article	IF	Citations
19	High fidelity and multi-scale thermal response modeling of an Avcoat-like TPS. , 2017, , .		2
20	Hydrogen-plasma patterning of multilayer graphene: Mechanisms and modeling. Carbon, 2017, 117, 82-91.	10.3	15
21	Grain boundary traction signatures: Quantifying the asymmetrical dislocation emission processes under tension and compression. Journal of the Mechanics and Physics of Solids, 2017, 103, 142-154.	4.8	27
22	Nanoscale Mechanics of the Solid Electrolyte Interphase on Lithiated-Silicon Electrodes. ACS Applied Materials & Interfaces, 2017, 9, 25662-25667.	8.0	21
23	Molecular dynamics simulations of plasticity and cracking in lithiated silicon electrodes. Extreme Mechanics Letters, 2016, 9, 503-513.	4.1	32
24	Grain Boundary Traction Signatures: Quantitative Predictors of Dislocation Emission. Physical Review Letters, 2016, 117, 085502.	7.8	13
25	Plasma-graphene interaction and its effects on nanoscale patterning. Physical Review B, 2016, 93, .	3.2	28
26	Brittle-to-ductile transition of lithiated silicon electrodes: Crazing to stable nanopore growth. Journal of Chemical Physics, 2015, 143, 104703.	3.0	18
27	Atomic-Scale Mechanisms of Sliding along an Interdiffused Liâ€“Siâ€“Cu Interface. Nano Letters, 2015, 15, 1716-1721.	9.1	15
28	Planar-to-wavy transition of Cuâ€“Ag nanolayered metals: a precursor mechanism to twinning. Philosophical Magazine, 2015, 95, 1029-1048.	1.6	12
29	High damage tolerance of electrochemically lithiated silicon. Nature Communications, 2015, 6, 8417.	12.8	96
30	Communication: Surface-to-bulk diffusion of isolated versus interacting C atoms in Ni(111) and Cu(111) substrates: A first principle investigation. Journal of Chemical Physics, 2015, 142, 061101.	3.0	13
31	Closed and open-ended stacking fault tetrahedra formation along the interfaces of Cuâ€“Al nanolayered metals. Philosophical Magazine, 2015, 95, 2747-2763.	1.6	16
32	Negative stiffness induced by shear along wavy interfaces. Journal of the Mechanics and Physics of Solids, 2014, 63, 285-297.	4.8	2
33	Cracking mechanisms in lithiated silicon thin film electrodes. International Journal of Solids and Structures, 2014, 51, 4176-4187.	2.7	58
34	Deformation twinning and plastic recovery in Cu/Ag nanolayers under uniaxial tensile straining. Philosophical Magazine Letters, 2014, 94, 260-268.	1.2	10
35	Cohesive zone laws for fatigue crack growth: Numerical field projection of the micromechanical damage process in an elasto-plastic medium. International Journal of Solids and Structures, 2014, 51, 1410-1420.	2.7	19
36	Inverse extraction of interfacial tractions from elastic and elasto-plastic far-fields by nonlinear field projection. Journal of the Mechanics and Physics of Solids, 2013, 61, 131-144.	4.8	9

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37	Nanoscale mechanisms of surface stress and morphology evolution in FCC metals under noble-gas ion bombardments. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 2550-2573.	2.1	12
38	Inverse extraction of cohesive zone laws by field projection method using numerical auxiliary fields. International Journal for Numerical Methods in Engineering, 2012, 91, 516-530.	2.8	17
39	Nanometer Scale Mechanical Behavior of Grain Boundaries. Materials Research Society Symposia Proceedings, 2011, 1297, 1.	0.1	1
40	Cohesive zone laws for void growth â€" II. Numerical field projection of elasto-plastic fracture processes with vapor pressure. Journal of the Mechanics and Physics of Solids, 2009, 57, 1374-1390.	4.8	18
41	Cohesive-zone laws for void growth â€" I. Experimental field projection of crack-tip crazing in glassy polymers. Journal of the Mechanics and Physics of Solids, 2009, 57, 1357-1373.	4.8	33