Guangming Cheng

List of Publications by Year
in descending order

72	3,206	30	56
papers	citations	h-index	g-index
		159525	149623

72	72	72	3679
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	TaCo₂Te₂: An Airâ€Stable, High Mobility Van der Waals Material with Probable Magnetic Order. Advanced Functional Materials, 2022, 32, .	7.8	10
2	Observation of a linked-loop quantum state in a topological magnet. Nature, 2022, 604, 647-652.	13.7	18
3	Magnetic Nanosheets via Chemical Exfoliation of K_{2<i>x</i>}Mn_{<i>x</i>}Sn_{1â€“<i>x</i>}S₂. Chemistry of Materials, 2022, 34, 5084-5093.	3.2	2
4	Accelerated aging of all-inorganic, interface-stabilized perovskite solar cells. Science, 2022, 377, 307-310.	6.0	121
5	Evidence of a room-temperature quantum spin Hall edge state in a higher-order topological insulator. Nature Materials, 2022, 21, 1111-1115.	13.3	32
6	New material platform for superconducting transmon qubits with coherence times exceeding 0.3 milliseconds. Nature Communications, 2021, 12, 1779.	5.8	224
7	The Effects of Chromophore Halogenation on the Stability of UVâ€Absorbing Organic Solar Cells. Advanced Energy Materials, 2021, 11, 2100225.	10.2	15
8	Probing the Variation of the Intervalley Tunnel Coupling in a Silicon Triple Quantum Dot. PRX Quantum, 2021, 2, .	3.5	17
9	Band Engineering of Dirac Semimetals Using Charge Density Waves. Advanced Materials, 2021, 33, e2101591.	11.1	32
10	Tensile detwinning in bi-twinned metallic nanowires. Microscopy and Microanalysis, 2021, 27, 1488-1490.	0.2	0
11	Interaction of dislocations with twinning boundary in bi-twinned metallic nanowires. Microscopy and Microanalysis, 2021, 27, 1960-1962.	0.2	0
12	Identification of topological magnetic order in a Weyl line ferromagnet. Microscopy and Microanalysis, 2021, 27, 214-215.	0.2	0
13	Manipulation of single atoms and molecules by electron probe and mechanical force. Microscopy and Microanalysis, 2021, 27, 220-221.	0.2	1
14	Identification of interfacial defects in the layered structure of a chalcopyrite compound. Microscopy and Microanalysis, 2021, 27, 1750-1752.	0.2	0
15	Kinetics and Evolution of Magnetism in Soft-Chemical Synthesis of CrSe₂ from KCrSe₂. Chemistry of Materials, 2021, 33, 8070-8078.	3.2	11
16	Signatures of Weyl Fermion Annihilation in a Correlated Kagome Magnet. Physical Review Letters, 2021, 127, 256403.	2.9	17
17	Magnetic Frustration in a Zeolite. Chemistry of Materials, 2021, 33, 9725-9731.	3.2	1
18	Microelectromechanical Systems for Nanomechanical Testing: Electrostatic Actuation and Capacitive Sensing for High-Strain-Rate Testing. Experimental Mechanics, 2020, 60, 329-343.	1.1	14

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19	Microelectromechanical Systems for Nanomechanical Testing: Displacement- and Force-Controlled Tensile Testing with Feedback Control. Experimental Mechanics, 2020, 60, 1005-1015.	1.1	11
20	Quantum-limit Chern topological magnetism in TbMn6Sn6. Nature, 2020, 583, 533-536.	13.7	253
21	Observation of [V_{Cu}^{1â€“}In<i>_i</i>²⁺V_{Cu}^{1â€“}] Defect Triplets in Cu-Deficient CuInS₂. Journal of Physical Chemistry C, 2020, 124, 26415-26427.	1.5	5
22	Fermionâ€“boson many-body interplay in a frustrated kagome paramagnet. Nature Communications, 2020, 11, 4003.	5.8	35
23	In Situ Nano-thermo-mechanical Experiment Reveals Brittle to Ductile Transition in Si Nanowires. Microscopy and Microanalysis, 2020, 26, 3192-3194.	0.2	2
24	In Situ Observation of Electrochemical Reduction of CO2 Using Cuprous and Intermetallic Catalysts. Microscopy and Microanalysis, 2020, 26, 1444-1446.	0.2	0
25	In-situ TEM study of dislocation interaction with twin boundary and retraction in twinned metallic nanowires. Acta Materialia, 2020, 196, 304-312.	3.8	25
26	Competition between shear localization and tensile detwinning in twinned nanowires. Physical Review Materials, 2020, 4, .	0.9	7
27	Transition of Deformation Mechanisms in Single-Crystalline Metallic Nanowires. ACS Nano, 2019, 13, 9082-9090.	7.3	33
28	In Situ Nano-thermomechanical Experiment Reveals Brittle to Ductile Transition in Silicon Nanowires. Nano Letters, 2019, 19, 5327-5334.	4.5	34
29	Extending the Photovoltaic Response of Perovskite Solar Cells into the Nearâ€Infrared with a Narrowâ€Bandgap Organic Semiconductor. Advanced Materials, 2019, 31, e1904494.	11.1	71
30	Soft Chemical Synthesis of H_{<i>x</i>}CrS₂: An Antiferromagnetic Material with Alternating Amorphous and Crystalline Layers. Journal of the American Chemical Society, 2019, 141, 15634-15640.	6.6	31
31	Hydrogen embrittlement in metallic nanowires. Nature Communications, 2019, 10, 2004.	5.8	37
32	Atomic structure of Î³â€³ phase in Mgâ€“Gdâ€“Yâ€“Ag alloy induced by Ag addition. Philosophical Magazine, 2019, 99, 1957-1969.	0.7	27
33	Perovskite Solar Cells: Extending the Photovoltaic Response of Perovskite Solar Cells into the Nearâ€Infrared with a Narrowâ€Bandgap Organic Semiconductor (Adv. Mater. 49/2019). Advanced Materials, 2019, 31, 1970349.	11.1	1
34	Anomalous Tensile Detwinning in Twinned Metallic Nanowires. Microscopy and Microanalysis, 2018, 24, 1824-1825.	0.2	0
35	Anelastic Behavior in Crystalline Nanowires. Microscopy and Microanalysis, 2018, 24, 1908-1909.	0.2	0
36	On the origin and behavior of irradiation-induced c-component dislocation loops in magnesium. Acta Materialia, 2017, 131, 457-466.	3.8	16

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37	Composition design and electrical property of a pure KxNa1â˜’xNbO3 single crystal fabricated by the seed-free solid-state crystal growth. Journal of Materials Science: Materials in Electronics, 2017, 28, 18357-18365.	1.1	12
38	Anomalous Tensile Detwinning in Twinned Nanowires. Physical Review Letters, 2017, 119, 256101.	2.9	47
39	Evolution of Irradiationâ€Induced Vacancy Defects in Boron Nitride Nanotubes. Small, 2016, 12, 818-824.	5.2	19
40	On the size-dependent elasticity of penta-twinned silver nanowires. Extreme Mechanics Letters, 2016, 8, 177-183.	2.0	38
41	Grain size effect on radiation tolerance of nanocrystalline Mo. Scripta Materialia, 2016, 123, 90-94.	2.6	60
42	Effect of Ag on interfacial segregation in Mgâ€"Gdâ€"Yâ€"(Ag)â€"Zr alloy. Acta Materialia, 2015, 95, 20-29.	3.8	95
43	Anneal hardening of a nanostructured Cuâ€"Al alloy processed by high-pressure torsion and rolling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 628, 207-215.	2.6	24
44	Recoverable plasticity in penta-twinned metallic nanowires governed by dislocation nucleation and retraction. Nature Communications, 2015, 6, 5983.	5.8	135
45	Large anelasticity and associated energy dissipation in single-crystalline nanowires. Nature Nanotechnology, 2015, 10, 687-691.	15.6	70
46	Strain Hardening and Size Effect in Five-fold Twinned Ag Nanowires. Nano Letters, 2015, 15, 4037-4044.	4.5	122
47	In-depth structure characterization and properties of (1â˜’x)(Li0.05Na0.475K0.475)(Nb0.95Sb0.05)O3â˜’xBiFeO3 lead-free piezoceramics. Journal of Materials Science: Materials in Electronics, 2015, 26, 9366-9372.	1.1	18
48	Design and operation of silver nanowire based flexible and stretchable touch sensors. Journal of Materials Research, 2015, 30, 79-85.	1.2	48
49	Dynamic Void Growth and Shrinkage in Mg under Electron Irradiation. Materials Research Letters, 2014, 2, 176-183.	4.1	7
50	A new metastable precipitate phase in Mgâ€"Gdâ€"Yâ€"Zr alloy. Philosophical Magazine, 2014, 94, 2403-2409.	0.7	38
51	Mechanical Properties of Silicon Carbide Nanowires: Effect of Size-Dependent Defect Density. Nano Letters, 2014, 14, 754-758.	4.5	161
52	In-situ atomic-scale observation of irradiation-induced void formation. Nature Communications, 2013, 4, 2288.	5.8	98
53	Ultrastrong Mg Alloy via Nano-spaced Stacking Faults. Materials Research Letters, 2013, 1, 61-66.	4.1	268
54	Morphology, structure and composition of precipitates in Al0.3CoCrCu0.5FeNi high-entropy alloy. Intermetallics, 2013, 32, 329-336.	1.8	82

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55	Significant hardening due to the formation of a sigma phase matrix in a high entropy alloy. Intermetallics, 2013, 33, 81-86.	1.8	153
56	Deformation-induced Ï‰ phase in nanocrystalline Mo. Scripta Materialia, 2013, 68, 130-133.	2.6	29
57	Grain Size Effect on Deformation Mechanisms of Nanocrystalline bcc Metals. Materials Research Letters, 2013, 1, 26-31.	4.1	78
58	Dislocations with edge components in nanocrystalline bcc Mo. Journal of Materials Research, 2013, 28, 1820-1826.	1.2	28
59	Physics and model of strengthening by parallel stacking faults. Applied Physics Letters, 2013, 103, .	1.5	81
60	Microstructure evolution and room temperature deformation of a unidirectionally solidified Nb-22Ti-16Si-3Ta-2Hf-7Cr-3Al-0.2Ho (at.%) alloy. Intermetallics, 2011, 19, 196-201.	1.8	22
61	Characterization of a new Nbâ€“silicide (Î´-Nb₁₁Si₄) in Nbâ€“Si binary systems. Philosophical Magazine, 2010, 90, 2557-2568.	0.7	12
62	Effect of growth rate on microstructure and mechanical properties in a directionally solidified Nb-silicide base alloy. Materials & Design, 2009, 30, 2274-2277.	5.1	27
63	Microstructural characteristics and high temperature compressive properties at 1623K of a directionally solidified Nb-silisides based in-situ composite. Journal of Alloys and Compounds, 2009, 470, 606-609.	2.8	12
64	Multiple deformation mechanisms of Tiâ€“22.4Nbâ€“0.73Taâ€“2.0Zrâ€“1.34O alloy. Applied Physics Letters, 2009, 94, 061901.	1.5	44
65	Orientation relationship and interfacial structure betweenÎ±-Nb5Si3and Nb solid solution in the eutectic lamellar structure. Philosophical Magazine, 2009, 89, 2801-2812.	0.7	17
66	Orientation relationship and interfacial structure between Nbsolid solution precipitates and Î±-Nb5Si3 intermetallics. Journal of Materials Research, 2009, 24, 192-197.	1.2	10
67	Stress-introduced Î±â€³ martensite and twinning in a multifunctional titanium alloy. Scripta Materialia, 2008, 58, 9-12.	2.6	62
68	Microstructure and room temperature fracture toughness of cast Nbss/silicides composites alloyed with Hf. Materials Letters, 2008, 62, 2657-2660.	1.3	27
69	Microstructures and mechanical properties of cast Nbâ€“Tiâ€“Siâ€“Zr alloys. Intermetallics, 2008, 16, 807-812.	1.8	67
70	Deformation Induced Microtwins and Stacking Faults in Aluminum Single Crystal. Physical Review Letters, 2008, 101, 115505.	2.9	81
71	Elevated temperature compressive behavior of Nb-22Ti-16Si-7Cr-3Al-3Ta-2Hf alloy with minor Ho addition. International Journal of Materials Research, 2008, 99, 228-232.	0.1	2
72	Microstructure and Mechanical Properties of Directionally Solidified Nbâ€•22Tiâ€•16Siâ€•7Crâ€•3Alâ€•3Taâ€•2Hfâ€•0.1Ho Alloy. Advanced Engineering Materials, 2007, 9, 963-966.	1.6	9