Chien-Neng Liao

List of Publications by Year
in descending order

68	1,372	393982	360668
papers	citations	19 h-index	35 g-index

68	68	68	1633
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Observation of Atomic Diffusion at Twin-Modified Grain Boundaries in Copper. Science, 2008, 321, 1066-1069.	6.0	352
2	Thermoelectric properties of nanostructured bismuthâ€“telluride thin films grown using pulsed laser deposition. Journal of Alloys and Compounds, 2014, 615, 546-552.	2.8	83
3	Thermodynamic Routes to Ultralow Thermal Conductivity and High Thermoelectric Performance. Advanced Materials, 2020, 32, e1906457.	11.1	71
4	Effect of ball milling and post treatment on crystal defects and transport properties of Bi2(Se,Te)3 compounds. Journal of Applied Physics, 2011, 110, .	1.1	57
5	Effect of Interfacial Compound Formation on Contact Resistivity of Soldered Junctions Between Bismuth Telluride-Based Thermoelements and Copper. Electrochemical and Solid-State Letters, 2007, 10, P23.	2.2	51
6	Manipulating the Crystallographic Texture of Nanotwinned Cu Films by Electrodeposition. Crystal Growth and Design, 2011, 11, 4970-4974.	1.4	39
7	Thermoelectric properties of bismuth-selenide films with controlled morphology and texture grown using pulsed laser deposition. Applied Surface Science, 2013, 285, 657-663.	3.1	38
8	Effects of Copper Doping on Microstructural Evolution in Eutectic SnBi Solder Stripes under Annealing and Current Stressing. Journal of Electronic Materials, 2007, 36, 760-765.	1.0	36
9	Preparation of bismuth telluride thin films through interfacial reaction. Thin Solid Films, 2007, 515, 8059-8064.	0.8	32
10	Enhancement of thermoelectric properties of sputtered Biâ€“Sbâ€“Te thin films by electric current stressing. Applied Physics Letters, 2008, 93, .	1.5	31
11	Electrochemical Cycling-Induced Spiky Cu_xO/Cu Nanowire Array for Glucose Sensing. ACS Omega, 2019, 4, 12222-12229.	1.6	30
12	Thermal transport properties of nanocrystalline Biâ€“Sbâ€“Te thin films prepared by sputter deposition. Journal of Applied Physics, 2008, 104, .	1.1	28
13	Growth of large-scale nanotwinned Cu nanowire arrays from anodic aluminum oxide membrane by electrochemical deposition process: controllable nanotwin density and growth orientation with enhanced electrical endurance performance. Nanoscale, 2014, 6, 7332-7338.	2.8	27
14	Thermoelectric Properties of Ag-Doped Bi₂(Se,Te)₃ Compounds: Dual Electronic Nature of Ag-Related Lattice Defects. Inorganic Chemistry, 2015, 54, 7438-7444.	1.9	27
15	Direct observation of electromigration-induced surface atomic steps in Cu lines by in situ transmission electron microscopy. Applied Physics Letters, 2007, 90, 203101.	1.5	26
16	Enhanced photolysis stability of Cu₂O grown on Cu nanowires with nanoscale twin boundaries. Nanoscale, 2019, 11, 13709-13713.	2.8	26
17	Suppression of interdiffusion-induced voiding in oxidation of copper nanowires with twin-modified surface. Nature Communications, 2018, 9, 340.	5.8	25
18	Modulation of Crystallographic Texture and Twinning Structure of Cu Nanowires by Electrodeposition. Journal of the Electrochemical Society, 2013, 160, D207-D211.	1.3	24

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19	Twin-mediated epitaxial growth of highly lattice-mismatched Cu/Ag coreâ€“shell nanowires. Nanoscale, 2018, 10, 9862-9866.	2.8	24
20	Effect of Ag addition in Sn on growth of SnTe compound during reaction between molten solder and tellurium. Journal of Materials Research, 2010, 25, 391-395.	1.2	19
21	Enhancement of carrier transport properties of BixSb2â^'xTe3 compounds by electrical sintering process. Applied Physics Letters, 2009, 95, .	1.5	17
22	A Physical Model of Solenoid Inductors on Silicon Substrates. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 2579-2585.	2.9	16
23	Electrical and thermal transport properties of electrically stressed Biâ€“Sbâ€“Te nanocrystalline thin films. Thin Solid Films, 2011, 519, 4394-4399.	0.8	16
24	Mechanical and thermal processing effects on crystal defects and thermoelectric transport properties of Bi2(Se,Te)3 compounds. Journal of Alloys and Compounds, 2013, 571, 178-182.	2.8	16
25	Optimization of the nanotwin-induced zigzag surface of copper by electromigration. Nanoscale, 2016, 8, 2584-2588.	2.8	16
26	Oscillatory Transport Properties of Thermally Annealed Biâ•Te Multilayer Thin Films. Journal of the Electrochemical Society, 2007, 154, H304.	1.3	15
27	Thermoelectric properties of Biâ€“Sbâ€“Te materials prepared by electric current stressing. Journal of Alloys and Compounds, 2010, 490, 468-471.	2.8	15
28	Stability of nanoscale twins in copper under electric current stressing. Journal of Applied Physics, 2010, 108, 066103.	1.1	14
29	Chemical reactivity of twin-modified copper nanowire surfaces. Applied Physics Letters, 2015, 107, .	1.5	14
30	Mass transport phenomena in copper nanowires at high current density. Nano Research, 2016, 9, 1071-1078.	5.8	14
31	A method for the determination of gold thin film's mechanical properties. Thin Solid Films, 1994, 238, 70-72.	0.8	11
32	Multilevel Suspended Thin-Film Inductors on Silicon Wafers. IEEE Transactions on Electron Devices, 2007, 54, 1510-1514.	1.6	11
33	Electromigration-induced Pb segregation in eutectic Snâ€“Pb molten solder. Journal of Materials Research, 2005, 20, 3425-3430.	1.2	10
34	Large-scale nanotwins in Cu films/Cu nanowires via stress engineering by a high-energy ion beam bombardment process: growth and characterization. Journal of Materials Chemistry C, 2014, 2, 9805-9812.	2.7	10
35	Suppression of vigorous liquid Sn/Te reactions by Snâ€“Cu solder alloys. Journal of Materials Research, 2008, 23, 3303-3308.	1.2	8
36	Polarity effect on interfacial reactions at soldered junctions of electrically stressed thermoelectric modules. Applied Physics Letters, 2010, 97, 241906.	1.5	8

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37	Thermoelectric properties of electrically stressed Sb/Biâ€“Sbâ€“Te multilayered films. Journal of Applied Physics, 2010, 107, .	1.1	8
38	Surface roughness reduction in nanocrystalline Cu thin films by electrical stressing treatment. Applied Physics Letters, 2011, 98, 181902.	1.5	8
39	Photocatalytic CO2 reduction for C2-C3 oxy-compounds on ZIF-67 derived carbon with TiO2. Journal of CO2 Utilization, 2022, 58, 101920.	3.3	8
40	Electrocrystallization of Mutually Crossed Bismuth Telluride Nanoplatelets. Journal of the Electrochemical Society, 2010, 157, D605.	1.3	7
41	Effect of antimony on vigorous interfacial reaction of Snâ€“Sb/Te couples. Journal of Alloys and Compounds, 2011, 509, 5142-5146.	2.8	7
42	Morphology, Texture and Twinning Structure of Cu Films Prepared by Low-Temperature Electroplating. Journal of the Electrochemical Society, 2013, 160, D3070-D3074.	1.3	7
43	Thermoelectric transport properties of Biâ€“Te based thin films on strained polyimide substrates. Applied Physics Letters, 2014, 105, 133903.	1.5	7
44	Enhanced Seebeck coefficient of bismuth telluride compounds with graded doping profiles. Applied Physics Letters, 2013, 103, .	1.5	6
45	Electrodeposition and Growth Mechanism of Nanotwinned Copper in High Aspect-Ratio via Structures. Journal of the Electrochemical Society, 2021, 168, 102503.	1.3	6
46	Flexible thermoelectric generators prepared by dispenser printing technology. Materials Chemistry and Physics, 2022, 287, 126269.	2.0	6
47	Experimental and theoretical assessments of thermal boundary resistance between Bi0.4Sb1.6Te3 thin films and metals. Applied Physics Letters, 2014, 105, 013903.	1.5	5
48	Anisotropic thermal conductivity of sputtered Bi0.5Sb1.5Te3 films after current-assisted thermal treatment. Thin Solid Films, 2018, 645, 93-96.	0.8	5
49	Enhanced thermoelectric properties of screen-printed Biâ€“Sbâ€“Te films on flexible substrate by electrical sintering process. Materials Chemistry and Physics, 2021, 259, 124006.	2.0	5
50	Growth of nanotwinned Cu nanowires in modified anodic aluminum oxide templates. Materials Letters, 2021, 288, 129381.	1.3	5
51	Current crowding effect on thermal characteristics of Ni/doped-Si contacts. IEEE Electron Device Letters, 2003, 24, 637-639.	2.2	3
52	Characterization and modeling of twinning superlattice structure in copper nanowires. Materials Letters, 2017, 194, 23-25.	1.3	3
53	Enhancement of fatigue resistance of Bi-Sb-Te films on flexible substrates by current-assisted thermal annealing. Materials Letters, 2017, 186, 314-317.	1.3	3
54	Transport properties of electrically sintered bismuth antimony telluride with antimony nanoprecipitation. Applied Physics Letters, 2017, 111, 143901.	1.5	3

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55	Grain growth behavior and enhanced thermoelectric properties of PbTe consolidated by high-density pulse current. Journal of Alloys and Compounds, 2020, 815, 152658.	2.8	3
56	Effect of interfacial resistance and contact size on current crowding at Ni/poly-Si junctions. Semiconductor Science and Technology, 2005, 20, 659-663.	1.0	2
57	Transverse thermoelectric effect of asymmetrically doped Bi-Sb-Te compounds. Journal of Applied Physics, 2016, 119, .	1.1	2
58	Synthesis and characterization of Ge-Ag-Sb-S-Se-Te high-entropy thermoelectric alloys. Materials Letters, 2022, 311, 131617.	1.3	2
59	Stress relaxation and microstructural change in passivated Al(Cu) lines during isothermal annealing. AIP Conference Proceedings, 1996, , .	0.3	1
60	High-quality Solenoid Inductors on Silicon Wafers. , 2006, , .		1
61	In-situ transmission electron microscopy study of nanotwinned copper under electromigration. , 2010, , .		1
62	Electrically motivated atomic migration and defect formation in Bi0.5Sb1.5Te3 compounds. Materials Chemistry and Physics, 2018, 204, 373-377.	2.0	1
63	In-situ Microscopic Study of Cu Intragranular Electromigration. Materials Research Society Symposia Proceedings, 2005, 907, 1.	0.1	0
64	Preparation of Bismuth Telluride Compound Semiconductors Through Thin Film Reactions. ECS Transactions, 2006, 2, 143-150.	0.3	0
65	Preparation and evaluation of the n-type PbTe based material properties for thermoelectric generators. Materials Research Society Symposia Proceedings, 2013, 1490, 179-184.	0.1	0
66	Enhancing Chemical Stability of Electroplated Cu Films by Engineering Electrolyte Chemistry and Twinning Structure. Journal of Electronic Materials, 2015, 44, 2529-2535.	1.0	0
67	Scattering characteristics of grain boundaries in electrically sintered Bi 0.4 Sb 1.6 Te 3 compounds. Materials Letters, 2017, 197, 21-23.	1.3	0
68	Fabrication and characterization of copper nanowires with dense nanoscale twin boundaries. , 2017, , .		0