

# Chien-Neng Liao

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

61  
papers

1,070  
citations

17  
h-index

31  
g-index

68  
ext. papers

1,238  
ext. citations

4.9  
avg, IF

4.5  
L-index

#	Paper	IF	Citations
61	Photocatalytic CO <sub>2</sub> reduction for C <sub>2</sub> -C <sub>3</sub> oxy-compounds on ZIF-67 derived carbon with TiO <sub>2</sub> . <i>Journal of CO<sub>2</sub> Utilization</i> , <b>2022</b> , 58, 101920	7.6	0
60	Synthesis and characterization of Ge-Ag-Sb-S-Se-Te high-entropy thermoelectric alloys. <i>Materials Letters</i> , <b>2022</b> , 311, 131617	3.3	0
59	Flexible thermoelectric generators prepared by dispenser printing technology. <i>Materials Chemistry and Physics</i> , <b>2022</b> , 287, 126269	4.4	2
58	Electrodeposition and Growth Mechanism of Nanotwinned Copper in High Aspect-Ratio via Structures. <i>Journal of the Electrochemical Society</i> , <b>2021</b> , 168, 102503	3.9	0
57	Growth of nanotwinned Cu nanowires in modified anodic aluminum oxide templates. <i>Materials Letters</i> , <b>2021</b> , 288, 129381	3.3	2
56	Enhanced thermoelectric properties of screen-printed Bi <sub>0.5</sub> Sb <sub>1.5</sub> Te <sub>3</sub> films on flexible substrate by electrical sintering process. <i>Materials Chemistry and Physics</i> , <b>2021</b> , 259, 124006	4.4	3
55	Grain growth behavior and enhanced thermoelectric properties of PbTe consolidated by high-density pulse current. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 815, 152658	5.7	0
54	Thermodynamic Routes to Ultralow Thermal Conductivity and High Thermoelectric Performance. <i>Advanced Materials</i> , <b>2020</b> , 32, e1906457	24	40
53	Enhanced photolysis stability of CuO grown on Cu nanowires with nanoscale twin boundaries. <i>Nanoscale</i> , <b>2019</b> , 11, 13709-13713	7.7	19
52	Electrochemical Cycling-Induced Spiky Cu O/Cu Nanowire Array for Glucose Sensing. <i>ACS Omega</i> , <b>2019</b> , 4, 12222-12229	3.9	22
51	Suppression of interdiffusion-induced voiding in oxidation of copper nanowires with twin-modified surface. <i>Nature Communications</i> , <b>2018</b> , 9, 340	17.4	14
50	Anisotropic thermal conductivity of sputtered Bi <sub>0.5</sub> Sb <sub>1.5</sub> Te <sub>3</sub> films after current-assisted thermal treatment. <i>Thin Solid Films</i> , <b>2018</b> , 645, 93-96	2.2	4
49	Twin-mediated epitaxial growth of highly lattice-mismatched Cu/Ag core-shell nanowires. <i>Nanoscale</i> , <b>2018</b> , 10, 9862-9866	7.7	18
48	Electrically motivated atomic migration and defect formation in Bi <sub>0.5</sub> Sb <sub>1.5</sub> Te <sub>3</sub> compounds. <i>Materials Chemistry and Physics</i> , <b>2018</b> , 204, 373-377	4.4	1
47	Characterization and modeling of twinning superlattice structure in copper nanowires. <i>Materials Letters</i> , <b>2017</b> , 194, 23-25	3.3	1
46	Scattering characteristics of grain boundaries in electrically sintered Bi <sub>0.4</sub> Sb <sub>1.6</sub> Te <sub>3</sub> compounds. <i>Materials Letters</i> , <b>2017</b> , 197, 21-23	3.3	
45	Enhancement of fatigue resistance of Bi-Sb-Te films on flexible substrates by current-assisted thermal annealing. <i>Materials Letters</i> , <b>2017</b> , 186, 314-317	3.3	3

44	Transport properties of electrically sintered bismuth antimony telluride with antimony nanoprecipitation. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 143901	3.4	3
43	Optimization of the nanotwin-induced zigzag surface of copper by electromigration. <i>Nanoscale</i> , <b>2016</b> , 8, 2584-8	7.7	9
42	Mass transport phenomena in copper nanowires at high current density. <i>Nano Research</i> , <b>2016</b> , 9, 1071-1078		10
41	Transverse thermoelectric effect of asymmetrically doped Bi-Sb-Te compounds. <i>Journal of Applied Physics</i> , <b>2016</b> , 119, 205101	2.5	2
40	Thermoelectric Properties of Ag-Doped Bi <sub>2</sub> (Se,Te) <sub>3</sub> Compounds: Dual Electronic Nature of Ag-Related Lattice Defects. <i>Inorganic Chemistry</i> , <b>2015</b> , 54, 7438-44	5.1	20
39	Chemical reactivity of twin-modified copper nanowire surfaces. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 021603	3.4	10
38	Enhancing Chemical Stability of Electroplated Cu Films by Engineering Electrolyte Chemistry and Twinning Structure. <i>Journal of Electronic Materials</i> , <b>2015</b> , 44, 2529-2535	1.9	
37	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. <i>Nanoscale</i> , <b>2014</b> , 6, 7332-8	7.7	22
36	Thermoelectric properties of nanostructured bismuth telluride thin films grown using pulsed laser deposition. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 615, 546-552	5.7	68
35	Large-scale nanotwins in Cu films/Cu nanowires via stress engineering by a high-energy ion beam bombardment process: growth and characterization. <i>Journal of Materials Chemistry C</i> , <b>2014</b> , 2, 9805-9812	7.1	6
34	Experimental and theoretical assessments of thermal boundary resistance between Bi <sub>0.4</sub> Sb <sub>1.6</sub> Te <sub>3</sub> thin films and metals. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 013903	3.4	5
33	Thermoelectric transport properties of Bi <sub>2</sub> Te <sub>3</sub> based thin films on strained polyimide substrates. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 133903	3.4	7
32	Thermoelectric properties of bismuth-selenide films with controlled morphology and texture grown using pulsed laser deposition. <i>Applied Surface Science</i> , <b>2013</b> , 285, 657-663	6.7	30
31	Mechanical and thermal processing effects on crystal defects and thermoelectric transport properties of Bi <sub>2</sub> (Se,Te) <sub>3</sub> compounds. <i>Journal of Alloys and Compounds</i> , <b>2013</b> , 571, 178-182	5.7	14
30	Enhanced Seebeck coefficient of bismuth telluride compounds with graded doping profiles. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 163903	3.4	6
29	Preparation and evaluation of the n-type PbTe based material properties for thermoelectric generators. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1490, 179-184		
28	Morphology, Texture and Twinning Structure of Cu Films Prepared by Low-Temperature Electroplating. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, D3070-D3074	3.9	4
27	Modulation of Crystallographic Texture and Twinning Structure of Cu Nanowires by Electrodeposition. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, D207-D211	3.9	14

26	Manipulating the Crystallographic Texture of Nanotwinned Cu Films by Electrodeposition. <i>Crystal Growth and Design</i> , <b>2011</b> , 11, 4970-4974	3.5	29
25	Effect of ball milling and post treatment on crystal defects and transport properties of Bi <sub>2</sub> (Se,Te) <sub>3</sub> compounds. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 093707	2.5	43
24	Effect of antimony on vigorous interfacial reaction of Sn <sub>3</sub> Bi/Te couples. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, 5142-5146	5.7	7
23	Electrical and thermal transport properties of electrically stressed Bi <sub>2</sub> Sb <sub>2</sub> Te <sub>3</sub> nanocrystalline thin films. <i>Thin Solid Films</i> , <b>2011</b> , 519, 4394-4399	2.2	13
22	Surface roughness reduction in nanocrystalline Cu thin films by electrical stressing treatment. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 181902	3.4	8
21	Effect of Ag addition in Sn on growth of SnTe compound during reaction between molten solder and tellurium. <i>Journal of Materials Research</i> , <b>2010</b> , 25, 391-395	2.5	15
20	Polarity effect on interfacial reactions at soldered junctions of electrically stressed thermoelectric modules. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 241906	3.4	7
19	Electrocrystallization of Mutually Crossed Bismuth Telluride Nanoplatelets. <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, D605	3.9	7
18	Thermoelectric properties of Bi <sub>2</sub> Sb <sub>2</sub> Te <sub>3</sub> materials prepared by electric current stressing. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 490, 468-471	5.7	15
17	Enhancement of carrier transport properties of Bi <sub>2</sub> Sb <sub>2</sub> Te <sub>3</sub> compounds by electrical sintering process. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 052112	3.4	15
16	Observation of atomic diffusion at twin-modified grain boundaries in copper. <i>Science</i> , <b>2008</b> , 321, 1066-9	33.3	286
15	Thermal transport properties of nanocrystalline Bi <sub>2</sub> Sb <sub>2</sub> Te <sub>3</sub> thin films prepared by sputter deposition. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 104312	2.5	26
14	Suppression of vigorous liquid Sn/Te reactions by Sn-Cu solder alloys. <i>Journal of Materials Research</i> , <b>2008</b> , 23, 3303-3308	2.5	7
13	Enhancement of thermoelectric properties of sputtered Bi <sub>2</sub> Sb <sub>2</sub> Te <sub>3</sub> thin films by electric current stressing. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 042103	3.4	29
12	Multilevel Suspended Thin-Film Inductors on Silicon Wafers. <i>IEEE Transactions on Electron Devices</i> , <b>2007</b> , 54, 1510-1514	2.9	9
11	Effects of Copper Doping on Microstructural Evolution in Eutectic SnBi Solder Stripes under Annealing and Current Stressing. <i>Journal of Electronic Materials</i> , <b>2007</b> , 36, 760-765	1.9	28
10	Preparation of bismuth telluride thin films through interfacial reaction. <i>Thin Solid Films</i> , <b>2007</b> , 515, 8059-8064	3.0	30
9	Effect of Interfacial Compound Formation on Contact Resistivity of Soldered Junctions Between Bismuth Telluride-Based Thermoelements and Copper. <i>Electrochemical and Solid-State Letters</i> , <b>2007</b> , 10, P23		47

8	Direct observation of electromigration-induced surface atomic steps in Cu lines by in situ transmission electron microscopy. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 203101	3.4	25
7	A Physical Model of Solenoid Inductors on Silicon Substrates. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2007</b> , 55, 2579-2585	4.1	12
6	Oscillatory Transport Properties of Thermally Annealed BiTe Multilayer Thin Films. <i>Journal of the Electrochemical Society</i> , <b>2007</b> , 154, H304	3.9	14
5	Electromigration-induced Pb segregation in eutectic SnPb molten solder. <i>Journal of Materials Research</i> , <b>2005</b> , 20, 3425-3430	2.5	9
4	In-situ Microscopic Study of Cu Intragranular Electromigration. <i>Materials Research Society Symposia Proceedings</i> , <b>2005</b> , 907, 1		
3	Effect of interfacial resistance and contact size on current crowding at Ni/poly-Si junctions. <i>Semiconductor Science and Technology</i> , <b>2005</b> , 20, 659-663	1.8	0
2	Current crowding effect on thermal characteristics of Ni/doped-Si contacts. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 637-639	4.4	3
1	A method for the determination of gold thin film mechanical properties. <i>Thin Solid Films</i> , <b>1994</b> , 238, 70-72	2.2	9