

Bernard Hao-Chih Liu

List of Publications by Year in descending order

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61
papers

929
citations

516561

16
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501076

28
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61
all docs

61
docs citations

61
times ranked

1275
citing authors

#	ARTICLE	IF	CITATIONS
1	Screw extrusion-based additive manufacturing of PEEK. <i>Materials and Design</i> , 2018, 140, 209-221.	3.3	116
2	Ag nanoclusters on ZnO nanodome array as hybrid SERS-active substrate for trace detection of malachite green. <i>Sensors and Actuators B: Chemical</i> , 2015, 207, 430-436.	4.0	99
3	Extending the limits of Pt/C catalysts with passivation-gas-incorporated atomic layer deposition. <i>Nature Catalysis</i> , 2018, 1, 624-630.	16.1	63
4	Rapid prototyping and manufacturing by gelcasting of metallic and ceramic slurries. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002, 334, 187-192.	2.6	53
5	Focused-ion-beam-fabricated Au nanorods coupled with Ag nanoparticles used as surface-enhanced Raman scattering-active substrate for analyzing trace melamine constituents in solution. <i>Analytica Chimica Acta</i> , 2013, 800, 56-64.	2.6	45
6	Nanoplasmonic Au/Ag/Au nanorod arrays as SERS-active substrate for the detection of pesticides residue. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2017, 75, 287-291.	2.7	31
7	Advanced atomic force microscopy probes: Wear resistant designs. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005, 23, 3090.	1.6	29
8	Effects of Annealing on Magnetic Properties of Electrical Steel and Performances of SRM After Punching. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-4.	1.2	26
9	Lewis bases: promising additives for enhanced performance of perovskite solar cells. <i>Materials Today Energy</i> , 2021, 22, 100847.	2.5	24
10	Ageing, Shocks and Wear Mechanisms in ZTA and the Long-Term Performance of Hip Joint Materials. <i>Materials</i> , 2017, 10, 569.	1.3	23
11	Ag Nanostructures with Spikes on Adhesive Tape as a Flexible Sers-Active Substrate for In Situ Trace Detection of Pesticides on Fruit Skin. <i>Nanomaterials</i> , 2019, 9, 1750.	1.9	22
12	Gold Nanoparticle-Coated ZrO ₂ -Nanofiber Surface as a SERS-Active Substrate for Trace Detection of Pesticide Residue. <i>Nanomaterials</i> , 2018, 8, 402.	1.9	21
13	SERS-Active Substrate with Collective Amplification Design for Trace Analysis of Pesticides. <i>Nanomaterials</i> , 2019, 9, 664.	1.9	20
14	Micro-colonization of arsenic-resistant <i>Staphylococcus</i> sp. As-3 on arsenopyrite (FeAsS) drives arsenic mobilization under anoxic sub-surface mimicking conditions. <i>Science of the Total Environment</i> , 2019, 669, 527-539.	3.9	20
15	Intense Raman scattering on hybrid Au/Ag nanoplatfoms for the distinction of MMP-9-digested collagen type-I fiber detection. <i>Biosensors and Bioelectronics</i> , 2015, 72, 61-70.	5.3	18
16	In-situ , time-lapse study of extracellular polymeric substance discharge in <i>Streptococcus mutans</i> biofilm. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017, 150, 98-105.	2.5	18
17	Practical assessment of nanoscale indentation techniques for the biomechanical properties of biological materials. <i>Mechanics of Materials</i> , 2016, 98, 11-21.	1.7	17
18	Critical dimension AFM tip characterization and image reconstruction applied to the 45-nm node. , 2006, 6152, 945.		15

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19	Advanced CD-AFM probe tip shape characterization for metrology accuracy and throughput. , 2007, , .		14
20	Design, fabrication, and characterization of electroless Niâ€P alloy films for micro heating devices. Thin Solid Films, 2013, 537, 263-268.	0.8	14
21	Dual properties of zirconia coated porous titanium for a stiffness enhanced bio-scaffold. Materials and Design, 2017, 132, 13-21.	3.3	14
22	Modified flat-punch model for hyperelastic polymeric and biological materials in nanoindentation. Mechanics of Materials, 2018, 118, 17-21.	1.7	14
23	<i>In situ</i> biosensing of the nanomechanical property and electrochemical spectroscopy of <i>Streptococcus mutans</i> -containing biofilms. Journal Physics D: Applied Physics, 2013, 46, 275401.	1.3	13
24	Nanoscale mapping of humid degradation-induced local mechanical property variation in CH ₃ NH ₃ PbI ₃ polycrystalline film by scanning probe microscopy. Applied Surface Science, 2020, 507, 145078.	3.1	12
25	Carbon nanotube AFM probes for microlithography process control. , 2006, 6152, 1005.		11
26	Continuous Waste Cooking Oil Transesterification with Microwave Heating and Strontium Oxide Catalyst. Chemical Engineering and Technology, 2018, 41, 192-198.	0.9	11
27	Rapid prototyping methods of silicon carbide micro heat exchangers. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2005, 219, 525-538.	1.5	10
28	TEM validation of CD AFM image reconstruction. , 2007, , .		10
29	Ion-beam-sputter deposited titanium nitride thin films for conductive atomic force microscope probes. Thin Solid Films, 2013, 529, 317-321.	0.8	10
30	Synergistic surface-enhanced Raman scattering effect to distinguish live SARS-CoV-2 S pseudovirus. Analytica Chimica Acta, 2022, 1193, 339406.	2.6	10
31	Indentation Deformation and Microcracking in Si_3N_4 -Based Nanoceramic. Journal of the American Ceramic Society, 2012, 95, 1421-1428.	1.9	8
32	Linking microstructure evolution and impedance behaviors in spark plasma sintered Si ₃ N ₄ /TiC and Si ₃ N ₄ /TiN ceramic nanocomposites. Ceramics International, 2013, 39, 4205-4212.	2.3	8
33	Oriented association of multiwall carbon nanotubes upon efficient epitaxial organization of polyfluorene. Carbon, 2015, 93, 342-352.	5.4	8
34	Structureâ€dependent behaviours of skin layers studied by atomic force microscopy. Journal of Microscopy, 2017, 267, 265-271.	0.8	8
35	Hydrothermal Fabrication of Highly Porous Titanium Bio-Scaffold with a Load-Bearable Property. Materials, 2017, 10, 726.	1.3	8
36	Dielectric Nanoparticles Coated upon Silver Hollow Nanosphere as an Integrated Design to Reinforce SERS Detection of Trace Ampicillin in Milk Solution. Coatings, 2020, 10, 390.	1.2	8

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37	Direct deformation study of AFM probe tips modified by hydrophobic alkylsilane self-assembled monolayers. Ultramicroscopy, 2011, 111, 1124-1130.	0.8	7
38	Recent CD AFM probe developments for sub-45 nm technology nodes. Proceedings of SPIE, 2008, , .	0.8	6
39	A multilevel nonvolatile visible light photomemory based on charge transfer in conformal zinc-tin oxide/Au nanoparticle heterostructures. Journal of Materials Chemistry C, 2022, 10, 8181-8191.	2.7	6
40	TEM validation of CD AFM image reconstruction: part II. , 2008, , .		5
41	Nanostructure and conductivity study of yttria doped zirconia films deposited on samaria doped ceria. Applied Surface Science, 2011, 257, 7871-7875.	3.1	5
42	Simulation-aided design and fabrication of nanoprobe for scanning probe microscopy. Ultramicroscopy, 2011, 111, 337-341.	0.8	5
43	Strontium Oxide Deposited onto a Load-Bearable and Porous Titanium Matrix as Dynamic and High-Surface-Contact-Area Catalysis for Transesterification. Nanomaterials, 2018, 8, 973.	1.9	5
44	In situ synchrotron X-ray diffraction study on the improved dehydrogenation performance of NaAlH ₄ -Mg(AlH ₄) ₂ mixture. Journal of Alloys and Compounds, 2013, 577, 6-10.	2.8	4
45	Nanomechanical probing of the septum and surrounding substances on Streptococcus mutans cells and biofilms. Colloids and Surfaces B: Biointerfaces, 2013, 110, 356-362.	2.5	4
46	Nanoscale electrochemical characterization of a solid-state electrolyte using a manganese-based thin-film probe. Nanoscale, 2016, 8, 19978-19983.	2.8	4
47	Development of all-solution-processed nanocrystal memory. Journal of Alloys and Compounds, 2017, 698, 484-494.	2.8	4
48	Identification of Characteristic Macromolecules of Escherichia coli Genotypes by Atomic Force Microscope Nanoscale Mechanical Mapping. Nanoscale Research Letters, 2018, 13, 35.	3.1	4
49	Fabrication of composite probe electrode used for localized impedance analysis of solid-state electrolyte LATP. Solid State Ionics, 2019, 336, 11-18.	1.3	4
50	Probing the Conductance and Microstructure Heterogeneity of Si ₃ N ₄ /TiC ₂ N ₂ -Based Nanocomposite at the Nanoscale by Scanning Impedance Microscopy. Journal of the American Ceramic Society, 2013, 96, 2311-2315.	1.9	3
51	AuGa ₂ O _n focused Ga ion beam-fabricated Au nanorod array for trace detection of melamine cyanurate in milk solution. Applied Physics Express, 2015, 8, 017001.	1.1	3
52	Probed adhesion force of living lung cells with a tip-modified atomic force microscope. Biointerphases, 2016, 11, 04B311.	0.6	3
53	In-Situ Investigation on Nanoscopic Biomechanics of Streptococcus mutans at Low pH Citric Acid Environments Using an AFM Fluid Cell. International Journal of Molecular Sciences, 2020, 21, 9481.	1.8	3
54	Development of manganese-based thin-film probe via hydrothermal process for localized electrochemical impedance analysis of a solid-state electrolyte LiPON. Materials Letters, 2018, 216, 295-298.	1.3	1

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55	Photodegradation pathways of CH ₃ NH ₃ PbI ₃ organic perovskite polycrystalline film observed by in-situ scanning probe microscopy. <i>Applied Surface Science</i> , 2021, 545, 149081.	3.1	1
56	Non-Thermal Reactive N ₂ /He Plasma Exposure to Inhibit Epithelial Head and Neck Tumor Cells. <i>Coatings</i> , 2021, 11, 1284.	1.2	1
57	Shape effect of torsional resonance mode AFM cantilevers operated in fluids. <i>Surface Topography: Metrology and Properties</i> , 2014, 2, 035003.	0.9	0
58	Characterization of Localized Electrochemical Properties of Si ₃ N ₄ -TiC Ceramic Nanocomposite Using Dual-Electrode Scanning Probes. <i>Materials Research Society Symposia Proceedings</i> , 2014, 1712, 7.	0.1	0
59	Focused-ion-beam-fabricated homogeneous acute-angled Au nanorods for surface-enhanced Raman scattering. <i>Applied Physics Express</i> , 2015, 8, 052402.	1.1	0
60	Solution-processed dual-layer Pt-SiO ₂ core-shell nanoparticles for nanocrystal memory with multi-bit storage states. <i>Journal of Alloys and Compounds</i> , 2018, 749, 369-377.	2.8	0
61	Role of phase transformation in possible wear mechanisms in silicon microelectromechanical-system devices. <i>Materials Chemistry and Physics</i> , 2020, 245, 122765.	2.0	0