

# Jen-Fin Lin

## List of Publications by Year in descending order

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116  
papers

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times ranked

1474  
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#	ARTICLE	IF	CITATIONS
1	Establishment of the Model Widely Valid for the Melting and Vaporization Zones in Selective Laser Melting Printings Via Experimental Verifications. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2022, 9, 143-162.	2.7	7
2	Effect of the addition of zirconium on the electrical, optical, and mechanical properties and microstructure of ITO thin films. <i>Vacuum</i> , 2021, 183, 109844.	1.6	9
3	Fractal parameters developed to evaluate the effects of laser textured surface on oil contact angle and tribological parameters. <i>Journal of Laser Applications</i> , 2021, 33, 022021.	0.8	1
4	Applications of energy flux and numerical analyses to the plasma etching of silicon deep trench isolation (DTI) structures. <i>Precision Engineering</i> , 2021, 71, 141-152.	1.8	8
5	Uses of empirical mode decomposition and multi-entropy techniques to establish the correlations among vibrations, friction coefficients and component wear of ball-bearing-like specimens. <i>Measurement: Journal of the International Measurement Confederation</i> , 2020, 150, 107021.	2.5	5
6	Effects of fluorination of carbon film and annealing conditions on side leakage current and current breakdown time of SiO <sub>2</sub> /graphene/Cu/Ti/SiO <sub>2</sub> /Si specimens. <i>Vacuum</i> , 2020, 172, 109037.	1.6	0
7	Surface polishes of the SKD 61 tool steel by a femto pulse laser operating in a wide range of powers. <i>Journal of Materials Processing Technology</i> , 2020, 277, 116465.	3.1	9
8	Effect of fractal parameters on optical properties of cold rolled aluminum alloy strips with induced surface deflection: Simulations and experimental correlations. <i>Journal of Materials Processing Technology</i> , 2020, 279, 116554.	3.1	7
9	Effects of roll pattern and reduction ratio on optical characteristics of A1008 cold-rolled steel specimens: analytical approach and experimental correlations. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 111, 2001-2020.	1.5	4
10	Effect of femtosecond laser power and overlap ratio on surface roughness parameters, contact angle, and tribological properties of the textured SKD 61 tool steel with oil lubrication. <i>Surface Topography: Metrology and Properties</i> , 2020, 8, 045003.	0.9	2
11	Effects of AZO film as inductive layer and annealing temperature on microstructure crystallinity and electrical and optical properties of IGZO/SiO <sub>2</sub> and IGZO/AZO/SiO <sub>2</sub> specimens. <i>Ceramics International</i> , 2020, 46, 11089-11100.	2.3	0
12	Deep Trench Isolation and Inverted Pyramid Array Structures Used to Enhance Optical Efficiency of Photodiode in CMOS Image Sensor via Simulations. <i>Sensors</i> , 2020, 20, 3062.	2.1	8
13	Determinations of thermoelastic instability for ball-bearing-like specimens with spacers and in grease lubrications. <i>Tribology International</i> , 2020, 151, 106415.	3.0	2
14	Effects of nitrogen/oxygen on the electrical and optical properties and microstructure of triple layer AZO/Ag/AZO thin films. <i>Optical Materials Express</i> , 2020, 10, 249.	1.6	12
15	Evaluations of heat treatment on polymer adhesive bonding and thermal-induced failure of two-layer through-silicon via structures. <i>Sensors and Actuators A: Physical</i> , 2019, 285, 685-699.	2.0	2
16	Study of the Electrical and Diffusion Barrier Properties in Ultrathin Carbon Film-Coated Copper Microwires for Interconnects. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 2292-2304.	1.2	2
17	Characterization of the electrical and optical properties for a-IGZO/Ag/a-IGZO triple-layer thin films with different thickness depositions on a curved glass substrate. <i>Optical Materials Express</i> , 2019, 9, 3414.	1.6	8
18	Effects of thin titanium and graphene depositions and annealing temperature on electrical, optical, and mechanical properties of IGZO/Ti/graphene/PI specimen. <i>Ceramics International</i> , 2018, 44, 6573-6583.	2.3	8

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19	Effects of SiO <sub>2</sub> film thickness and operating temperature on thermally-induced failures in through-silicon-via structures. <i>Microelectronics Reliability</i> , 2018, 83, 1-13.	0.9	6
20	Effects of groove factor and surface roughness of raceway in ball-bearing-like specimens on tribological behavior and the onsets of two instabilities of dry contacts. <i>Wear</i> , 2018, 406-407, 126-139.	1.5	6
21	Techniques developed for fault diagnosis of long-range running ball screw drive machine to evaluate lubrication condition. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 126, 274-288.	2.5	24
22	Effects of deposition method and conditions for IGZO film and thermal annealing on composite film quality, surface roughness, microstructural defects, and electrical properties of Ti/IGZO/graphene/polyimide specimens. <i>Journal of Alloys and Compounds</i> , 2018, 768, 298-315.	2.8	5
23	Effects of deposition power of IGZO film and graphene layer in IGZO/graphene + Ni/SiO <sub>2</sub> /Si wafer specimens on the mechanical and electrical properties in tribotests. <i>Surface and Coatings Technology</i> , 2017, 315, 44-60.	2.2	0
24	Surface quality, microstructure, and mechanical properties of the SKD 61 tool steel with prior heat treatment affected by single- and double-pass continuous wave laser polishing. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 92, 1643-1658.	1.5	4
25	Tribological behavior and thermoelastic instability demonstrated in ball-bearing-like specimens operating in dry contacts and with grease lubrication. <i>Tribology International</i> , 2017, 110, 358-369.	3.0	4
26	The measuring technique developed to evaluate the thermal diffusivity of the multi-layered thin film specimens. <i>MATEC Web of Conferences</i> , 2017, 123, 00026.	0.1	0
27	Effects of graphene layers in IGZO / graphite-like +Ni/SiO <sub>2</sub> /Si wafer specimens on electrical and optical properties in tribotests. <i>Optical Materials Express</i> , 2016, 6, 3857.	1.6	3
28	Effective Improvements in Microstructure and Electrical Properties of the <sc>IGZO</sc> Films by Sputtering Angles. <i>International Journal of Applied Ceramic Technology</i> , 2016, 13, 469-479.	1.1	2
29	Effects of inclination angle during Al-doped ZnO film deposition and number of bending cycles on electrical, piezoelectric, optical, and mechanical properties and fatigue life. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016, 34, 021501.	0.9	5
30	Surface quality, microstructure, mechanical properties and tribological results of the SKD 61 tool steel with prior heat treatment affected by the deposited energy of continuous wave laser micro-polishing. <i>Journal of Materials Processing Technology</i> , 2016, 234, 177-194.	3.1	14
31	Thermally-induced failures of copper through-silicon via structures evaluated by the strain energy density model. <i>Thin Solid Films</i> , 2016, 615, 281-291.	0.8	6
32	Effects of sputtering-deposition inclination angle on the IGZO film microstructures, optical properties and photoluminescence. <i>Optical Materials Express</i> , 2016, 6, 343.	1.6	12
33	Effects of Deposition Inclination Angle on Microstructure and Electrical Properties of Al-Doped ZnO Coating Films. <i>International Journal of Applied Ceramic Technology</i> , 2016, 13, 152-163.	1.1	1
34	Effects of annealing temperature on microstructure, surface roughness, mechanical and tribological properties of Ni <sup>63</sup> P and Ni <sup>63</sup> P/SiC films. <i>Surface and Coatings Technology</i> , 2016, 288, 135-143.	2.2	44
35	Effects of thicknesses of Si/Al/Si composite films and annealing temperature on metal-induced si crystallization efficiency, voids, and electrical properties. <i>Thin Solid Films</i> , 2016, 599, 151-160.	0.8	11
36	Studies on centrifugal clutch judder behavior and the design of frictional lining materials. <i>Mechanical Systems and Signal Processing</i> , 2016, 66-67, 811-828.	4.4	10

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37	Influence of laser beam fluence on surface quality, microstructure, mechanical properties, and tribological results for laser polishing of SKD61 tool steel. Journal of Materials Processing Technology, 2016, 229, 22-35.	3.1	38
38	Effects of deposition inclination angle on the mechanical, optical and electrical characteristics of Al-doped ZnO films. , 2015, , .		0
39	Effects of Deposition Conditions of TiO <sub>2</sub> Film and Substrate Prestrain on Film Void Geometries and Optical Properties in TiO <sub>2</sub> /PET Specimens. International Journal of Applied Ceramic Technology, 2015, 12, E217.	1.1	1
40	Fatigue life study of ITO/PET specimens in cyclic bending tests. Journal of Materials Science: Materials in Electronics, 2015, 26, 250-261.	1.1	13
41	Characterization of the elastic and viscoelastic properties of dentin by a nanoindentation creep test. Journal of Biomechanics, 2015, 48, 2155-2161.	0.9	30
42	Effects of prestrain applied to poly(ethylene terephthalate) substrate on microstructures and morphologies of porous TiO <sub>2</sub> film and optical scattering behaviors of light. Applied Optics, 2015, 54, 816.	0.9	0
43	Non-vacuum growth of graphene films using solid carbon source. Applied Physics Letters, 2015, 106, 221604.	1.5	8
44	Effects of deposition and annealing conditions on the defects in the Al/glass composites of TFT specimens. Journal of Materials Science: Materials in Electronics, 2014, 25, 4425-4433.	1.1	4
45	1-nm-thick graphene tri-layer as the ultimate copper diffusion barrier. Applied Physics Letters, 2014, 104, .	1.5	57
46	Effects of the inclination angle of polyethylene terephthalate substrate on mechanical, electrical, and optical properties of Al-doped ZnO coating film. , 2014, , .		0
47	Effects of prestrain applied to poly(ethylene terephthalate) substrate before coating of indium oxide film on film quality and optical, electrical, and mechanical properties. Ceramics International, 2014, 40, 591-603.	2.3	11
48	Effects of inclination angle applied to a polyethylene terephthalate substrate before the coating of Al-doped ZnO on film quality and mechanical and optical properties. Ceramics International, 2014, 40, 6987-6998.	2.3	5
49	Effects of mold geometry and taper angles on the filling mechanism of a nanoimprinted polymer using molecular dynamics. Applied Surface Science, 2014, 316, 292-300.	3.1	14
50	Microstructural, Electrical, and Mechanical Properties of Graphene Films on Flexible Substrate Determined by Cyclic Bending Test. ACS Applied Materials & Interfaces, 2014, 6, 19566-19573.	4.0	14
51	Effects of pre-strain applied to a poly(ethylene terephthalate) substrate before TiO <sub>2</sub> film deposition on the contact angle of the substrate and the morphology of the specimen. Mechanics of Materials, 2013, 58, 23-34.	1.7	1
52	Effects of prestrain applied to poly(ethylene terephthalate) substrate on size, porosity, and geometry of TiO <sub>2</sub> particles and optical properties of TiO <sub>2</sub> /PET specimens. Ceramics International, 2013, 39, 7063-7075.	2.3	3
53	Nanotribology of self-assembled monolayer with a probe tip investigated using molecular dynamics simulations. Micron, 2013, 44, 410-418.	1.1	9
54	Fatigue Life Study of ITO/PET Specimens in Terms of Electrical Resistance and Stress/Strain Via Cyclic Bending Tests. Journal of Display Technology, 2013, 9, 577-585.	1.3	19

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55	Effects of tip-substrate gap, deposition temperature, holding time, and pull-off velocity on dip-pen lithography investigated using molecular dynamics simulation. <i>Journal of Applied Physics</i> , 2012, 111, 103521.	1.1	6
56	Effects of Prestrain Applied to a Polyethylene Terephthalate Substrate Before the Coating of Al-Doped ZnO Film on Film Quality, Electrical Properties, and Pop-In Behavior During Nanoindentation. <i>Journal of Microelectromechanical Systems</i> , 2012, 21, 1059-1070.	1.7	7
57	Stress-strain analysis for evaluating the effect of the orientation of dentin tubules on their mechanical properties and deformation behavior. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 12, 1-8.	1.5	20
58	High-efficiency concentrated optical module. <i>Energy</i> , 2012, 44, 593-603.	4.5	11
59	Atomic-scale simulations of material behaviors and tribology properties for FCC and BCC metal films. <i>Materials Letters</i> , 2012, 80, 59-62.	1.3	25
60	Residual Stress Release During Nanoindentation-Induced Delamination. <i>Advanced Science Letters</i> , 2012, 8, 836-838.	0.2	0
61	The Interfacial Transition of the C/Si Composite Film and Si Substrate Evaluated to Predict the Pop-In Behavior in Nanoindentation. <i>IEEE Nanotechnology Magazine</i> , 2011, 10, 363-370.	1.1	1
62	Nano-structure and nano-mechanical properties of human teeth. , 2011, , .		4
63	Investigation of acoustic properties and Raman scattering of AlN films for biosensor application. , 2011, , .		0
64	Effects of pre-strain applied at a polyethylene terephthalate substrate before the coating of TiO <sub>2</sub> film on the coating film quality and optical performance. <i>Thin Solid Films</i> , 2011, 519, 7875-7882.	0.8	13
65	Effects of pre-strain applied at a polyethylene terephthalate substrate before the coating of Al-doped ZnO film on film quality and optical and electrical properties. <i>Ceramics International</i> , 2011, 37, 2467-2476.	2.3	20
66	Effect of chain length of self-assembled monolayers in dip-pen nanolithography using molecular dynamics simulations. <i>Journal of Colloid and Interface Science</i> , 2011, 361, 316-320.	5.0	11
67	Analyses and experimental confirmation of removal performance of silicon oxide film in the chemical-mechanical polishing (CMP) process with pattern geometry of concentric groove pads. <i>Wear</i> , 2011, 270, 172-180.	1.5	18
68	Effects of annealing conditions and thickness ratio of Si/Al films on the Hall carrier mobility, Al carrier concentration, and nanovoids formed in the metal-induced Si crystallization of Si/Al/Si/SiO <sub>2</sub> /glass specimens. <i>Surface and Coatings Technology</i> , 2011, 205, 4672-4682.	2.2	9
69	Determining buckling strain energy release rate through indentation-induced delamination. <i>Thin Solid Films</i> , 2011, 519, 4889-4893.	0.8	10
70	An Investigation of the Effects of Polymethylmethacrylate Orientation and Antistiction Layer on the Nanoimprint Process Using Molecular Dynamics. <i>Advanced Science Letters</i> , 2011, 4, 36-43.	0.2	11
71	Use of Nanoindentation for Investigating the Nanostructure of Dentin Tissue. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011, , 153-158.	0.3	1
72	Mechanical Characterization of Nanomolding Process Using Coarse Particle Dynamics. <i>Journal of Computational and Theoretical Nanoscience</i> , 2010, 7, 2171-2175.	0.4	0

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73	Investigation of the relationship between primary and secondary shear bands induced by indentation in bulk metallic glasses. <i>International Journal of Plasticity</i> , 2010, 26, 1645-1658.	4.1	38
74	Formation of microcrystalline silicon films using rapid crystal aluminum induced crystallization under low-temperature rapid thermal annealing. <i>Thin Solid Films</i> , 2010, 518, 6966-6971.	0.8	9
75	A microcontact model developed for sphere- and cylinder-based fractal bodies in contact with a rigid flat surface. <i>Wear</i> , 2010, 268, 431-442.	1.5	41
76	Nanotribological behavior of diamond surfaces using molecular dynamics with fractal theory and experiments. <i>Current Applied Physics</i> , 2010, 10, 266-271.	1.1	6
77	Formation Mechanism and Mechanics of Dip-Pen Nanolithography Using Molecular Dynamics. <i>Langmuir</i> , 2010, 26, 3237-3241.	1.6	21
78	The model developed for stress-induced structural phase transformations of micro-crystalline silicon films. <i>Nano-Micro Letters</i> , 2010, 2, 68-73.	14.4	7
79	A study of the relationship between semi-circular shear bands and pop-ins induced by indentation in bulk metallic glasses. <i>Intermetallics</i> , 2010, 18, 1572-1578.	1.8	17
80	The Model Developed for Stress-Induced Structural Phase Transformations of Micro-Crystalline Silicon Films. <i>Nano-Micro Letters</i> , 2010, 2, 68.	14.4	1
81	Determination of the strain energy release rate for C/a-Si composite film produced in nanoindentation tests. <i>Journal of Applied Physics</i> , 2009, 105, 023523.	1.1	7
82	The nanoindentation applied to predict the interface delamination for the C/amorphous Si composite film. <i>Journal of Applied Physics</i> , 2009, 106, .	1.1	7
83	Modified method for continuous stiffness measurement. <i>Journal of Materials Research</i> , 2009, 24, 599-606.	1.2	4
84	Modified method developed for contact-induced adhesion in indentation. <i>Journal of Materials Research</i> , 2009, 24, 1795-1802.	1.2	2
85	Coarse particle dynamics applied to the nanocontact. <i>IEEE Nanotechnology Magazine</i> , 2009, 3, 9-15.	0.9	0
86	Molecular Dynamics Simulations of the Roller Nanoimprint Process: Adhesion and Other Mechanical Characteristics. <i>Nanoscale Research Letters</i> , 2009, 4, 913-920.	3.1	15
87	An integrated simulation and statistical technique for investigating the effect of interpenetration polymer brushes in a good solvent. <i>Applied Physics A: Materials Science and Processing</i> , 2009, 94, 195.	1.1	1
88	Analysis of a ball screw with a preload and lubrication. <i>Tribology International</i> , 2009, 42, 1816-1831.	3.0	77
89	The study of adhesion and nanomechanical properties of DLC films deposited on tool steels. <i>Thin Solid Films</i> , 2009, 517, 4916-4920.	0.8	41
90	Plasma immersion ion implantation induced improvements of mechanical properties, wear resistance, and adhesion of diamond-like carbon films deposited on tool steel. <i>Surface and Coatings Technology</i> , 2009, 204, 229-236.	2.2	11

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91	Multiscale Particle Dynamics on Nanocontact and Sliding Friction. Journal of Nanoscience and Nanotechnology, 2009, 9, 3295-3300.	0.9	0
92	Multiscale particle dynamics in nanoimprint process. Applied Physics A: Materials Science and Processing, 2008, 91, 273-279.	1.1	3
93	Effects of a self-assembled monolayer on the sliding friction and adhesion of an Au surface. Applied Physics A: Materials Science and Processing, 2008, 91, 459-466.	1.1	11
94	Numerical and experimental studies for the anisotropic etching of silicon with the AFM oxide lines as masks. Microelectronic Engineering, 2008, 85, 143-150.	1.1	2
95	Modeling to evaluate the contact areas of hard materials during the nano-indentation tests. Sensors and Actuators A: Physical, 2008, 147, 229-241.	2.0	6
96	Determination for elasticity and plasticity from time-dependent nanoindentations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 496, 90-97.	2.6	12
97	A New Model Developed to Evaluate the Contact Area Arising During Nano-indentation Tests With Pileup Behavior of Metal Materials. IEEE Nanotechnology Magazine, 2008, 7, 256-265.	1.1	3
98	Ferrule fabrication for the MT-type optical fiber connector using the microinjection process. Journal of Micromechanics and Microengineering, 2008, 18, 115026.	1.5	0
99	Retardation of cyclic indentation creep exhibited in metal alloys. Journal of Materials Research, 2008, 23, 2650-2656.	1.2	4
100	Theoretical modeling developed to evaluate the hardness and reduced modulus for the C/a-Si composite film using nanoindentation tests. Nanotechnology, 2008, 19, 325710.	1.3	6
101	Molecular dynamic simulation and characterization of self-assembled monolayer under sliding friction. Computational Materials Science, 2007, 39, 808-816.	1.4	23
102	Contact and frictional behavior of rough surfaces using molecular dynamics combined with fractal theory. Computational Materials Science, 2007, 40, 480-484.	1.4	19
103	Effects of implantation temperature and volume flow rate ratio of nitrogen and hydrogen on nitrogen concentration distribution, mechanical properties, fatigue life, fracture toughness, and tribological behavior of plasma-nitrided P20, 718 and 420 steels. Surface and Coatings Technology, 2007, 201, 5912-5924.	2.2	6
104	Atomistic simulations of hard and soft films under nanoindentation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 452-453, 135-141.	2.6	68
105	A study of the self-assembled mono-layer deposition process for the anti-adhesion of nano-imprint stamps. , 2006, , .		1
106	Thermal analysis for graphitization and ablation depths of diamond films. Diamond and Related Materials, 2006, 15, 1-9.	1.8	12
107	A new method developed to evaluate both the hardness and elastic modulus of a coating's substrate system. Surface and Coatings Technology, 2005, 200, 2489-2496.	2.2	25
108	The effect of under-layers and pre-test temperature on the tribological characteristics of TiN films rubbing against steel. Wear, 2004, 256, 252-267.	1.5	1

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109	Effect of nitrogen content on mechanical properties and tribological behaviors of hydrogenated amorphous carbon films prepared by ion beam assisted chemical vapor deposition. <i>Thin Solid Films</i> , 2004, 466, 137-150.	0.8	20
110	Effect of nitrogen content at coating film and film thickness on nanohardness and Young's modulus of hydrogenated carbon films. <i>Diamond and Related Materials</i> , 2004, 13, 42-53.	1.8	28
111	The effects of hydrogenated carbon films with different film thickness and nitrogen content on specimen mechanical properties, scratch critical load, adhesion work and tribological behavior. <i>Diamond and Related Materials</i> , 2004, 13, 1895-1906.	1.8	16
112	Sliding wear and fracture mechanisms of injection molded Cr <sub>3</sub> C <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> composite. <i>Ceramics International</i> , 2003, 29, 213-221.	2.3	3
113	The response surface method and the analysis of mild oxidational wear. <i>Tribology International</i> , 2002, 35, 771-785.	3.0	11
114	Antiwear performance of polysiloxane-containing copolymers at oil/metal interface under extreme pressure. <i>Wear</i> , 2002, 253, 862-868.	1.5	5
115	Novel Polymeric Surfactants for Improving Chemical Mechanical Polishing Performance of Silicon Oxide. <i>Electrochemical and Solid-State Letters</i> , 2001, 4, G42.	2.2	11
116	A study of the self-assembled mono-layer deposition process for the anti-adhesion of nano-imprint stamps. , 0, , .		0