

Jen-Fin Lin

List of Publications by Year in descending order

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116
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1331
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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. International Journal of Precision Engineering and Manufacturing - Green Technology, 2022, 9, 143-162.	4.9	7
2	Effect of the addition of zirconium on the electrical, optical, and mechanical properties and microstructure of ITO thin films. Vacuum, 2021, 183, 109844.	3.5	9
3	Fractal parameters developed to evaluate the effects of laser textured surface on oil contact angle and tribological parameters. Journal of Laser Applications, 2021, 33, 022021.	1.7	1
4	Applications of energy flux and numerical analyses to the plasma etching of silicon deep trench isolation (DTI) structures. Precision Engineering, 2021, 71, 141-152.	3.4	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. Measurement: Journal of the International Measurement Confederation, 2020, 150, 107021.	5.0	5
6	Effects of fluorination of carbon film and annealing conditions on side leakage current and current breakdown time of SiO ₂ /graphene/Cu/Ti/SiO ₂ /Si specimens. Vacuum, 2020, 172, 109037.	3.5	0
7	Surface polishes of the SKD 61 tool steel by a femto pulse laser operating in a wide range of powers. Journal of Materials Processing Technology, 2020, 277, 116465.	6.3	9
8	Effect of fractal parameters on optical properties of cold rolled aluminum alloy strips with induced surface deflection: Simulations and experimental correlations. Journal of Materials Processing Technology, 2020, 279, 116554.	6.3	7
9	Effects of roll pattern and reduction ratio on optical characteristics of A1008 cold-rolled steel specimens: analytical approach and experimental correlations. International Journal of Advanced Manufacturing Technology, 2020, 111, 2001-2020.	3.0	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. Surface Topography: Metrology and Properties, 2020, 8, 045003.	1.6	2
11	Effects of AZO film as inductive layer and annealing temperature on microstructure crystallinity and electrical and optical properties of IGZO/SiO ₂ and IGZO/AZO/SiO ₂ specimens. Ceramics International, 2020, 46, 11089-11100.	4.8	0
12	Deep Trench Isolation and Inverted Pyramid Array Structures Used to Enhance Optical Efficiency of Photodiode in CMOS Image Sensor via Simulations. Sensors, 2020, 20, 3062.	3.8	8
13	Determinations of thermoelastic instability for ball-bearing-like specimens with spacers and in grease lubrications. Tribology International, 2020, 151, 106415.	5.9	2
14	Effects of nitrogen/oxygen on the electrical and optical properties and microstructure of triple layer AZO/Ag/AZO thin films. Optical Materials Express, 2020, 10, 249.	3.0	12
15	Evaluations of heat treatment on polymer adhesive bonding and thermal-induced failure of two-layer through-silicon via structures. Sensors and Actuators A: Physical, 2019, 285, 685-699.	4.1	2
16	Study of the Electrical and Diffusion Barrier Properties in Ultrathin Carbon Film-Coated Copper Microwires for Interconnects. Journal of Materials Engineering and Performance, 2019, 28, 2292-2304.	2.5	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. Optical Materials Express, 2019, 9, 3414.	3.0	8
18	Effects of thin titanium and graphene depositions and annealing temperature on electrical, optical, and mechanical properties of IGZO/Ti/graphene/PI specimen. Ceramics International, 2018, 44, 6573-6583.	4.8	8

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19	Effects of SiO ₂ film thickness and operating temperature on thermally-induced failures in through-silicon-via structures. <i>Microelectronics Reliability</i> , 2018, 83, 1-13.	1.7	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.	3.1	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.	5.0	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.	5.5	5
23	Effects of deposition power of IGZO film and graphene layer in IGZO/graphene + Ni/SiO ₂ /Si wafer specimens on the mechanical and electrical properties in tribotests. <i>Surface and Coatings Technology</i> , 2017, 315, 44-60.	4.8	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.	3.0	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.	5.9	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.	0.2	0
27	Effects of graphene layers in IGZO / graphite-like +Ni/SiO ₂ /Si wafer specimens on electrical and optical properties in tribotests. <i>Optical Materials Express</i> , 2016, 6, 3857.	3.0	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.	2.1	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.	2.1	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.	6.3	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.	1.8	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.	3.0	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.	2.1	1
34	Effects of annealing temperature on microstructure, surface roughness, mechanical and tribological properties of Ni _{0.5} P and Ni _{0.5} P/SiC films. <i>Surface and Coatings Technology</i> , 2016, 288, 135-143.	4.8	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.	1.8	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.	8.0	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.	6.3	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 ₂ Film and Substrate Prestrain on Film Void Geometries and Optical Properties in TiO ₂ /PET Specimens. International Journal of Applied Ceramic Technology, 2015, 12, E217.	2.1	1
40	Fatigue life study of ITO/PET specimens in cyclic bending tests. Journal of Materials Science: Materials in Electronics, 2015, 26, 250-261.	2.2	13
41	Characterization of the elastic and viscoelastic properties of dentin by a nanoindentation creep test. Journal of Biomechanics, 2015, 48, 2155-2161.	2.1	30
42	Effects of prestrain applied to poly(ethylene terephthalate) substrate on microstructures and morphologies of porous TiO ₂ film and optical scattering behaviors of light. Applied Optics, 2015, 54, 816.	1.8	0
43	Non-vacuum growth of graphene films using solid carbon source. Applied Physics Letters, 2015, 106, 221604.	3.3	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.	2.2	4
45	1-nm-thick graphene tri-layer as the ultimate copper diffusion barrier. Applied Physics Letters, 2014, 104, .	3.3	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.	4.8	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.	4.8	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.	6.1	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.	8.0	14
51	Effects of pre-strain applied to a poly(ethylene terephthalate) substrate before TiO ₂ film deposition on the contact angle of the substrate and the morphology of the specimen. Mechanics of Materials, 2013, 58, 23-34.	3.2	1
52	Effects of prestrain applied to poly(ethylene terephthalate) substrate on size, porosity, and geometry of TiO ₂ particles and optical properties of TiO ₂ /PET specimens. Ceramics International, 2013, 39, 7063-7075.	4.8	3
53	Nanotribology of self-assembled monolayer with a probe tip investigated using molecular dynamics simulations. Micron, 2013, 44, 410-418.	2.2	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.	1.2	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. Journal of Applied Physics, 2012, 111, 103521.	2.5	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. Journal of Microelectromechanical Systems, 2012, 21, 1059-1070.	2.5	7
57	Stress-strain analysis for evaluating the effect of the orientation of dentin tubules on their mechanical properties and deformation behavior. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 12, 1-8.	3.1	20
58	High-efficiency concentrated optical module. Energy, 2012, 44, 593-603.	8.8	11
59	Atomic-scale simulations of material behaviors and tribology properties for FCC and BCC metal films. Materials Letters, 2012, 80, 59-62.	2.6	25
60	Residual Stress Release During Nanoindentation-Induced Delamination. Advanced Science Letters, 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. IEEE Nanotechnology Magazine, 2011, 10, 363-370.	2.0	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 ₂ film on the coating film quality and optical performance. Thin Solid Films, 2011, 519, 7875-7882.	1.8	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. Ceramics International, 2011, 37, 2467-2476.	4.8	20
66	Effect of chain length of self-assembled monolayers in dip-pen nanolithography using molecular dynamics simulations. Journal of Colloid and Interface Science, 2011, 361, 316-320.	9.4	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. Wear, 2011, 270, 172-180.	3.1	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 ₂ /glass specimens. Surface and Coatings Technology, 2011, 205, 4672-4682.	4.8	9
69	Determining buckling strain energy release rate through indentation-induced delamination. Thin Solid Films, 2011, 519, 4889-4893.	1.8	10
70	An Investigation of the Effects of Polymethylmethacrylate Orientation and Antistiction Layer on the Nanoimprint Process Using Molecular Dynamics. Advanced Science Letters, 2011, 4, 36-43.	0.2	11
71	Use of Nanoindentation for Investigating the Nanostructure of Dentin Tissue. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 153-158.	0.5	1
72	Mechanical Characterization of Nanomolding Process Using Coarse Particle Dynamics. Journal of Computational and Theoretical Nanoscience, 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. International Journal of Plasticity, 2010, 26, 1645-1658.	8.8	38
74	Formation of microcrystalline silicon films using rapid crystal aluminum induced crystallization under low-temperature rapid thermal annealing. Thin Solid Films, 2010, 518, 6966-6971.	1.8	9
75	A microcontact model developed for sphere- and cylinder-based fractal bodies in contact with a rigid flat surface. Wear, 2010, 268, 431-442.	3.1	41
76	Nanotribological behavior of diamond surfaces using molecular dynamics with fractal theory and experiments. Current Applied Physics, 2010, 10, 266-271.	2.4	6
77	Formation Mechanism and Mechanics of Dip-Pen Nanolithography Using Molecular Dynamics. Langmuir, 2010, 26, 3237-3241.	3.5	21
78	The model developed for stress-induced structural phase transformations of micro-crystalline silicon films. Nano-Micro Letters, 2010, 2, 68-73.	27.0	7
79	A study of the relationship between semi-circular shear bands and pop-ins induced by indentation in bulk metallic glasses. Intermetallics, 2010, 18, 1572-1578.	3.9	17
80	The Model Developed for Stress-Induced Structural Phase Transformations of Micro-Crystalline Silicon Films. Nano-Micro Letters, 2010, 2, 68.	27.0	1
81	Determination of the strain energy release rate for C/a-Si composite film produced in nanoindentation tests. Journal of Applied Physics, 2009, 105, 023523.	2.5	7
82	The nanoindentation applied to predict the interface delamination for the C/amorphous Si composite film. Journal of Applied Physics, 2009, 106, .	2.5	7
83	Modified method for continuous stiffness measurement. Journal of Materials Research, 2009, 24, 599-606.	2.6	4
84	Modified method developed for contact-induced adhesion in indentation. Journal of Materials Research, 2009, 24, 1795-1802.	2.6	2
85	Coarse particle dynamics applied to the nanocontact. IEEE Nanotechnology Magazine, 2009, 3, 9-15.	1.3	0
86	Molecular Dynamics Simulations of the Roller Nanoimprint Process: Adhesion and Other Mechanical Characteristics. Nanoscale Research Letters, 2009, 4, 913-920.	5.7	15
87	An integrated simulation and statistical technique for investigating the effect of interpenetration polymer brushes in a good solvent. Applied Physics A: Materials Science and Processing, 2009, 94, 195.	2.3	1
88	Analysis of a ball screw with a preload and lubrication. Tribology International, 2009, 42, 1816-1831.	5.9	77
89	The study of adhesion and nanomechanical properties of DLC films deposited on tool steels. Thin Solid Films, 2009, 517, 4916-4920.	1.8	41
90	Plasma immersion ion implantation induced improvements of mechanical properties, wear resistance, and adhesion of diamond-like carbon films deposited on tool steel. Surface and Coatings Technology, 2009, 204, 229-236.	4.8	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.	2.3	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.	2.3	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.	2.4	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.	4.1	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.	5.6	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.	2.0	3
98	Ferrule fabrication for the MT-type optical fiber connector using the microinjection process. Journal of Micromechanics and Microengineering, 2008, 18, 115026.	2.6	0
99	Retardation of cyclic indentation creep exhibited in metal alloys. Journal of Materials Research, 2008, 23, 2650-2656.	2.6	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.	2.6	6
101	Molecular dynamic simulation and characterization of self-assembled monolayer under sliding friction. Computational Materials Science, 2007, 39, 808-816.	3.0	23
102	Contact and frictional behavior of rough surfaces using molecular dynamics combined with fractal theory. Computational Materials Science, 2007, 40, 480-484.	3.0	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.	4.8	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.	5.6	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.	3.9	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.	4.8	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.	3.1	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. Thin Solid Films, 2004, 466, 137-150.	1.8	20
110	Effect of nitrogen content at coating film and film thickness on nanohardness and Young's modulus of hydrogenated carbon films. Diamond and Related Materials, 2004, 13, 42-53.	3.9	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. Diamond and Related Materials, 2004, 13, 1895-1906.	3.9	16
112	Sliding wear and fracture mechanisms of injection molded Cr ₃ C ₂ /Al ₂ O ₃ composite. Ceramics International, 2003, 29, 213-221.	4.8	3
113	The response surface method and the analysis of mild oxidational wear. Tribology International, 2002, 35, 771-785.	5.9	11
114	Antiwear performance of polysiloxane-containing copolymers at oil/metal interface under extreme pressure. Wear, 2002, 253, 862-868.	3.1	5
115	Novel Polymeric Surfactants for Improving Chemical Mechanical Polishing Performance of Silicon Oxide. Electrochemical and Solid-State Letters, 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