Pradeep Dixit

List of Publications by Year in Descending Order

63 papers	950 citations	18 h-index	28 g-index
67 ext. papers	1,143 ext. citations	2.9 avg, IF	4.95 L-index

#	Paper	IF	Citations
63	Effect of pulse frequency and duty cycle on electrochemical dissolution behavior of multi-tip array tool electrode for reusability in the ECDM process. *Journal of Applied Electrochemistry*, **2022**, 52, 667	2.6	1
62	Fabrication of Through-glass Vias (TGV) based 3D microstructures in glass substrate by a lithography-free process for MEMS applications. *Applied Surface Science*, **2022**, 584, 152494	6.7	3
61	Ultrasonic-assisted surface roughening of glass substrate to improve adhesion of electroless nickel seed layer in microsystems packaging. *Materials Letters*, **2022**, 316, 132033	3.3	2
60	A review on microholes formation in glass-based substrates by electrochemical discharge drilling for MEMS applications. *Machining Science and Technology*, **2022**, 26, 276-337	2	2
59	Formation of macro-sized through-holes in glass using notch-shaped tubular electrodes in electrochemical discharge machining. *Journal of Manufacturing Processes*, **2022**, 78, 92-106	5	0
58	Experimental investigation into tool wear behaviour of line-array tool electrode during the electrochemical discharge micromilling process. *Journal of Manufacturing Processes*, **2021**, 72, 93-104	5	5
57	Through-holes micromachining of alumina using a combined pulse-feed approach in ECDM. *Materials and Manufacturing Processes*, **2021**, 36, 1501-1512	4.1	8
56	Measurement and analysis of the geometric characteristics of microholes and tool wear for varying tool-workpiece gaps in electrochemical discharge drilling. *Measurement: Journal of the International Measurement Confederation*, **2021**, 168, 108463	4.6	10
55	Effect of tool-electrode material in through-hole formation using ECDM process. *Materials and Manufacturing Processes*, **2021**, 36, 1019-1027	4.1	9
54	A review of intermetallic compound growth and void formation in electrodeposited Cu–Sn Layers for microsystems packaging. *Journal of Materials Science: Materials in Electronics*, **2021**, 32, 6742-6777	2.1	5
53	Experimental investigations of energy channelization behavior in ultrasonic assisted electrochemical discharge machining. *Journal of Materials Processing Technology*, **2021**, 293, 117084	5.3	15
52	Design, fabrication, and characterization of SU-8/carbon black nanocomposite based polymer MEMS acceleration sensor. *Microsystem Technologies*, **2020**, 26, 2857-2867	1.7	6
51	Influence of tool electrode feed rate in the electrochemical discharge drilling of a glass substrate. *Materials and Manufacturing Processes*, **2020**, 35, 1749-1760	4.1	18
50	Experimental investigations into alumina ceramic micromachining by electrochemical discharge machining process. *Procedia Manufacturing*, **2020**, 48, 244-250	1.5	6
49	Investigations into surface topography of glass microfeatures formed by pulsed electrochemical discharge milling for microsystem applications. *Microsystem Technologies*, **2020**, 26, 2105-2116	1.7	9
48	Experimental and Theoretical Dynamic Investigation of MEMS Polymer Mass-Spring Systems. *IEEE Sensors Journal*, **2020**, 20, 11191-11203	4	0
47	Through-substrate vias based three-dimensional interconnection technology **2020**, 721-741		

46	Numerical and experimental analysis of high-aspect-ratio micro-tool electrode fabrication using controlled electrochemical machining. *Journal of Applied Electrochemistry*, **2020**, 50, 169-184	2.6	14
45	Role of tool-substrate gap in the micro-holes formation by electrochemical discharge machining. *Procedia Manufacturing*, **2020**, 48, 492-497	1.5	4
44	Fabrication and Characterization of Through-glass vias (TGV) based 3D Spiral and Toroidal Inductors by Cost-effective ECDM Process **2020**,		1
43	Effect of Tool Electrode-Workpiece Gap in the Microchannel Formation by Electrochemical Discharge Machining. *ECS Journal of Solid State Science and Technology*, **2020**, 9, 034011	2	10
42	Experimental investigations in the intermetallic and microvoid formation in sub-200 °C Cu–Sn bonding. *Journal of Materials Science: Materials in Electronics*, **2019**, 30, 16427-16438	2.1	5
41	Micro array hole formation in glass using electrochemical discharge machining. *Procedia Manufacturing*, **2019**, 34, 349-354	1.5	11
40	Effect of Tool Path Complexity on Top Burrs in Micromilling. *Procedia Manufacturing*, **2019**, 34, 432-439	1.5	2
39	Effect of tool electrode roughness on the geometric characteristics of through-holes formed by ECDM. *Precision Engineering*, **2019**, 60, 437-447	2.9	31
38	High Aspect Ratio Glass Micromachining by Multi-Pass Electrochemical Discharge Based Micromilling Technique. *ECS Journal of Solid State Science and Technology*, **2019**, 8, P322-P331	2	24
37	Fabrication of multiple through-holes in non-conductive materials by Electrochemical Discharge Machining for RF MEMS Packaging. *Journal of Materials Processing Technology*, **2019**, 271, 542-553	5.3	40
36	Numerical and experimental investigations into microchannel formation in glass substrate using electrochemical discharge machining. *Journal of Micromechanics and Microengineering*, **2019**, 29, 075004	2	30
35	Fabrication and Characterization of Through-Glass Vias by the ECDM Process. *Journal of the Electrochemical Society*, **2019**, 166, D531-D538	3.9	29
34	Effect of surface roughness on void formation and intermetallic growth in electrodeposited Cu-Sn stacks. *Materials Letters*, **2019**, 257, 126710	3.3	5
33	Fabrication of Deep Microfeatures in Glass Substrate using Electrochemical Discharge Machining for Biomedical and Microfluidic Applications **2019**,		3
32	**2019**,		3
31	Void Formation in Low-Temperature Electroplated Cu-Sn Stack for Hermetic Packaging **2019**,		2
30	Induced-Stress Analysis of SU-8 Polymer Based Single Mass 3-Axis Piezoresistive MEMS Accelerometer **2019**,		2
29	Void Formation and Intermetallic Growth in Pulse Electrodeposited Cu-Sn Layers for MEMS Packaging. *Journal of Electronic Materials*, **2018**, 47, 7386-7400	1.9	9

28	Via Technologies for MEMS **2015**, 694-712		7
27	**2013**,		2
26	Void formation over limiting current density and impurity analysis of TSV fabricated by constant-current pulse-reverse modulation. *Microelectronics Reliability*, **2013**, 53, 1943-1953	1.2	23
25	Effect of Process Gases on Fabricating Tapered Through-Silicon vias by Continuous SF6/O2/Ar Plasma Etching. *ECS Journal of Solid State Science and Technology*, **2012**, 1, P107-P116	2	13
24	Fabrication and electrical characterization of high aspect ratio poly-silicon filled through-silicon vias. *Journal of Micromechanics and Microengineering*, **2012**, 22, 055021	2	17
23	The application of dry photoresists in fabricating cost-effective tapered through-silicon vias and redistribution lines in a single step. *Journal of Micromechanics and Microengineering*, **2011**, 21, 025020	2	6
22	Mechanical and Microstructural Characterization of Through-Silicon Via Fabricated with Constant Current Pulse-Reverse Modulation. *Journal of the Electrochemical Society*, **2010**, 157, D323	3.9	5
21	Failure mechanisms and optimum design for electroplated copper Through-Silicon Vias (TSV) **2009**,		28
20	Investigation of Carbon Nanotube Growth on Multimetal Layers for Advanced Interconnect Applications in Microelectronic Devices. *Journal of the Electrochemical Society*, **2009**, 156, K23	3.9	4
19	Numerical and Experimental Investigation of Thermomechanical Deformation in High-Aspect-Ratio Electroplated Through-Silicon Vias. *Journal of the Electrochemical Society*, **2008**, 155, H981	3.9	29
18	Structure and migration of (112) step on (111) twin boundaries in nanocrystalline copper. *Journal of Applied Physics*, **2008**, 104, 113717	2.5	37
17	High Aspect Ratio Vertical Through-Vias for 3D MEMS Packaging Applications by Optimized Three-Step Deep RIE. *Journal of the Electrochemical Society*, **2008**, 155, H85	3.9	34
16	Silicon nanopillars based 3D stacked microchannel heat sinks concept for enhanced heat dissipation applications in MEMS packaging. *Sensors and Actuators A: Physical*, **2008**, 141, 685-694	3.9	31
15	Effect of improved wettability of silicon-based materials with electrolyte for void free copper deposition in high aspect ratio through-vias. *Thin Solid Films*, **2008**, 516, 5194-5200	2.2	7
14	Study of surface treatment processes for improvement in the wettability of silicon-based materials used in high aspect ratio through-via copper electroplating. *Applied Surface Science*, **2007**, 253, 8637-8646	6.7	30
13	Concept and Analytical analysis of Silicon micro/nanopillars based 3-D stacked microchannel heat sink for advanced heat dissipation applications **2007**,		1
12	Through-wafer electroplated copper interconnect with ultrafine grains and high density of nanotwins. *Applied Physics Letters*, **2007**, 90, 033111	3.4	63
11	Fabrication and characterization of fine pitch on-chip copper interconnects for advanced wafer level packaging by a high aspect ratio through AZ9260 resist electroplating. *Journal of Micromechanics and Microengineering*, **2007**, 17, 1078-1086	2	61

10	Mechanical and microstructural characterization of high aspect ratio through-wafer electroplated copper interconnects. *Journal of Micromechanics and Microengineering*, **2007**, 17, 1749-1757	2	33
9	Characterization of Nano-grained High Aspect Ratio Through-wafer Copper Interconnect Column **2007**,		2
8	Effect of Clamping Ring Materials and Chuck Temperature on the Formation of Silicon Nanograss in Deep RIE. *Journal of the Electrochemical Society*, **2006**, 153, G771	3.9	13
7	Fabrication of High Aspect Ratio 35 μm Pitch Through-Wafer Copper Interconnects by Electroplating for 3-D Wafer Stacking. *Electrochemical and Solid-State Letters*, **2006**, 9, G305		30
6	Mechanical and microstructure characterization of high aspect ratio electroplated through-wafer copper interconnects **2006**,		1
5	Effect of SF6flow rate on the etched surface profile and bottom grass formation in deep reactive ion etching process. *Journal of Physics: Conference Series*, **2006**, 34, 577-582	0.3	31
4	Aspect-Ratio-Dependent Copper Electrodeposition Technique for Very High Aspect-Ratio Through-Hole Plating. *Journal of the Electrochemical Society*, **2006**, 153, G552	3.9	107
3	Design and fabrication of through-glass via (TGV) based 3D spiral inductors in fused silica substrate. *Microsystem Technologies*,1	1.7	2
2	Investigation of tool wear in alumina micromachining by multi-tip ECDM. *Materials and Manufacturing Processes*,1-7	4.1	4
1	Cathode shape prediction for uniform electrochemical dissolution of array tools for ECDM applications. *Materials and Manufacturing Processes*,1-11	4.1	2