R Balasubramaniam

List of Publications by Year
in descending order

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50 papers	878 citations	471509 17 h-index	501196 28 g-index
51 all docs	51 docs citations	51 times ranked	632 citing authors

#	Article	IF	Citations
1	A study on the shape of the surface generated by abrasive jet machining. Journal of Materials Processing Technology, 2002, 121, 102-106.	6.3	86
2	Surface finish and integrity of machined surfaces on Al/SiCp composites. Journal of Materials Processing Technology, 2007, 192-193, 166-174.	6.3	86
3	Molecular dynamics simulation to investigate the orientation effects on nanoscale cutting of single crystal copper. Computational Materials Science, 2018, 153, 241-250.	3.0	64
4	Micromanufacturing: A reviewâ€"Part I. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2014, 228, 973-994.	2.4	62
5	AN EXPERIMENTAL ANALYSIS OF MAGNETIC ABRASIVES FINISHING OF PLANE SURFACES. Machining Science and Technology, 2006, 10, 323-340.	2.5	50
6	Analysis of magnetorheological fluid behavior in chemo-mechanical magnetorheological finishing (CMMRF) process. Precision Engineering, 2017, 49, 122-135.	3.4	37
7	An experimental study on the abrasive jet deburring of cross-drilled holes. Journal of Materials Processing Technology, 1999, 91, 178-182.	6.3	36
8	Investigation of AJM for deburring. Journal of Materials Processing Technology, 1998, 79, 52-58.	6.3	34
9	A molecular dynamics simulation of wear mechanism of diamond tool in nanoscale cutting of copper beryllium. International Journal of Advanced Manufacturing Technology, 2019, 102, 731-745.	3.0	34
10	An investigation of tool and hard particle interaction in nanoscale cutting of copper beryllium. Computational Materials Science, 2018, 145, 208-223.	3.0	33
11	Fabryâ€"Perot Interferometer-Based Absolute Pressure Sensor With Stainless Steel Diaphragm. IEEE Sensors Journal, 2019, 19, 6093-6101.	4.7	29
12	An empirical study on the generation of an edge radius in abrasive jet external deburring (AJED). Journal of Materials Processing Technology, 2000, 99, 49-53.	6.3	27
13	Investigations into the mechanism of material removal and surface modification at atomic scale on stainless steel using molecular dynamics simulation. Philosophical Magazine, 2018, 98, 1437-1469.	1.6	21
14	Numerical modelling, simulation and fabrication of 3-D hemi-spherical convex micro features using Reverse Micro EDM. Journal of Manufacturing Processes, 2018, 32, 344-356.	5.9	21
15	Development of chemo-mechanical magnetorheological finishing process for super finishing of copper alloy. International Journal of Manufacturing Technology and Management, 2013, 27, 130.	0.1	20
16	Mechanism of material removal during nanofinishing of aluminium in aqueous KOH: A reactive molecular dynamics simulation study. Computational Materials Science, 2019, 156, 35-46.	3.0	20
17	Modeling and analysis of tool wear mechanisms in diamond turning of copper beryllium alloy. Journal of Manufacturing Processes, 2020, 56, 439-450.	5.9	20
18	Optical coherence tomography for shape and radius of curvature measurements of deeply curved machined metallic surfaces: a comparison with two-beam laser interferometry. Optics and Lasers in Engineering, 2015, 66, 204-209.	3.8	17

#	Article	IF	Citations
19	Numerical modelling and simulation of surface roughness of 3-D hemispherical convex micro-feature generated by reverse micro-EDM. International Journal of Advanced Manufacturing Technology, 2018, 97, 979-992.	3.0	15
20	Micromachining: An overview (Part I). Journal of Micromanufacturing, 2020, 3, 142-158.	1.1	14
21	Debris based discharge segregation in reverse micro EDM. Measurement: Journal of the International Measurement Confederation, 2020, 153, 107433.	5.0	13
22	Modelling and simulation of chemo-mechanical magnetorheological finishing (CMMRF) process. International Journal of Precision Technology, 2014, 4, 230.	0.2	12
23	A portable microfluidic device-based Fe₃O₄â€“urease nanoprobe-enhanced colorimetric sensor for the detection of heavy metals in fish tissue. Preparative Biochemistry and Biotechnology, 2020, 50, 1000-1013.	1.9	11
24	Analysis, design and synthesis of water-based magnetorheological fluid for CMMRF process. Journal of Micromanufacturing, 2018, 1, 45-52.	1.1	10
25	Investigation of the performance of 248 nm excimer laser assisted photoresist removal process in gaseous media by response surface methodology and artificial neural network. Journal of Manufacturing Processes, 2019, 38, 516-529.	5.9	9
26	Micro-mixer device with deep channels in silicon using modified RIE process: fabrication, packaging and characterization. Microsystem Technologies, 2016, 22, 515-522.	2.0	7
27	Molecular Dynamics Simulation of Mechanical Polishing on Stainless Steel Using Diamond Nanoparticles. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	2.2	6
28	Influence of ion-rich plasma discharge channel on unusually high discharging points in reverse micro electrical discharge machining. International Journal of Advanced Manufacturing Technology, 2020, 106, 4467-4475.	3.0	6
29	Investigation of Tool and Workpiece Interaction on Surface Quality While Diamond Turning of Copper Beryllium Alloy. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	2.2	6
30	Fundamental insights of mechanical polishing on polycrystalline Cu through molecular dynamics simulations. Materials Today Communications, 2022, 32, 103980.	1.9	6
31	Molecular dynamics study on the effect of discharge on adjacent craters on micro EDMed surface. Precision Engineering, 2018, 52, 469-476.	3.4	5
32	Effect of various factors influencing the generation of hemispherical micro features using non-conformal RMEDM. Journal of Micromanufacturing, 2019, 2, 110-122.	1.1	5
33	Investigation of effect of uncut chip thickness to edge radius ratio on nanoscale cutting behavior of single crystal copper: MD simulation approach. Journal of Micromanufacturing, 2021, 4, 6-17.	1.1	5
34	Experimental characterization of hydrodynamic nanopolishing of flat steel plates. Precision Engineering, 2012, 36, 424-434.	3.4	4
35	Mixed Nb2O5:MoO3 (95:5 and 85:15) thin films and their properties for electrochromic device applications. Journal of Materials Science: Materials in Electronics, 2016, 27, 7809-7821.	2.2	4
36	Some Investigations Into Magnetorheological Finishing (MRF) of Hard Materials. , 2009, , .		3

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37	Molecular dynamics simulation of single discharge and dimensionless correlation with actual material removal in micro electrical discharge machining. Molecular Simulation, 2019, 45, 985-995.	2.0	3
38	Reverse micro EDMed 3D hemispherical protruded micro feature: microstructural and mechanical characterization. Materials Research Express, 2019, 6, 036513.	1.6	3
39	Non-destructive surface characterization of reverse micro-EDM-induced arrayed Î¼-features with varying aspect ratio. International Journal of Advanced Manufacturing Technology, 2020, 107, 2609-2622.	3.0	3
40	Prediction of tool wear constants for diamond turn machining of CuBe. Journal of Micromanufacturing, 2021, 4, 18-26.	1.1	3
41	Modeling the Nano Indentation Behavior of Recast Layer and Heat Affected Zone on Reverse Micro EDMed Hemispherical Feature. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2021, 143, .	2.2	2
42	Microturning. , 2012, , 55-74.		1
43	Development of reactive ion etching process for deep etching of silicon for micro-mixer device fabrication. , 2014, , .		1
44	Tool Condition Monitoring in Microturning of Aluminium Alloy Using Multiple Sensors. Applied Mechanics and Materials, 0, 592-594, 796-800.	0.2	1
45	Study of excimer laser ablation of photoresist polymer in presence of hydrogen gas environment for micro-fluidic applications. Materials Research Express, 2019, 6, 085316.	1.6	1
46	Finite element analysis and experimental validation of suppression of span in optical MEMS pressure sensors. Microsystem Technologies, 2019, 25, 3691-3701.	2.0	1
47	Fabrication, characterization and comparative analysis of mechanical properties of micro features generated by reverse micro EDM. Microsystem Technologies, 2020, 26, 625-632.	2.0	1
48	Improvement in surface quality of diamond-turned aluminium substrate by using hydrogen peroxide: a molecular dynamics simulation study. Journal of Micromanufacturing, 2021, 4, 27-35.	1.1	1
49	Mapping the material removal behaviour of micro deep hole drilling EDM process. International Journal of Mechatronics and Manufacturing Systems, 2012, 5, 516.	0.1	0
50	Tool wear compensation scheme for DTM. IOP Conference Series: Materials Science and Engineering, 2018, 346, 012046.	0.6	0