Tuncay Alan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3178742/publications.pdf

Version: 2024-02-01

66 papers	1,942 citations	257101 24 h-index	253896 43 g-index
66 all docs	66 docs citations	66 times ranked	2360 citing authors

#	Article	IF	Citations
1	Ultrafast Dynamic Piezoresistive Response of Grapheneâ€Based Cellular Elastomers. Advanced Materials, 2016, 28, 194-200.	11.1	171
2	Surface acoustic waves for on-demand production of picoliter droplets and particle encapsulation. Lab on A Chip, 2013, 13, 3225.	3.1	141
3	Microfluidic on-demand droplet merging using surface acoustic waves. Lab on A Chip, 2014, 14, 3325-3333.	3.1	129
4	Particle separation using virtual deterministic lateral displacement (vDLD). Lab on A Chip, 2014, 14, 1595-1603.	3.1	126
5	The importance of travelling wave components in standing surface acoustic wave (SSAW) systems. Lab on A Chip, 2016, 16, 3756-3766.	3.1	102
6	Limit Cycle Oscillations in CW Laser-Driven NEMS. Journal of Microelectromechanical Systems, 2004, 13, 1018-1026.	1.7	84
7	Droplet control technologies for microfluidic high throughput screening (Î¼HTS). Lab on A Chip, 2017, 17, 2372-2394.	3.1	82
8	In-situ TEM on (de)hydrogenation of Pd at 0.5â€“4.5 bar hydrogen pressure and 20â€“400Â°C. Ultramicroscopy, 2012, 112, 47-52.	0.8	77
9	Vibrating membrane with discontinuities for rapid and efficient microfluidic mixing. Lab on A Chip, 2015, 15, 4206-4216.	3.1	68
10	Microfluidic plug steering using surface acoustic waves. Lab on A Chip, 2015, 15, 3030-3038.	3.1	55
11	Ultrafast star-shaped acoustic micromixer for high throughput nanoparticle synthesis. Lab on A Chip, 2020, 20, 582-591.	3.1	55
12	Ultrasensitive Strain Sensor Produced by Direct Patterning of Liquid Crystals of Graphene Oxide on a Flexible Substrate. ACS Applied Materials & Interfaces, 2016, 8, 22501-22505.	4.0	52
13	On-chip droplet production regimes using surface acoustic waves. Lab on A Chip, 2016, 16, 1675-1683.	3.1	45
14	The particle valve: On-demand particle trapping, filtering, and release from a microfabricated polydimethylsiloxane membrane using surface acoustic waves. Applied Physics Letters, 2014, 105, .	1.5	44
15	Micro-fabricated channel with ultra-thin yet ultra-strong windows enables electron microscopy under 4-bar pressure. Applied Physics Letters, 2012, 100, .	1.5	40
16	Characterization of adhesive properties of red blood cells using surface acoustic wave induced flows for rapid diagnostics. Applied Physics Letters, 2014, 105, .	1.5	40
17	Surface acoustic wave enabled pipette on a chip. Lab on A Chip, 2017, 17, 438-447.	3.1	40
18	Contactless tracking of humans using non-contact triboelectric sensing technology: Enabling new assistive applications for the elderly and the visually impaired. Nano Energy, 2021, 90, 106486.	8.2	38

#	Article	IF	Citations
19	Effect of surface morphology on the fracture strength of silicon nanobeams. Applied Physics Letters, 2006, 89, 091901.	1.5	32
20	Detecting Subtle Vibrations Using Graphene-Based Cellular Elastomers. ACS Applied Materials & Interfaces, 2017, 9, 11345-11349.	4.0	32
21	Methyl monolayers improve the fracture strength and durability of silicon nanobeams. Applied Physics Letters, 2006, 89, 231905.	1.5	28
22	Droplet Manipulation Using Acoustic Streaming Induced by a Vibrating Membrane. Analytical Chemistry, 2016, 88, 5696-5703.	3.2	28
23	Continuous flow ultrasonic particle trapping in a glass capillary. Journal of Applied Physics, 2014, 115, .	1.1	25
24	Acoustically enhanced microfluidic mixer to synthesize highly uniform nanodrugs without the addition of stabilizers. International Journal of Nanomedicine, 2018, Volume 13, 1353-1359.	3.3	25
25	Nanoscale displacement sensing using microfabricated variable-inductance planar coils. Applied Physics Letters, 2013, 103, 143501.	1.5	24
26	An ultra-portable, self-contained point-of-care nucleic acid amplification test for diagnosis of active COVID-19 infection. Scientific Reports, 2021, 11, 15176.	1.6	24
27	Ultrasensitive WSe₂ field-effect transistor-based biosensor for label-free detection of cancer in point-of-care applications. 2D Materials, 2021, 8, 045005.	2.0	23
28	High throughput acoustic microfluidic mixer controls self-assembly of protein nanoparticles with tuneable sizes. Journal of Colloid and Interface Science, 2021, 585, 229-236.	5.0	22
29	An all-in-one nanoreactor for high-resolution microscopy on nanomaterials at high pressures. , 2011, , .		21
30	Particle manipulation using an ultrasonic micro-gripper. Applied Physics Letters, 2012, 101, 163504.	1.5	20
31	Single line particle focusing using a vibrating bubble. Applied Physics Letters, 2014, 105, .	1.5	20
32	Feedback-Controlled MEMS Force Sensor for Characterization of Microcantilevers. Journal of Microelectromechanical Systems, 2015, 24, 1092-1101.	1.7	19
33	Zero displacement microelectromechanical force sensor using feedback control. Applied Physics Letters, 2014, 104, 153502.	1.5	18
34	In situ synthesis of silver nanowire gel and its super-elastic composite foams. Nanoscale, 2020, 12, 19861-19869.	2.8	18
35	Graphene Elastomer Electrodes for Medical Sensing Applications: Combining High Sensitivity, Low Noise and Excellent Skin Compatibility to Enable Continuous Medical Monitoring. IEEE Sensors Journal, 2021, 21, 13967-13975.	2.4	15
36	Non-contact acoustic trapping in circular cross-section glass capillaries: A numerical study. Journal of the Acoustical Society of America, 2012, 132, 2978-2987.	0.5	12

#	Article	IF	Citations
37	Stability of flowing open fluidic channels. AIP Advances, 2013, 3, .	0.6	11
38	A microfabricated fringing field capacitive pH sensor with an integrated readout circuit. Applied Physics Letters, 2014, 104, .	1.5	11
39	On-demand sample injection: combining acoustic actuation with a tear-drop shaped nozzle to generate droplets with precise spatial and temporal control. Lab on A Chip, 2020, 20, 253-265.	3.1	11
40	Synthesis of CsPbBr₃ perovskite nanocrystals with acoustically actuated millisecond mixing. Journal of Materials Chemistry C, 2021, 9, 313-321.	2.7	11
41	Microfluidic Processing of Ligandâ€Engineered NiO Nanoparticles for Lowâ€Temperature Holeâ€Transporting Layers in Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100342.	3.1	11
42	Controlled particle self-assembly in an evaporating droplet. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 398, 64-68.	2.3	10
43	Shell-type micromechanical oscillator. , 2003, , .		9
44	Tuning the oxygen functional groups in reduced graphene oxide papers to enhance the electromechanical actuation. RSC Advances, 2015, 5, 68052-68060.	1.7	9
45	A Monte-Carlo simulation of the effect of surface morphology on the fracture of nanobeams. International Journal of Fracture, 2007, 148, 129-138.	1.1	8
46	A star shaped acoustofluidic mixer enhances rapid malaria diagnostics via cell lysis and whole blood homogenisation in 2 seconds. Lab on A Chip, 2022, 22, 1829-1840.	3.1	7
47	Hopf Bifurcation in a Disk-Shaped NEMS. , 2003, , 1759.		6
48	A Lotus shaped acoustofluidic mixer: High throughput homogenisation of liquids in 2Âms using hydrodynamically coupled resonators. Ultrasonics Sonochemistry, 2022, 83, 105936.	3.8	6
49	Haemoprocessor: A Portable Platform Using Rapid Acoustically Driven Plasma Separation Validated by Infrared Spectroscopy for Point-of-Care Diagnostics. Biosensors, 2022, 12, 119.	2.3	6
50	Characterization of Ultrathin Membranes to Enable TEM Observation of Gas Reactions at High Pressures. , 2009, , .		5
51	Fabrication of AlN slender piezoelectric cantilevers for highspeed MEMS actuations. Procedia Engineering, 2011, 25, 673-676.	1.2	5
52	The role height plays in the spreading of liquid droplets over sharp edges. Applied Physics Letters, 2013, 102, .	1.5	5
53	A MEMS capacitive pH sensor for high acidic and basic solutions. , 2014, , .		5
54	Nanofluidic and monolithic environmental cells for cryogenic microscopy. Nanotechnology, 2019, 30, 085301.	1.3	4

#	Article	IF	Citations
55	Open microdroplet diluter for concentration-gradient generation. Applied Physics Express, 2014, 7, 087201.	1.1	2
56	Using Nano-mechanics and Surface Acoustic Wave (SAW) for Disease Monitoring and Diagnostics at a Cellular Level in Red Blood Cells. Physics Procedia, 2015, 70, 18-20.	1.2	2
57	X-ray compatible microfluidics for in situ studies of chemical state, transport and reaction of light elements in an aqueous environment using synchrotron radiation. Lab on A Chip, 2022, , .	3.1	2
58	A Comparative Study of the Strength of Si, SiN and SiC used at Nanoscales. Materials Research Society Symposia Proceedings, 2007, 1052, 1.	0.1	1
59	Particle trapping in a capillary tube. , 2012, , .		0
60	Force-compensating MEMS sensor for AFM cantilever stiffness calibration. , 2014, , .		0
61	Acoustic Resonator Optimisation for Airborne Particle Manipulation. Physics Procedia, 2015, 70, 6-9.	1.2	0
62	2D individual particle grids patterned with surface acoustic waves. , 2015, , .		0
63	Microfluidic Devices for Biosensing. , 2021, , .		0
64	Reliability of Nanostructures. , 2012, , 2221-2226.		0
65	Particle Manipulation in the Presence of Fluid Interfaces. , 0, , .		0
66	Reliability of Nanostructures. , 2016, , 3441-3446.		0