

Zhenhua Tian

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3307059/publications.pdf>

Version: 2024-02-01

74
papers

2,371
citations

172457

29
h-index

214800

47
g-index

75
all docs

75
docs citations

75
times ranked

1907
citing authors

#	ARTICLE	IF	CITATIONS
1	Sonoporation: Past, Present, and Future. <i>Advanced Materials Technologies</i> , 2022, 7, .	5.8	28
2	Harmonic acoustics for dynamic and selective particle manipulation. <i>Nature Materials</i> , 2022, 21, 540-546.	27.5	66
3	Acoustofluidic black holes for multifunctional in-droplet particle manipulation. <i>Science Advances</i> , 2022, 8, eabm2592.	10.3	17
4	Dispersion curve regression assisted wideband local wavenumber analysis for characterizing three-dimensional (3D) profile of hidden corrosion damage. <i>Mechanical Systems and Signal Processing</i> , 2021, 150, 107347.	8.0	14
5	Acoustohydrodynamic tweezers via spatial arrangement of streaming vortices. <i>Science Advances</i> , 2021, 7, .	10.3	34
6	Fabrication of tunable, high-molecular-weight polymeric nanoparticles via ultrafast acoustofluidic micromixing. <i>Lab on A Chip</i> , 2021, 21, 2453-2463.	6.0	27
7	Electrically Tunable Surface Acoustic Wave Propagation at MHz Frequencies Based on Carbon Nanotube Thin-Film Transistors. <i>Advanced Functional Materials</i> , 2021, 31, 2010744.	14.9	5
8	Acoustoelectronic nanotweezers enable dynamic and large-scale control of nanomaterials. <i>Nature Communications</i> , 2021, 12, 3844.	12.8	22
9	Electrochemical micro-aptasensors for exosome detection based on hybridization chain reaction amplification. <i>Microsystems and Nanoengineering</i> , 2021, 7, 63.	7.0	38
10	Acoustofluidic multi-well plates for enrichment of micro/nano particles and cells. <i>Lab on A Chip</i> , 2020, 20, 3399-3409.	6.0	33
11	Generating multifunctional acoustic tweezers in Petri dishes for contactless, precise manipulation of bioparticles. <i>Science Advances</i> , 2020, 6, .	10.3	59
12	Noncontact laser vibrometry-based fence-like arrays with wavefield filtering-assisted adaptive imaging algorithms for detecting multiple pits in a compact cluster. <i>Structural Health Monitoring</i> , 2020, , 147592172097692.	7.5	3
13	Acoustic streaming vortices enable contactless, digital control of droplets. <i>Science Advances</i> , 2020, 6, eaba0606.	10.3	42
14	Acoustofluidic Holography for Micro- to Nanoscale Particle Manipulation. <i>ACS Nano</i> , 2020, 14, 14635-14645.	14.6	62
15	Acoustofluidic Scanning Nanoscope with High Resolution and Large Field of View. <i>ACS Nano</i> , 2020, 14, 8624-8633.	14.6	16
16	Low-frequency flexural wave based microparticle manipulation. <i>Lab on A Chip</i> , 2020, 20, 1281-1289.	6.0	21
17	A disposable acoustofluidic chip for nano/microparticle separation using unidirectional acoustic transducers. <i>Lab on A Chip</i> , 2020, 20, 1298-1308.	6.0	76
18	Dispersion tuning and route reconfiguration of acoustic waves in valley topological phononic crystals. <i>Nature Communications</i> , 2020, 11, 762.	12.8	135

#	ARTICLE	IF	CITATIONS
19	An acoustofluidic device for efficient mixing over a wide range of flow rates. <i>Lab on A Chip</i> , 2020, 20, 1238-1248.	6.0	56
20	A Cell-Phone-Based Acoustofluidic Platform for Quantitative Point-of-Care Testing. <i>ACS Nano</i> , 2020, 14, 3159-3169.	14.6	36
21	Acoustofluidic sonoporation for gene delivery to human hematopoietic stem and progenitor cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 10976-10982.	7.1	72
22	Fluorescence-based sorting of <i>Caenorhabditis elegans</i> via acoustofluidics. <i>Lab on A Chip</i> , 2020, 20, 1729-1739.	6.0	27
23	Acoustic tweezers based on circular, slanted-finger interdigital transducers for dynamic manipulation of micro-objects. <i>Lab on A Chip</i> , 2020, 20, 987-994.	6.0	32
24	Contactless, programmable acoustofluidic manipulation of objects on water. <i>Lab on A Chip</i> , 2019, 19, 3397-3404.	6.0	30
25	On-chip stool liquefaction via acoustofluidics. <i>Lab on A Chip</i> , 2019, 19, 941-947.	6.0	38
26	Open source acoustofluidics. <i>Lab on A Chip</i> , 2019, 19, 2404-2414.	6.0	28
27	Wave number ² spiral acoustic tweezers for dynamic and reconfigurable manipulation of particles and cells. <i>Science Advances</i> , 2019, 5, eaau6062.	10.3	146
28	Programmable Acoustic Metasurfaces. <i>Advanced Functional Materials</i> , 2019, 29, 1808489.	14.9	130
29	Surface acoustic waves enable rotational manipulation of <i>Caenorhabditis elegans</i> . <i>Lab on A Chip</i> , 2019, 19, 984-992.	6.0	69
30	Elastic Phased Diffraction Gratings for Manipulation of Ultrasonic Guided Waves in Solids. <i>Physical Review Applied</i> , 2019, 11, .	3.8	27
31	Pulsed laser-scanning laser Doppler vibrometer (PL-SLDV) phased arrays for damage detection in aluminum plates. <i>Mechanical Systems and Signal Processing</i> , 2019, 121, 158-170.	8.0	46
32	Damage localization with fiber Bragg grating Lamb wave sensing through adaptive phased array imaging. <i>Structural Health Monitoring</i> , 2019, 18, 334-344.	7.5	31
33	Core ² skin debonding detection in honeycomb sandwich structures through guided wave wavefield analysis. <i>Journal of Intelligent Material Systems and Structures</i> , 2019, 30, 1306-1317.	2.5	28
34	Digital acoustofluidics enables contactless and programmable liquid handling. <i>Nature Communications</i> , 2018, 9, 2928.	12.8	134
35	Rainbow trapping of ultrasonic guided waves in chirped phononic crystal plates. <i>Scientific Reports</i> , 2017, 7, 40004.	3.3	37
36	Multi-site delamination detection and quantification in composites through guided wave based global-local sensing. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	6

#	ARTICLE	IF	CITATIONS
37	Wavefront modulation and controlling for Lamb waves using surface bonded slice lenses. Journal of Applied Physics, 2017, 122, .	2.5	20
38	Water Level Sensing in a Steel Vessel Using A0 and Quasi-Scholte Waves. Journal of Sensors, 2017, 2017, 1-11.	1.1	5
39	Crack Detection and Evaluation in Grout Structures with Passive/Active Methods. Journal of Materials in Civil Engineering, 2016, 28, 04015168.	2.9	9
40	Damage Detection With Guided Waves and Fiber Bragg Grating Sensor Arrays. , 2016, , .		0
41	Damage Detection in Thick Steel Plates Using Guided Ultrasonic Waves and Non-Contact Laser Vibrometry. , 2016, , .		0
42	Phased array beamforming and imaging in composite laminates using guided waves. , 2016, , .		2
43	Rapid guided wave delamination detection and quantification in composites using global-local sensing. Smart Materials and Structures, 2016, 25, 085042.	3.5	54
44	Guided wave damage detection with PZT-FBG sensing. , 2016, , .		3
45	Guided wave phased array beamforming and imaging in composite plates. Ultrasonics, 2016, 68, 43-53.	3.9	69
46	Damage Imaging and Quantification Using Spectral Field. , 2015, , .		0
47	Impact induced delamination detection and quantification with guided wavefield analysis. Proceedings of SPIE, 2015, , .	0.8	0
48	Delamination detection and quantification on laminated composite structures with Lamb waves and wavenumber analysis. Journal of Intelligent Material Systems and Structures, 2015, 26, 1723-1738.	2.5	89
49	Case study of guided wave propagation in a one-side water-immersed steel plate. Case Studies in Nondestructive Testing and Evaluation, 2015, 3, 1-8.	1.7	26
50	Crack imaging and quantification in aluminum plates with guided wave wavenumber analysis methods. Ultrasonics, 2015, 62, 203-212.	3.9	70
51	Wavenumber study of guided waves in aluminum honeycomb sandwich structures. Proceedings of SPIE, 2015, , .	0.8	2
52	Guided wave imaging for detection and evaluation of impact-induced delamination in composites. Smart Materials and Structures, 2015, 24, 105019.	3.5	51
53	Damage Assessment in Metal Plates by Using Laser Vibrometer Measurements. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 67-72.	0.5	1
54	Study of Guided Wave Propagation in Honeycomb Sandwich Structures. , 2014, , .		1

#	ARTICLE	IF	CITATIONS
55	3D guided wave motion analysis on laminated composites. , 2014, , .		0
56	Study on guided wave propagation in a water loaded plate with wavenumber analysis techniques. , 2014, , .		4
57	Guided wave propagation study on laminated composites by frequency-wavenumber technique. , 2014, , .		11
58	Single mode Lamb wave phased array beamforming with hybrid PZT-SLDV sensing. , 2014, , .		2
59	Lamb wave frequency-wavenumber analysis and decomposition. Journal of Intelligent Material Systems and Structures, 2014, 25, 1107-1123.	2.5	106
60	Guided Wave Delamination Detection and Quantification With Wavefield Data Analysis. , 2014, , .		6
61	Lamb wave structural health monitoring using frequency-wavenumber analysis. AIP Conference Proceedings, 2013, , .	0.4	5
62	Lamb wave Structural Health Monitoring Using a Hybrid PZT-Laser Vibrometer Approach. Structural Health Monitoring, 2013, 12, 469-483.	7.5	79
63	Study on crack scattering in aluminum plates with Lamb wave frequency-wavenumber analysis. Smart Materials and Structures, 2013, 22, 065019.	3.5	31
64	Crack detection with Lamb wave wavenumber analysis. , 2013, , .		8
65	Visualization of solitary waves via laser Doppler vibrometry for heavy impurity identification in a granular chain. Smart Materials and Structures, 2013, 22, 035016.	3.5	29
66	A dual mode imaging array for damage detection in grout structures. , 2013, , .		1
67	Damage Detection in Composite Structures With Wavenumber Array Data Processing. , 2013, , .		0
68	Lamb Wave Propagation Study Using Frequency-Wavenumber Analysis. , 2012, , .		7
69	Ultrasonic gas accumulation detection and evaluation in nuclear cooling pipes. , 2012, , .		4
70	Gas Accumulation Detection in a Water Tank Using Lamb Waves. , 2012, , .		2
71	Dual Mode Sensing of Crack Growth in Steel Bridge Structures. , 2012, , .		1
72	Simulation Study of Damage Identification Method Based on Lamb Wave Scattering in Aluminium Plate. Advanced Materials Research, 0, 383-390, 7362-7368.	0.3	0

#	ARTICLE	IF	CITATIONS
73	Simulation Study of Damage Identification Method Based on Lamb Wave Scattering in Aluminium Plate. Advanced Materials Research, 0, 433-440, 2611-2618.	0.3	0
74	Guided Wave Sensing with Fiber Bragg Grating Optic Sensors and Embedment. , 0, , .		1