Feiyan Cai

List of Publications by Year
in descending order

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79 papers	2,170 citations	201674 27 h-index	233421 45 g-index
87 all docs	87 docs citations	87 times ranked	2045 citing authors

#	Article	IF	Citations
1	Acoustofluidics for biomedical applications. Nature Reviews Methods Primers, 2022, 2, .	21.2	95
2	Phononic crystal-induced standing Lamb wave for the translation of subwavelength microparticles. Applied Physics Letters, 2022, 121, 023505.	3.3	3
3	Self-Navigated 3D Acoustic Tweezers in Complex Media Based on Time Reversal. Research, 2021, 2021, 9781394.	5.7	28
4	10.1121/10.0003959.1. , 2021, , .		0
5	A deep learning approach for the fast generation of acoustic holograms. Journal of the Acoustical Society of America, 2021, 149, 2312-2322.	1.1	18
6	Fabrication and properties of C_f/Ta₄HfC₅â€SiC composite via precursor infiltration and pyrolysis. Journal of the American Ceramic Society, 2021, 104, 6601-6610.	3.8	11
7	Targeted Delivery of Liposomal Temozolomide Enhanced Anti-Glioblastoma Efficacy through Ultrasound-Mediated Bloodâ€“Brain Barrier Opening. Pharmaceutics, 2021, 13, 1270.	4.5	19
8	Early Detection and Reversal of Cell Apoptosis Induced by Focused Ultrasound-Mediated Bloodâ€“Brain Barrier Opening. ACS Nano, 2021, 15, 14509-14521.	14.6	19
9	Numerical study of enhanced Rayleigh streaming in resonant cylindrical shells. Journal of Micromechanics and Microengineering, 2021, 31, 104005.	2.6	2
10	Three-dimensional spiral motion of microparticles by a binary-phase logarithmic-spiral zone plate. Journal of the Acoustical Society of America, 2021, 150, 2401-2408.	1.1	7
11	High frequency focal transducer with a Fresnel zone plate for intravascular ultrasound. Applied Physics Letters, 2021, 119, .	3.3	2
12	Brain Delivery of Curcumin Through Low-Intensity Ultrasound-Induced Bloodâ€“Brain Barrier Opening via Lipid-PLGA Nanobubbles. International Journal of Nanomedicine, 2021, Volume 16, 7433-7447.	6.7	38
13	Development of Scalable 2D Plane Array for Transcranial Ultrasonic Neuromodulation on Non-Human Primates: An Ex Vivo Study. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 361-369.	4.9	8
14	Ultrasonic tunable focusing by a stretchable phase-reversal Fresnel zone plate. Applied Physics Letters, 2020, 117, .	3.3	19
15	Trapping of sub-wavelength microparticles and cells in resonant cylindrical shells. Applied Physics Letters, 2020, 117, .	3.3	12
16	Ultrasonic microstreaming for complex-trajectory transport and rotation of single particles and cells. Lab on A Chip, 2020, 20, 2947-2953.	6.0	35
17	Microbubble enhanced acoustic tweezers for size-independent cell sorting. Applied Physics Letters, 2020, 116, .	3.3	26
18	The compact acoustic liquid sensor based on the circumferential modes of a cylindrical shell. Sensors and Actuators A: Physical, 2020, 304, 111843.	4.1	13

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19	Phononic-Crystal-Enabled Dynamic Manipulation of Microparticles and Cells in an Acoustofluidic Channel. Physical Review Applied, 2020, 13, .	3.8	21
20	Ultrasonic super-oscillation wave-packets with an acoustic meta-lens. Nature Communications, 2019, 10, 3411.	12.8	81
21	Selective photothermal ablation of cancer cells by patterned gold nanocages using surface acoustic waves. Lab on A Chip, 2019, 19, 3387-3396.	6.0	14
22	Sonoporation of Cells by a Parallel Stable Cavitation Microbubble Array. Advanced Science, 2019, 6, 1900557.	11.2	83
23	A Novel Racing Array Transducer for Noninvasive Ultrasonic Retinal Stimulation: A Simulation Study. Sensors, 2019, 19, 1825.	3.8	9
24	Active Acoustic Metasurface: Complete Elimination of Grating Lobes for High-Quality Ultrasound Focusing and Controllable Steering. Physical Review Applied, 2019, 11, .	3.8	23
25	Acoustic tweezers. Journal Physics D: Applied Physics, 2019, 52, 273001.	2.8	109
26	Ultrafast Rayleigh-like streaming in a sub-wavelength slit between two phononic crystal plates. Journal of Applied Physics, 2019, 125, .	2.5	8
27	Acoustic manipulation of particles in a cylindrical cavity: Theoretical and experimental study on the effects of boundary conditions. Ultrasonics, 2019, 93, 18-25.	3.9	26
28	Noninvasive Ultrasonic Neuromodulation in Freely Moving Mice. IEEE Transactions on Biomedical Engineering, 2019, 66, 217-224.	4.2	63
29	Sorting of tumour cells in a microfluidic device by multi-stage surface acoustic waves. Sensors and Actuators B: Chemical, 2018, 258, 1174-1183.	7.8	108
30	Tunable Manipulation of Microparticles by CMUT. , 2018, , .		0
31	Planar Ultrasonic Lenses Formed by Concentric Circular Sandwichedâ€Ring Arrays. Advanced Materials Technologies, 2018, 4, 1800542.	5.8	7
32	Rapid acoustophoretic motion of microparticles manipulated by phononic crystals. Applied Physics Letters, 2018, 113, .	3.3	19
33	Phononic crystal-enhanced near-boundary streaming for sonoporation. Applied Physics Letters, 2018, 113, 083701.	3.3	20
34	Observation of Metal Nanoparticles for Acoustic Manipulation. Advanced Science, 2017, 4, 1600447.	11.2	24
35	Ultrasound neuro-modulation chip: activation of sensory neurons in Caenorhabditis elegans by surface acoustic waves. Lab on A Chip, 2017, 17, 1725-1731.	6.0	71
36	Influence of the nature of amino acids on the formation of mesoporous LTA-type zeolite. Microporous and Mesoporous Materials, 2017, 252, 79-89.	4.4	23

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37	Simulation Study of an Ultrasound Retinal Prosthesis With a Novel Contact-Lens Array for Noninvasive Retinal Stimulation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1605-1611.	4.9	14
38	Coreâ€“shell zeolite Y with ant-nest like hollow interior constructed by amino acids and enhanced catalytic activity. Journal of Materials Chemistry A, 2017, 5, 20757-20764.	10.3	32
39	Focusing of ultrasonic waves in water with a flat artificial composite plate. , 2017, , .		0
40	Notice of Removal: Massive manipulation of cells for drug delivery using phononic crystals. , 2017, , .		0
41	Notice of Removal: Acoustic manipulation of nanoparticles by octagonal surface acoustic waves. , 2017, , .		0
42	Spatial selective manipulation of microbubbles by tunable surface acoustic waves. Biomicrofluidics, 2016, 10, 034121.	2.4	20
43	Acoustic manipulation of microparticles in a sub-wavelength slot between two plates. , 2016, , .		0
44	A highly sensitive compact liquid sensor based on slotted phononic crystal plates. Lab on A Chip, 2016, 16, 4595-4600.	6.0	14
45	Phononic Crystal Tunable via Ferroelectric Phase Transition. Physical Review Applied, 2015, 4, .	3.8	12
46	A Disposable Microfluidic Device for Controlled Drug Release from Thermal-Sensitive Liposomes by High Intensity Focused Ultrasound. Theranostics, 2015, 5, 1203-1213.	10.0	42
47	High sensitivity liquid sensor based on slotted phononic crystal. , 2015, , .		0
48	Spatial selective trapping of microparticles using a quasi-periodic phononic crystal plate. , 2015, , .		0
49	Controlled thermal-sensitive liposomes release on a disposable microfluidic device. , 2015, 2015, 5912-5.		2
50	Strong localization of an acoustic wave in a sub-wavelength slot between two plates. Journal of the Acoustical Society of America, 2015, 137, 1251-1256.	1.1	6
51	A Force to Be Reckoned With: A Review of Synthetic Microswimmers Powered by Ultrasound. Small, 2015, 11, 2836-2846.	10.0	188
52	Multi-functional biomedical ultrasound: Imaging, manipulation, neuromodulation and therapy. Chinese Science Bulletin, 2015, 60, 1864-1873.	0.7	1
53	On-chip targeted single cell sonoporation with microbubble destruction excited by surface acoustic waves. Applied Physics Letters, 2014, 104, .	3.3	40
54	Multi-scale patterning of microparticles using a combination of surface acoustic waves and ultrasonic bulk waves. Applied Physics Letters, 2014, 104, .	3.3	19

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55	Phononic-Crystal-Based Acoustic Sieve for Tunable Manipulations of Particles by a Highly Localized Radiation Force. Physical Review Applied, 2014, 1, .	3.8	71
56	Enhanced ambient pressure sensitivity of the subharmonic signal from ultrasound contrast microbubbles. , 2013, , .		0
57	Acoustic radiation force on cylindrical particles near subwavelength slits. , 2013, , .		0
58	Precise and programmable manipulation of microbubbles by two-dimensional standing surface acoustic waves. Applied Physics Letters, 2012, 100, .	3.3	67
59	Ambient pressure dependence of the subharmonic signal from ultrasound contrast microbubbles. , 2012, , .		0
60	Acoustic trapping of particle in the near field of a resonant periodically structured stiff plate. , 2011, , .		0
61	Acoustic aligning and trapping of microbubbles in an enclosed PDMS microfluidic device. Sensors and Actuators B: Chemical, 2011, 160, 1599-1605.	7.8	46
62	Microfluidic-assisted formation of multifunctional monodisperse microbubbles for diagnostics and therapeutics. Micro and Nano Letters, 2011, 6, 417.	1.3	13
63	Acoustic trapping of particle by a periodically structured stiff plate. Applied Physics Letters, 2011, 99, .	3.3	34
64	Transportation of single cell and microbubbles by phase-shift introduced to standing leaky surface acoustic waves. Biomicrofluidics, 2011, 5, 44104-4410410.	2.4	78
65	Precise tracking of impulsive acoustic radiation force induced small displacements for shear wave speed estimation. , 2011, , .		0
66	Precise transportation of single cell by phase-shift standing surface acoustic wave. , 2011, , .		2
67	Anomalous Doppler effects in bulk phononic crystal. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 3971-3976.	2.1	2
68	Acoustic Transmission Enhancement through a Periodically Structured Stiff Plate without Any Opening. Physical Review Letters, 2010, 105, 074301.	7.8	81
69	Acoustic radiation force on small particle studied via the FDTD method. , 2010, , .		0
70	Scholte surface wave in a soft film deposited on rigid plate immersed in water: Dispersion relation and collimation effect. Journal of Applied Physics, 2010, 107, 064505.	2.5	2
71	Concentration of microbubbles with surface acoustic wave devices. , 2010, , .		0
72	Computation of the acoustic radiation force using the finite-difference time-domain method. Journal of the Acoustical Society of America, 2010, 128, 1617-1622.	1.1	52

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73	Parallel acoustic near-field microscope: A steel slab with a periodic array of slits. Physical Review E, 2009, 80, 026603.	2.1	32
74	Guiding acoustic waves with graded phononic crystals. Solid State Communications, 2008, 148, 74-77.	1.9	26
75	Tunable transmission spectra of acoustic waves through double phononic crystal slabs. Applied Physics Letters, 2008, 92, .	3.3	45
76	Subwavelength imaging of acoustic waves by a canalization mechanism in a two-dimensional phononic crystal. Applied Physics Letters, 2008, 93, .	3.3	53
77	Surface acoustic waves in two-dimensional phononic crystals: Dispersion relation and the eigenfield distribution of surface modes. Physical Review B, 2007, 76, .	3.2	38
78	High refractive-index sonic material based on periodic subwavelength structure. Applied Physics Letters, 2007, 91, 203515.	3.3	39
79	Acoustic Bloch oscillations in a two-dimensional phononic crystal. Physical Review E, 2007, 76, 056605.	2.1	33