Xudong Fan

List of Publications by Citations

107 papers	5,447 citations	35 h-index	72 g-index
116 ext. papers	6,579 ext. citations	7.2 avg, IF	6.09 L-index

#	Paper	IF	Citations
107	Sensitive optical biosensors for unlabeled targets: a review. *Analytica Chimica Acta*, **2008**, 620, 8-26	6.6	1527
106	Optofluidic Microsystems for Chemical and Biological Analysis. *Nature Photonics*, **2011**, 5, 591-597	33.9	639
105	The potential of optofluidic biolasers. *Nature Methods*, **2014**, 11, 141-7	21.6	227
104	Graphene nanoelectronic heterodyne sensor for rapid and sensitive vapour detection. *Nature Communications*, **2014**, 5, 4376	17.4	141
103	Brillouin cavity optomechanics with microfluidic devices. *Nature Communications*, **2013**, 4, 1994	17.4	125
102	Optofluidic ring resonator based dye laser. *Applied Physics Letters*, **2007**, 90, 221101	3.4	115
101	Bioinspired optofluidic FRET lasers via DNA scaffolds. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 16039-42	11.5	111
100	Characterization of sensing capability of optofluidic ring resonator biosensors. *Applied Physics Letters*, **2010**, 97, 011105	3.4	107
99	Fluorescent and lasing whispering gallery mode microresonators for sensing applications. *Laser and Photonics Reviews*, **2017**, 11, 1600265	8.3	101
98	Refractometric Sensors for Lab-on-a-Chip Based on Optical Ring Resonators. *IEEE Sensors Journal*, **2007**, 7, 28-35	4	83
97	Cavity optomechanics on a microfluidic resonator with water and viscous liquids. *Light: Science and Applications*, **2013**, 2, e110-e110	16.7	77
96	Highly sensitive fluorescent protein FRET detection using optofluidic lasers. *Lab on A Chip*, **2013**, 13, 2679-81	7.2	77
95	Microneedles for transdermal diagnostics: Recent advances and new horizons. *Biomaterials*, **2020**, 232, 119740	15.6	75
94	Distinguishing DNA by analog-to-digital-like conversion by using optofluidic lasers. *Angewandte Chemie - International Edition*, **2012**, 51, 1236-9	16.4	68
93	Optofluidic laser for dual-mode sensitive biomolecular detection with a large dynamic range. *Nature Communications*, **2014**, 5, 3779	17.4	63
92	Biological Lasers for Biomedical Applications. *Advanced Optical Materials*, **2019**, 7, 1900377	8.1	57
91	Lasing in blood. *Optica*, **2016**, 3, 809-815	8.6	56

90	Optofluidic lasers with a single molecular layer of gain. *Lab on A Chip*, **2014**, 14, 4590-5	7.2	55
89	A quasi-droplet optofluidic ring resonator laser using a micro-bubble. *Applied Physics Letters*, **2011**, 99, 091102	3.4	53
88	Laser-emission imaging of nuclear biomarkers for high-contrast cancer screening and immunodiagnosis. *Nature Biomedical Engineering*, **2017**, 1, 724-735	19	53
87	Self-assembled DNA tetrahedral optofluidic lasers with precise and tunable gain control. *Lab on A Chip*, **2013**, 13, 3351-4	7.2	46
86	Graphene-Enhanced Brillouin Optomechanical Microresonator for Ultrasensitive Gas Detection. *Nano Letters*, **2017**, 17, 4996-5002	11.5	46
85	Rapid, sensitive, and multiplexed on-chip optical sensors for micro-gas chromatography. *Lab on A Chip*, **2012**, 12, 901-5	7.2	46
84	Tunable single mode lasing from an on-chip optofluidic ring resonator laser. *Applied Physics Letters*, **2011**, 98, 061103	3.4	45
83	Intracavity DNA melting analysis with optofluidic lasers. *Analytical Chemistry*, **2012**, 84, 9558-63	7.8	44
82	Bio-switchable optofluidic lasers based on DNA Holliday junctions. *Lab on A Chip*, **2012**, 12, 3673-5	7.2	43
81	Optofluidic chlorophyll lasers. *Lab on A Chip*, **2016**, 16, 2228-35	7.2	43
80	Turbidimetric inhibition immunoassay revisited to enhance its sensitivity via an optofluidic laser. *Biosensors and Bioelectronics*, **2019**, 131, 60-66	11.8	41
79	Flow-through microfluidic photoionization detectors for rapid and highly sensitive vapor detection. *Lab on A Chip*, **2015**, 15, 3021-9	7.2	41
78	Nanowire lasers as intracellular probes. *Nanoscale*, **2018**, 10, 9729-9735	7.7	40
77	A digitally generated ultrafine optical frequency comb for spectral measurements with 0.01-pm resolution and 0.7-μs response time. *Light: Science and Applications*, **2015**, 4, e300-e300	16.7	38
76	Reproducible fiber optofluidic laser for disposable and array applications. *Lab on A Chip*, **2017**, 17, 3431-3436	7.2	38
75	Bio-inspired optofluidic lasers with luciferin. *Applied Physics Letters*, **2013**, 102, 203706	3.4	38
74	Distributed fibre optofluidic laser for chip-scale arrayed biochemical sensing. *Lab on A Chip*, **2018**, 18, 2741-2748	7.2	37
73	Optofluidic Lasers with Aqueous Quantum Dots. *ACS Photonics*, **2015**, 2, 707-713	6.3	35

72	Digital DNA detection based on a compact optofluidic laser with ultra-low sample consumption. *Lab on A Chip*, **2016**, 16, 4770-4776	7.2	34
71	Optofluidic laser array based on stable high-Q Fabry-Pérot microcavities. *Lab on A Chip*, **2015**, 15, 3862-9	7.2	33
70	All-Optical Tunable Microlaser Based on an Ultrahigh-Q Erbium-Doped Hybrid Microbottle Cavity. *ACS Photonics*, **2018**, 5, 3794-3800	6.3	33
69	Sensitive sulfide ion detection by optofluidic catalytic laser using horseradish peroxidase (HRP) enzyme. *Biosensors and Bioelectronics*, **2017**, 96, 351-357	11.8	32
68	Rapid and quantitative detection of SARS-CoV-2 specific IgG for convalescent serum evaluation. *Biosensors and Bioelectronics*, **2020**, 169, 112572	11.8	32
67	Rapid and sensitive detection of formaldehyde using portable 2-dimensional gas chromatography equipped with photoionization detectors. *Sensors and Actuators B: Chemical*, **2019**, 283, 182-187	8.5	32
66	Fully Automated Portable Comprehensive 2-Dimensional Gas Chromatography Device. *Analytical Chemistry*, **2016**, 88, 10266-10274	7.8	30
65	Air-coupled ultrasound detection using capillary-based optical ring resonators. *Scientific Reports*, **2017**, 7, 109	4.9	29
64	Single mode coupled optofluidic ring resonator dye lasers. *Applied Physics Letters*, **2009**, 94, 241109	3.4	29
63	Glass capillary based microfluidic ELISA for rapid diagnostics. *Analyst, The*, **2017**, 142, 2378-2385	5	28
62	A fully automated portable gas chromatography system for sensitive and rapid quantification of volatile organic compounds in water. *RSC Advances*, **2016**, 6, 49416-49424	3.7	28
61	Highly sensitive tuning of coupled optical ring resonators by microfluidics. *Microfluidics and Nanofluidics*, **2009**, 6, 425-429	2.8	26
60	High-Q, low-mode-volume microsphere-integrated Fabry–Perot cavity for optofluidic lasing applications. *Photonics Research*, **2019**, 7, 50	6	25
59	Versatile tissue lasers based on high-Q Fabry-Pérot microcavities. *Lab on A Chip*, **2017**, 17, 538-548	7.2	24
58	Optofluidic FRET lasers using aqueous quantum dots as donors. *Lab on A Chip*, **2016**, 16, 353-9	7.2	24
57	Monolithic optofluidic ring resonator lasers created by femtosecond laser nanofabrication. *Lab on A Chip*, **2015**, 15, 2335-40	7.2	23
56	Fiber Optofluidic Microlaser With Lateral Single Mode Emission. *IEEE Journal of Selected Topics in Quantum Electronics*, **2018**, 24, 1-6	3.8	23
55	Rapid Mouse Follicle Stimulating Hormone Quantification and Estrus Cycle Analysis Using an Automated Microfluidic Chemiluminescent ELISA System. *ACS Sensors*, **2018**, 3, 2327-2334	9.2	23

54	Microbubble-Based Fiber Optofluidic Interferometer for Sensing. *Journal of Lightwave Technology*, **2017**, 35, 2514-2519	4	22
53	Optofluidic FRET Lasers and Their Applications in Novel Photonic Devices and Biochemical Sensing. *IEEE Journal of Selected Topics in Quantum Electronics*, **2016**, 22, 188-202	3.8	22
52	On-chip, high-sensitivity temperature sensors based on dye-doped solid-state polymer microring lasers. *Applied Physics Letters*, **2017**, 111, 061109	3.4	22
51	Rapid breath analysis for acute respiratory distress syndrome diagnostics using a portable two-dimensional gas chromatography device. *Analytical and Bioanalytical Chemistry*, **2019**, 411, 6435-6447	4.4	20
50	An integrated microwell array platform for cell lasing analysis. *Lab on A Chip*, **2017**, 17, 2814-2820	7.2	19
49	Fast and Reproducible ELISA Laser Platform for Ultrasensitive Protein Quantification. *ACS Sensors*, **2020**, 5, 110-117	9.2	19
48	Low-Power Miniaturized Helium Dielectric Barrier Discharge Photoionization Detectors for Highly Sensitive Vapor Detection. *Analytical Chemistry*, **2016**, 88, 8780-6	7.8	18
47	Optofluidic UV-Vis spectrophotometer for online monitoring of photocatalytic reactions. *Scientific Reports*, **2016**, 6, 28928	4.9	18
46	Electrical Probing and Tuning of Molecular Physisorption on Graphene. *Nano Letters*, **2016**, 16, 695-700	11.5	18
45	Reconfigurable Solid-state Dye-doped Polymer Ring Resonator Lasers. *Scientific Reports*, **2015**, 5, 18310	4.9	18
44	A robust tissue laser platform for analysis of formalin-fixed paraffin-embedded biopsies. *Lab on A Chip*, **2018**, 18, 1057-1065	7.2	17
43	Sensitive optofluidic flow rate sensor based on laser heating and microring resonator. *Microfluidics and Nanofluidics*, **2015**, 19, 1497-1505	2.8	17
42	Rapid and sensitive detection of drugs of abuse in sweat by multiplexed capillary based immuno-biosensors. *Analyst, The*, **2020**, 145, 1346-1354	5	16
41	All-optical controllable electromagnetically induced transparency in coupled silica microbottle cavities. *Nanophotonics*, **2018**, 7, 1669-1677	6.3	16
40	In situ calibration of micro-photoionization detectors in a multi-dimensional micro-gas chromatography system. *Analyst, The*, **2016**, 141, 4100-7	5	15
39	Rapid In Situ Analysis of Plant Emission for Disease Diagnosis Using a Portable Gas Chromatography Device. *Journal of Agricultural and Food Chemistry*, **2019**, 67, 7530-7537	5.7	14
38	Effects of edge inclination angles on whispering-gallery modes in printable wedge microdisk lasers. *Optics Express*, **2018**, 26, 233-241	3.3	13
37	DNA Melting Analysis with Optofluidic Lasers Based on Fabry-Pérot Microcavity. *ACS Sensors*, **2018**, 3, 1750-1755	9.2	13

36	Fusion of Renewable Ring Resonator Lasers and Ultrafast Laser Inscribed Photonic Waveguides. *Scientific Reports*, **2016**, 6, 32668	4.9	12
35	Demonstration of versatile whispering-gallery micro-lasers for remote refractive index sensing. *Optics Express*, **2018**, 26, 5800-5809	3.3	12
34	Integrated Separation Columns and Fabry-Perot Sensors for Microgas Chromatography Systems. *Journal of Microelectromechanical Systems*, **2013**, 22, 1174-1179	2.5	11
33	On-site monitoring of occupational exposure to volatile organic compounds by a portable comprehensive 2-dimensional gas chromatography device. *Analytical Methods*, **2018**, 10, 237-244	3.2	11
32	Distinguishing Small Molecules in Microcavity with Molecular Laser Polarization. *ACS Photonics*, **2020**, 7, 1908-1914	6.3	10
31	Bioresponsive microlasers with tunable lasing wavelength. *Nanoscale*, **2021**, 13, 1608-1615	7.7	10
30	Fluorescent chemo-sensors based on dually smart optical micro/nano-waveguides lithographically fabricated with AIE composite resins. *Materials Horizons*, **2020**, 7, 1782-1789	14.4	9
29	Rapid and quantitative detection of COVID-19 markers in micro-liter sized samples		9
28	Multiparameter urine analysis for quantitative bladder cancer surveillance of orthotopic xenografted mice. *Lab on A Chip*, **2020**, 20, 634-646	7.2	9
27	Monitoring Neuron Activities and Interactions with Laser Emissions. *ACS Photonics*, **2020**, 7, 2182-2189	6.3	9
26	Ultrasound Modulated Droplet Lasers. *ACS Photonics*, **2019**, 6, 531-537	6.3	9
25	Stable High-Q Bouncing Ball Modes inside a Fabry Pot Cavity. *ACS Photonics*, **2019**, 6, 2470-2478	6.3	8
24	Refractive index sensing based on semiconductor nanowire lasers. *Applied Physics Letters*, **2017**, 111, 031112	3.4	7
23	Highly Reproducible, Isotropic Optofluidic Laser Based on Hollow Optical Fiber. *IEEE Journal of Selected Topics in Quantum Electronics*, **2019**, 25, 1-6	3.8	5
22	Evanescent coupling between refillable ring resonators and laser-inscribed optical waveguides. *Applied Optics*, **2017**, 56, 4750-4756	0.2	5
21	Chromatin laser imaging reveals abnormal nuclear changes for early cancer detection. *Biomedical Optics Express*, **2019**, 10, 838-854	3.5	5
20	Optical coherence tomography and fluorescence microscopy dual-modality imaging for in vivo single-cell tracking with nanowire lasers. *Biomedical Optics Express*, **2020**, 11, 3659-3672	3.5	5
19	High-Sensitivity Micro-Gas Chromatograph-Photoionization Detector for Trace Vapor Detection. *ACS Sensors*, **2021**, 6, 2348-2355	9.2	5

18	Microfabricated porous layer open tubular (PLOT) column. *Lab on A Chip*, **2019**, 19, 3979-3987	7.2	5
17	Distinguishing DNA by Analog-to-Digital-like Conversion by Using Optofluidic Lasers. *Angewandte Chemie*, **2012**, 124, 1262-1265	3.6	4
16	Peak focusing based on stationary phase thickness gradient. *Journal of Chromatography A*, **2020**, 1614, 460737	4.5	4
15	Microfabricated ionic liquid column for separations in dry air. *Journal of Chromatography A*, **2020**, 1620, 461002	4.5	3
14	Demonstration of on-chip quantum dot microcavity lasers in a molecularly engineered annular groove. *Optics Letters*, **2019**, 44, 495-498	3	3
13	A Multilevel Bayesian Approach to Improve Effect Size Estimation in Regression Modeling of Metabolomics Data Utilizing Imputation with Uncertainty. *Metabolites*, **2020**, 10,	5.6	3
12	Smart bio-gel optofluidic Mach-Zehnder interferometers multiphoton-lithographically customized with chemo-mechanical-opto transduction and bio-triggered degradation. *Lab on A Chip*, **2020**, 20, 3815-3823	7.2	3
11	Portable multi-dimensional gas chromatography device for rapid field analysis of chemical compounds **2017**,		2
10	Experimental Coupling of a MEMS Gas Chromatograph and a Mass Spectrometer for Organic Analysis in Space Environments. *ACS Earth and Space Chemistry*, **2020**, 4, 1718-1729	3.2	2
9	Real Time Breath Analysis Using Portable Gas Chromatography for Adult Asthma Phenotypes. *Metabolites*, **2021**, 11,	5.6	2
8	Bioinspired optofluidic lasers for DNA and protein detection **2013**,		1
7	Analysis of single nanoparticle detection by using 3-dimensionally confined optofluidic ring resonators **2010**,		1
6	A fast and reproducible ELISA laser platform **2019**,		1
5	Laser Recording of Subcellular Neuron Activities		1
4	Integrated microfluidic helium discharge photoionization detectors. *Sensors and Actuators B: Chemical*, **2021**, 332, 129504	8.5	1
3	Quantification and immunoprofiling of bladder cancer cell-derived extracellular vesicles with microfluidic chemiluminescent ELISA. *Biosensors and Bioelectronics: X*, **2021**, 8, 100066	2.9	1
2	Rapid and Quantitative Evaluation of SARS-CoV-2 Neutralizing Antibodies and Nanobodies.. *Analytical Chemistry*, **2022**,	7.8	1
1	Guest Editorial Introduction to the Issue on Nanobiophotonics. *IEEE Journal of Selected Topics in Quantum Electronics*, **2016**, 22, 3-5	3.8	