

# Xudong Fan

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Rapid and Quantitative Evaluation of SARS-CoV-2 Neutralizing Antibodies and Nanobodies.. <i>Analytical Chemistry</i> , <b>2022</b> ,	7.8	1
106	Real Time Breath Analysis Using Portable Gas Chromatography for Adult Asthma Phenotypes. <i>Metabolites</i> , <b>2021</b> , 11,	5.6	2
105	Integrated microfluidic helium discharge photoionization detectors. <i>Sensors and Actuators B: Chemical</i> , <b>2021</b> , 332, 129504	8.5	1
104	High-Sensitivity Micro-Gas Chromatograph-Photoionization Detector for Trace Vapor Detection. <i>ACS Sensors</i> , <b>2021</b> , 6, 2348-2355	9.2	5
103	Bioresponsive microlasers with tunable lasing wavelength. <i>Nanoscale</i> , <b>2021</b> , 13, 1608-1615	7.7	10
102	Quantification and immunoprofiling of bladder cancer cell-derived extracellular vesicles with microfluidic chemiluminescent ELISA. <i>Biosensors and Bioelectronics: X</i> , <b>2021</b> , 8, 100066	2.9	1
101	Microfabricated ionic liquid column for separations in dry air. <i>Journal of Chromatography A</i> , <b>2020</b> , 1620, 461002	4.5	3
100	Fluorescent chemo-sensors based on dually smart optical micro/nano-waveguides lithographically fabricated with AIE composite resins. <i>Materials Horizons</i> , <b>2020</b> , 7, 1782-1789	14.4	9
99	Optical coherence tomography and fluorescence microscopy dual-modality imaging for in vivo single-cell tracking with nanowire lasers. <i>Biomedical Optics Express</i> , <b>2020</b> , 11, 3659-3672	3.5	5
98	Rapid and sensitive detection of drugs of abuse in sweat by multiplexed capillary based immuno-biosensors. <i>Analyst, The</i> , <b>2020</b> , 145, 1346-1354	5	16
97	Microneedles for transdermal diagnostics: Recent advances and new horizons. <i>Biomaterials</i> , <b>2020</b> , 232, 119740	15.6	75
96	Multiparameter urine analysis for quantitative bladder cancer surveillance of orthotopic xenografted mice. <i>Lab on A Chip</i> , <b>2020</b> , 20, 634-646	7.2	9
95	Fast and Reproducible ELISA Laser Platform for Ultrasensitive Protein Quantification. <i>ACS Sensors</i> , <b>2020</b> , 5, 110-117	9.2	19
94	Peak focusing based on stationary phase thickness gradient. <i>Journal of Chromatography A</i> , <b>2020</b> , 1614, 460737	4.5	4
93	Rapid and quantitative detection of SARS-CoV-2 specific IgG for convalescent serum evaluation. <i>Biosensors and Bioelectronics</i> , <b>2020</b> , 169, 112572	11.8	32
92	Experimental Coupling of a MEMS Gas Chromatograph and a Mass Spectrometer for Organic Analysis in Space Environments. <i>ACS Earth and Space Chemistry</i> , <b>2020</b> , 4, 1718-1729	3.2	2
91	Monitoring Neuron Activities and Interactions with Laser Emissions. <i>ACS Photonics</i> , <b>2020</b> , 7, 2182-2189	6.3	9

90	Distinguishing Small Molecules in Microcavity with Molecular Laser Polarization. <i>ACS Photonics</i> , <b>2020</b> , 7, 1908-1914	6.3	10
89	A Multilevel Bayesian Approach to Improve Effect Size Estimation in Regression Modeling of Metabolomics Data Utilizing Imputation with Uncertainty. <i>Metabolites</i> , <b>2020</b> , 10,	5.6	3
88	Smart bio-gel optofluidic Mach-Zehnder interferometers multiphoton-lithographically customized with chemo-mechanical-opto transduction and bio-triggered degradation. <i>Lab on A Chip</i> , <b>2020</b> , 20, 3815-3823	7.3	3
87	Stable High-Q Bouncing Ball Modes inside a Fabry-Pérot Cavity. <i>ACS Photonics</i> , <b>2019</b> , 6, 2470-2478	6.3	8
86	Biological Lasers for Biomedical Applications. <i>Advanced Optical Materials</i> , <b>2019</b> , 7, 1900377	8.1	57
85	Rapid In Situ Analysis of Plant Emission for Disease Diagnosis Using a Portable Gas Chromatography Device. <i>Journal of Agricultural and Food Chemistry</i> , <b>2019</b> , 67, 7530-7537	5.7	14
84	Turbidimetric inhibition immunoassay revisited to enhance its sensitivity via an optofluidic laser. <i>Biosensors and Bioelectronics</i> , <b>2019</b> , 131, 60-66	11.8	41
83	Highly Reproducible, Isotropic Optofluidic Laser Based on Hollow Optical Fiber. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2019</b> , 25, 1-6	3.8	5
82	Rapid breath analysis for acute respiratory distress syndrome diagnostics using a portable two-dimensional gas chromatography device. <i>Analytical and Bioanalytical Chemistry</i> , <b>2019</b> , 411, 6435-6444	4.4	20
81	A fast and reproducible ELISA laser platform <b>2019</b> ,		1
80	Chromatin laser imaging reveals abnormal nuclear changes for early cancer detection. <i>Biomedical Optics Express</i> , <b>2019</b> , 10, 838-854	3.5	5
79	Demonstration of on-chip quantum dot microcavity lasers in a molecularly engineered annular groove. <i>Optics Letters</i> , <b>2019</b> , 44, 495-498	3	3
78	High-Q, low-mode-volume microsphere-integrated Fabry-Pérot cavity for optofluidic lasing applications. <i>Photonics Research</i> , <b>2019</b> , 7, 50	6	25
77	Microfabricated porous layer open tubular (PLOT) column. <i>Lab on A Chip</i> , <b>2019</b> , 19, 3979-3987	7.2	5
76	Rapid and sensitive detection of formaldehyde using portable 2-dimensional gas chromatography equipped with photoionization detectors. <i>Sensors and Actuators B: Chemical</i> , <b>2019</b> , 283, 182-187	8.5	32
75	Ultrasound Modulated Droplet Lasers. <i>ACS Photonics</i> , <b>2019</b> , 6, 531-537	6.3	9
74	A robust tissue laser platform for analysis of formalin-fixed paraffin-embedded biopsies. <i>Lab on A Chip</i> , <b>2018</b> , 18, 1057-1065	7.2	17
73	Nanowire lasers as intracellular probes. <i>Nanoscale</i> , <b>2018</b> , 10, 9729-9735	7.7	40

72	Fiber Optofluidic Microlaser With Lateral Single Mode Emission. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2018</b> , 24, 1-6	3.8	23
71	Effects of edge inclination angles on whispering-gallery modes in printable wedge microdisk lasers. <i>Optics Express</i> , <b>2018</b> , 26, 233-241	3.3	13
70	Demonstration of versatile whispering-gallery micro-lasers for remote refractive index sensing. <i>Optics Express</i> , <b>2018</b> , 26, 5800-5809	3.3	12
69	Distributed fibre optofluidic laser for chip-scale arrayed biochemical sensing. <i>Lab on A Chip</i> , <b>2018</b> , 18, 2741-2748	7.2	37
68	All-Optical Tunable Microlaser Based on an Ultrahigh-Q Erbium-Doped Hybrid Microbottle Cavity. <i>ACS Photonics</i> , <b>2018</b> , 5, 3794-3800	6.3	33
67	DNA Melting Analysis with Optofluidic Lasers Based on Fabry-Pérot Microcavity. <i>ACS Sensors</i> , <b>2018</b> , 3, 1750-1755	9.2	13
66	On-site monitoring of occupational exposure to volatile organic compounds by a portable comprehensive 2-dimensional gas chromatography device. <i>Analytical Methods</i> , <b>2018</b> , 10, 237-244	3.2	11
65	All-optical controllable electromagnetically induced transparency in coupled silica microbottle cavities. <i>Nanophotonics</i> , <b>2018</b> , 7, 1669-1677	6.3	16
64	Rapid Mouse Follicle Stimulating Hormone Quantification and Estrus Cycle Analysis Using an Automated Microfluidic Chemiluminescent ELISA System. <i>ACS Sensors</i> , <b>2018</b> , 3, 2327-2334	9.2	23
63	Versatile tissue lasers based on high-Q Fabry-Pérot microcavities. <i>Lab on A Chip</i> , <b>2017</b> , 17, 538-548	7.2	24
62	Microbubble-Based Fiber Optofluidic Interferometer for Sensing. <i>Journal of Lightwave Technology</i> , <b>2017</b> , 35, 2514-2519	4	22
61	Sensitive sulfide ion detection by optofluidic catalytic laser using horseradish peroxidase (HRP) enzyme. <i>Biosensors and Bioelectronics</i> , <b>2017</b> , 96, 351-357	11.8	32
60	Air-coupled ultrasound detection using capillary-based optical ring resonators. <i>Scientific Reports</i> , <b>2017</b> , 7, 109	4.9	29
59	Glass capillary based microfluidic ELISA for rapid diagnostics. <i>Analyst, The</i> , <b>2017</b> , 142, 2378-2385	5	28
58	Fluorescent and lasing whispering gallery mode microresonators for sensing applications. <i>Laser and Photonics Reviews</i> , <b>2017</b> , 11, 1600265	8.3	101
57	Reproducible fiber optofluidic laser for disposable and array applications. <i>Lab on A Chip</i> , <b>2017</b> , 17, 3431-3436	7.4	38
56	Refractive index sensing based on semiconductor nanowire lasers. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 031112	3.4	7
55	Graphene-Enhanced Brillouin Optomechanical Microresonator for Ultrasensitive Gas Detection. <i>Nano Letters</i> , <b>2017</b> , 17, 4996-5002	11.5	46

54	On-chip, high-sensitivity temperature sensors based on dye-doped solid-state polymer microring lasers. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 061109	3.4	22
53	An integrated microwell array platform for cell lasing analysis. <i>Lab on A Chip</i> , <b>2017</b> , 17, 2814-2820	7.2	19
52	Portable multi-dimensional gas chromatography device for rapid field analysis of chemical compounds <b>2017</b> ,		2
51	Evanescent coupling between refillable ring resonators and laser-inscribed optical waveguides. <i>Applied Optics</i> , <b>2017</b> , 56, 4750-4756	0.2	5
50	Laser-emission imaging of nuclear biomarkers for high-contrast cancer screening and immunodiagnosis. <i>Nature Biomedical Engineering</i> , <b>2017</b> , 1, 724-735	19	53
49	Low-Power Miniaturized Helium Dielectric Barrier Discharge Photoionization Detectors for Highly Sensitive Vapor Detection. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 8780-6	7.8	18
48	Optofluidic UV-Vis spectrophotometer for online monitoring of photocatalytic reactions. <i>Scientific Reports</i> , <b>2016</b> , 6, 28928	4.9	18
47	Lasing in blood. <i>Optica</i> , <b>2016</b> , 3, 809-815	8.6	56
46	Digital DNA detection based on a compact optofluidic laser with ultra-low sample consumption. <i>Lab on A Chip</i> , <b>2016</b> , 16, 4770-4776	7.2	34
45	Guest Editorial Introduction to the Issue on Nanobiophotonics. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2016</b> , 22, 3-5	3.8	
44	Fusion of Renewable Ring Resonator Lasers and Ultrafast Laser Inscribed Photonic Waveguides. <i>Scientific Reports</i> , <b>2016</b> , 6, 32668	4.9	12
43	Electrical Probing and Tuning of Molecular Physisorption on Graphene. <i>Nano Letters</i> , <b>2016</b> , 16, 695-700	11.5	18
42	Optofluidic FRET lasers using aqueous quantum dots as donors. <i>Lab on A Chip</i> , <b>2016</b> , 16, 353-9	7.2	24
41	Optofluidic FRET Lasers and Their Applications in Novel Photonic Devices and Biochemical Sensing. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2016</b> , 22, 188-202	3.8	22
40	In situ calibration of micro-photoionization detectors in a multi-dimensional micro-gas chromatography system. <i>Analyst, The</i> , <b>2016</b> , 141, 4100-7	5	15
39	Optofluidic chlorophyll lasers. <i>Lab on A Chip</i> , <b>2016</b> , 16, 2228-35	7.2	43
38	A fully automated portable gas chromatography system for sensitive and rapid quantification of volatile organic compounds in water. <i>RSC Advances</i> , <b>2016</b> , 6, 49416-49424	3.7	28
37	Fully Automated Portable Comprehensive 2-Dimensional Gas Chromatography Device. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 10266-10274	7.8	30

36	A digitally generated ultrafine optical frequency comb for spectral measurements with 0.01-pm resolution and 0.7- $\mu$ s response time. <i>Light: Science and Applications</i> , <b>2015</b> , 4, e300-e300	16.7	38
35	Monolithic optofluidic ring resonator lasers created by femtosecond laser nanofabrication. <i>Lab on A Chip</i> , <b>2015</b> , 15, 2335-40	7.2	23
34	Optofluidic Lasers with Aqueous Quantum Dots. <i>ACS Photonics</i> , <b>2015</b> , 2, 707-713	6.3	35
33	Optofluidic laser array based on stable high-Q Fabry-Pérot microcavities. <i>Lab on A Chip</i> , <b>2015</b> , 15, 3862-9	7.2	33
32	Flow-through microfluidic photoionization detectors for rapid and highly sensitive vapor detection. <i>Lab on A Chip</i> , <b>2015</b> , 15, 3021-9	7.2	41
31	Sensitive optofluidic flow rate sensor based on laser heating and microring resonator. <i>Microfluidics and Nanofluidics</i> , <b>2015</b> , 19, 1497-1505	2.8	17
30	Reconfigurable Solid-state Dye-doped Polymer Ring Resonator Lasers. <i>Scientific Reports</i> , <b>2015</b> , 5, 18310	4.9	18
29	The potential of optofluidic biolasers. <i>Nature Methods</i> , <b>2014</b> , 11, 141-7	21.6	227
28	Optofluidic laser for dual-mode sensitive biomolecular detection with a large dynamic range. <i>Nature Communications</i> , <b>2014</b> , 5, 3779	17.4	63
27	Graphene nanoelectronic heterodyne sensor for rapid and sensitive vapour detection. <i>Nature Communications</i> , <b>2014</b> , 5, 4376	17.4	141
26	Optofluidic lasers with a single molecular layer of gain. <i>Lab on A Chip</i> , <b>2014</b> , 14, 4590-5	7.2	55
25	Self-assembled DNA tetrahedral optofluidic lasers with precise and tunable gain control. <i>Lab on A Chip</i> , <b>2013</b> , 13, 3351-4	7.2	46
24	Cavity optomechanics on a microfluidic resonator with water and viscous liquids. <i>Light: Science and Applications</i> , <b>2013</b> , 2, e110-e110	16.7	77
23	Highly sensitive fluorescent protein FRET detection using optofluidic lasers. <i>Lab on A Chip</i> , <b>2013</b> , 13, 2679-81	7.2	77
22	Bio-inspired optofluidic lasers with luciferin. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 203706	3.4	38
21	Brillouin cavity optomechanics with microfluidic devices. <i>Nature Communications</i> , <b>2013</b> , 4, 1994	17.4	125
20	Bioinspired optofluidic lasers for DNA and protein detection <b>2013</b> ,		1
19	Integrated Separation Columns and Fabry-Perot Sensors for Microgas Chromatography Systems. <i>Journal of Microelectromechanical Systems</i> , <b>2013</b> , 22, 1174-1179	2.5	11

18	Distinguishing DNA by analog-to-digital-like conversion by using optofluidic lasers. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 1236-9	16.4	68
17	Rapid, sensitive, and multiplexed on-chip optical sensors for micro-gas chromatography. <i>Lab on A Chip</i> , <b>2012</b> , 12, 901-5	7.2	46
16	Bio-switchable optofluidic lasers based on DNA Holliday junctions. <i>Lab on A Chip</i> , <b>2012</b> , 12, 3673-5	7.2	43
15	Intracavity DNA melting analysis with optofluidic lasers. <i>Analytical Chemistry</i> , <b>2012</b> , 84, 9558-63	7.8	44
14	Distinguishing DNA by Analog-to-Digital-like Conversion by Using Optofluidic Lasers. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 1262-1265	3.6	4
13	Optofluidic Microsystems for Chemical and Biological Analysis. <i>Nature Photonics</i> , <b>2011</b> , 5, 591-597	33.9	639
12	A quasi-droplet optofluidic ring resonator laser using a micro-bubble. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 091102	3.4	53
11	Tunable single mode lasing from an on-chip optofluidic ring resonator laser. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 061103	3.4	45
10	Analysis of single nanoparticle detection by using 3-dimensionally confined optofluidic ring resonators <b>2010</b> ,		1
9	Characterization of sensing capability of optofluidic ring resonator biosensors. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 011105	3.4	107
8	Bioinspired optofluidic FRET lasers via DNA scaffolds. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 16039-42	11.5	111
7	Single mode coupled optofluidic ring resonator dye lasers. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 241109	3.4	29
6	Highly sensitive tuning of coupled optical ring resonators by microfluidics. <i>Microfluidics and Nanofluidics</i> , <b>2009</b> , 6, 425-429	2.8	26
5	Sensitive optical biosensors for unlabeled targets: a review. <i>Analytica Chimica Acta</i> , <b>2008</b> , 620, 8-26	6.6	1527
4	Refractometric Sensors for Lab-on-a-Chip Based on Optical Ring Resonators. <i>IEEE Sensors Journal</i> , <b>2007</b> , 7, 28-35	4	83
3	Optofluidic ring resonator based dye laser. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 221101	3.4	115
2	Rapid and quantitative detection of COVID-19 markers in micro-liter sized samples		9
1	Laser Recording of Subcellular Neuron Activities		1

