Xudong Fan

List of Publications by Year
in descending order

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113 papers	7,331 citations	66234 42 h-index	54797 84 g-index
116 all docs	116 docs citations	116 times ranked	6990 citing authors

#	Article	IF	Citations
1	Sensitive optical biosensors for unlabeled targets: A review. Analytica Chimica Acta, 2008, 620, 8-26.	2.6	1,895
2	Optofluidic microsystems for chemical and biological analysis. Nature Photonics, 2011, 5, 591-597.	15.6	793
3	The potential of optofluidic biolasers. Nature Methods, 2014, 11, 141-147.	9.0	303
4	Graphene nanoelectronic heterodyne sensor for rapid and sensitive vapour detection. Nature Communications, 2014, 5, 4376.	5.8	162
5	Fluorescent and lasing whispering gallery mode microresonators for sensing applications. Laser and Photonics Reviews, 2017, 11, 1600265.	4.4	156
6	Bioinspired optofluidic FRET lasers via DNA scaffolds. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16039-16042.	3.3	147
7	Brillouin cavity optomechanics with microfluidic devices. Nature Communications, 2013, 4, 1994.	5.8	146
8	Microneedles for transdermal diagnostics: Recent advances and new horizons. Biomaterials, 2020, 232, 119740.	5.7	143
9	Optofluidic ring resonator based dye laser. Applied Physics Letters, 2007, 90, 221101.	1.5	132
10	Characterization of sensing capability of optofluidic ring resonator biosensors. Applied Physics Letters, 2010, 97, .	1.5	129
11	Biological Lasers for Biomedical Applications. Advanced Optical Materials, 2019, 7, 1900377.	3.6	102
12	Refractometric Sensors for Lab-on-a-Chip Based on Optical Ring Resonators. IEEE Sensors Journal, 2007, 7, 28-35.	2.4	98
13	Cavity optomechanics on a microfluidic resonator with water and viscous liquids. Light: Science and Applications, 2013, 2, e110-e110.	7.7	98
14	Highly sensitive fluorescent protein FRET detection using optofluidic lasers. Lab on A Chip, 2013, 13, 2679.	3.1	98
15	Optofluidic laser for dual-mode sensitive biomolecular detection with a large dynamic range. Nature Communications, 2014, 5, 3779.	5.8	94
16	Laser-emission imaging of nuclear biomarkers for high-contrast cancer screening and immunodiagnosis. Nature Biomedical Engineering, 2017, 1, 724-735.	11.6	89
17	Lasing in blood. Optica, 2016, 3, 809.	4.8	84
18	Distinguishing DNA by Analogâ€toâ€Digitalâ€like Conversion by Using Optofluidic Lasers. Angewandte Chemie - International Edition, 2012, 51, 1236-1239.	7.2	83

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19	Graphene-Enhanced Brillouin Optomechanical Microresonator for Ultrasensitive Gas Detection. Nano Letters, 2017, 17, 4996-5002.	4.5	73
20	Optofluidic lasers with a single molecular layer of gain. Lab on A Chip, 2014, 14, 4590-4595.	3.1	70
21	A quasi-droplet optofluidic ring resonator laser using a micro-bubble. Applied Physics Letters, 2011, 99, .	1.5	67
22	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.	4.0	65
23	Turbidimetric inhibition immunoassay revisited to enhance its sensitivity via an optofluidic laser. Biosensors and Bioelectronics, 2019, 131, 60-66.	5.3	64
24	Rapid, sensitive, and multiplexed on-chip optical sensors for micro-gas chromatography. Lab on A Chip, 2012, 12, 901.	3.1	62
25	Self-assembled DNA tetrahedral optofluidic lasers with precise and tunable gain control. Lab on A Chip, 2013, 13, 3351.	3.1	59
26	Bio-switchable optofluidic lasers based on DNA Holliday junctions. Lab on A Chip, 2012, 12, 3673.	3.1	58
27	Intracavity DNA Melting Analysis with Optofluidic Lasers. Analytical Chemistry, 2012, 84, 9558-9563.	3.2	58
28	Flow-through microfluidic photoionization detectors for rapid and highly sensitive vapor detection. Lab on A Chip, 2015, 15, 3021-3029.	3.1	58
29	All-Optical Tunable Microlaser Based on an Ultrahigh-Q Erbium-Doped Hybrid Microbottle Cavity. ACS Photonics, 2018, 5, 3794-3800.	3.2	58
30	Distributed fibre optofluidic laser for chip-scale arrayed biochemical sensing. Lab on A Chip, 2018, 18, 2741-2748.	3.1	57
31	Optofluidic chlorophyll lasers. Lab on A Chip, 2016, 16, 2228-2235.	3.1	56
32	Sensitive sulfide ion detection by optofluidic catalytic laser using horseradish peroxidase (HRP) enzyme. Biosensors and Bioelectronics, 2017, 96, 351-357.	5.3	54
33	Nanowire lasers as intracellular probes. Nanoscale, 2018, 10, 9729-9735.	2.8	54
34	Rapid and quantitative detection of SARS-CoV-2 specific IgG for convalescent serum evaluation. Biosensors and Bioelectronics, 2020, 169, 112572.	5.3	52
35	A digitally generated ultrafine optical frequency comb for spectral measurements with 0.01-pm resolution and 0.7-Âµs response time. Light: Science and Applications, 2015, 4, e300-e300.	7.7	51
36	Tunable single mode lasing from an on-chip optofluidic ring resonator laser. Applied Physics Letters, 2011, 98, .	1.5	50

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37	Air-coupled ultrasound detection using capillary-based optical ring resonators. Scientific Reports, 2017, 7, 109.	1.6	50
38	Reproducible fiber optofluidic laser for disposable and array applications. Lab on A Chip, 2017, 17, 3431-3436.	3.1	50
39	Bio-inspired optofluidic lasers with luciferin. Applied Physics Letters, 2013, 102, .	1.5	47
40	Digital DNA detection based on a compact optofluidic laser with ultra-low sample consumption. Lab on A Chip, 2016, 16, 4770-4776.	3.1	47
41	Optofluidic laser array based on stable high-Q Fabryâ€“PÃ©rot microcavities. Lab on A Chip, 2015, 15, 3862-3869.	3.1	44
42	Optofluidic Lasers with Aqueous Quantum Dots. ACS Photonics, 2015, 2, 707-713.	3.2	43
43	Fully Automated Portable Comprehensive 2-Dimensional Gas Chromatography Device. Analytical Chemistry, 2016, 88, 10266-10274.	3.2	42
44	Glass capillary based microfluidic ELISA for rapid diagnostics. Analyst, The, 2017, 142, 2378-2385.	1.7	41
45	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.	1.9	39
46	A fully automated portable gas chromatography system for sensitive and rapid quantification of volatile organic compounds in water. RSC Advances, 2016, 6, 49416-49424.	1.7	38
47	High-Q, low-mode-volume microsphere-integrated Fabryâ€“Perot cavity for optofluidic lasing applications. Photonics Research, 2019, 7, 50.	3.4	38
48	Single mode coupled optofluidic ring resonator dye lasers. Applied Physics Letters, 2009, 94, .	1.5	37
49	On-chip, high-sensitivity temperature sensors based on dye-doped solid-state polymer microring lasers. Applied Physics Letters, 2017, 111, .	1.5	37
50	Versatile tissue lasers based on high-Q Fabryâ€“PÃ©rot microcavities. Lab on A Chip, 2017, 17, 538-548.	3.1	35
51	Fast and Reproducible ELISA Laser Platform for Ultrasensitive Protein Quantification. ACS Sensors, 2020, 5, 110-117.	4.0	34
52	Monolithic optofluidic ring resonator lasers created by femtosecond laser nanofabrication. Lab on A Chip, 2015, 15, 2335-2340.	3.1	33
53	Optofluidic FRET lasers using aqueous quantum dots as donors. Lab on A Chip, 2016, 16, 353-359.	3.1	33
54	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.	1.9	33

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55	Highly sensitive tuning of coupled optical ring resonators by microfluidics. Microfluidics and Nanofluidics, 2009, 6, 425-429.	1.0	32
56	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.	2.4	32
57	Rapid Mouse Follicle Stimulating Hormone Quantification and Estrus Cycle Analysis Using an Automated Microfluidic Chemiluminescent ELISA System. ACS Sensors, 2018, 3, 2327-2334.	4.0	30
58	High-Sensitivity Micro-Gas Chromatographâ€“Photoionization Detector for Trace Vapor Detection. ACS Sensors, 2021, 6, 2348-2355.	4.0	30
59	Rapid and sensitive detection of drugs of abuse in sweat by multiplexed capillary based immuno-biosensors. Analyst, The, 2020, 145, 1346-1354.	1.7	29
60	An integrated microwell array platform for cell lasing analysis. Lab on A Chip, 2017, 17, 2814-2820.	3.1	28
61	Fiber Optofluidic Microlaser With Lateral Single Mode Emission. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-6.	1.9	28
62	Reconfigurable Solid-state Dye-doped Polymer Ring Resonator Lasers. Scientific Reports, 2016, 5, 18310.	1.6	27
63	A robust tissue laser platform for analysis of formalin-fixed paraffin-embedded biopsies. Lab on A Chip, 2018, 18, 1057-1065.	3.1	26
64	Low-Power Miniaturized Helium Dielectric Barrier Discharge Photoionization Detectors for Highly Sensitive Vapor Detection. Analytical Chemistry, 2016, 88, 8780-8786.	3.2	25
65	Electrical Probing and Tuning of Molecular Physisorption on Graphene. Nano Letters, 2016, 16, 695-700.	4.5	23
66	Microbubble-Based Fiber Optofluidic Interferometer for Sensing. Journal of Lightwave Technology, 2017, 35, 2514-2519.	2.7	23
67	Distinguishing Small Molecules in Microcavity with Molecular Laser Polarization. ACS Photonics, 2020, 7, 1908-1914.	3.2	23
68	DNA Melting Analysis with Optofluidic Lasers Based on Fabry-PÃ©rot Microcavity. ACS Sensors, 2018, 3, 1750-1755.	4.0	21
69	Optofluidic UV-Vis spectrophotometer for online monitoring of photocatalytic reactions. Scientific Reports, 2016, 6, 28928.	1.6	20
70	In situ calibration of micro-photoionization detectors in a multi-dimensional micro-gas chromatography system. Analyst, The, 2016, 141, 4100-4107.	1.7	19
71	All-optical controllable electromagnetically induced transparency in coupled silica microbottle cavities. Nanophotonics, 2018, 7, 1669-1677.	2.9	19
72	Fluorescent chemo-sensors based on â€œdually smartâ€•optical micro/nano-waveguides lithographically fabricated with AIE composite resins. Materials Horizons, 2020, 7, 1782-1789.	6.4	19

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73	Sensitive optofluidic flow rate sensor based on laser heating and microring resonator. Microfluidics and Nanofluidics, 2015, 19, 1497-1505.	1.0	18
74	Fusion of Renewable Ring Resonator Lasers and Ultrafast Laser Inscribed Photonic Waveguides. Scientific Reports, 2016, 6, 32668.	1.6	17
75	Effects of edge inclination angles on whispering-gallery modes in printable wedge microdisk lasers. Optics Express, 2018, 26, 233.	1.7	17
76	Ultrasound Modulated Droplet Lasers. ACS Photonics, 2019, 6, 531-537.	3.2	17
77	Demonstration of versatile whispering-gallery micro-lasers for remote refractive index sensing. Optics Express, 2018, 26, 5800.	1.7	16
78	Bioresponsive microlasers with tunable lasing wavelength. Nanoscale, 2021, 13, 1608-1615.	2.8	16
79	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.	1.3	15
80	Stable High-Q Bouncing Ball Modes inside a Fabryâ€“PÃ©rot Cavity. ACS Photonics, 2019, 6, 2470-2478.	3.2	14
81	Integrated Separation Columns and Fabry-Perot Sensors for Microgas Chromatography Systems. Journal of Microelectromechanical Systems, 2013, 22, 1174-1179.	1.7	13
82	Multiparameter urine analysis for quantitative bladder cancer surveillance of orthotopic xenografted mice. Lab on A Chip, 2020, 20, 634-646.	3.1	13
83	Monitoring Neuron Activities and Interactions with Laser Emissions. ACS Photonics, 2020, 7, 2182-2189.	3.2	13
84	Real Time Breath Analysis Using Portable Gas Chromatography for Adult Asthma Phenotypes. Metabolites, 2021, 11, 265.	1.3	13
85	Optical coherence tomography and fluorescence microscopy dual-modality imaging for in vivo single-cell tracking with nanowire lasers. Biomedical Optics Express, 2020, 11, 3659.	1.5	13
86	Highly Reproducible, Isotropic Optofluidic Laser Based on Hollow Optical Fiber. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-6.	1.9	12
87	Chromatin laser imaging reveals abnormal nuclear changes for early cancer detection. Biomedical Optics Express, 2019, 10, 838.	1.5	11
88	A Multilevel Bayesian Approach to Improve Effect Size Estimation in Regression Modeling of Metabolomics Data Utilizing Imputation with Uncertainty. Metabolites, 2020, 10, 319.	1.3	9
89	Integrated microfluidic helium discharge photoionization detectors. Sensors and Actuators B: Chemical, 2021, 332, 129504.	4.0	9
90	Refractive index sensing based on semiconductor nanowire lasers. Applied Physics Letters, 2017, 111, .	1.5	8

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91	Evanescent coupling between refillable ring resonators and laser-inscribed optical waveguides. Applied Optics, 2017, 56, 4750.	2.1	8
92	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.	1.2	8
93	Smart bio-gel optofluidic Machâ€“Zehnder interferometers multiphoton-lithographically customized with chemo-mechanical-opto transduction and bio-triggered degradation. Lab on A Chip, 2020, 20, 3815-3823.	3.1	7
94	Microfabricated ionic liquid column for separations in dry air. Journal of Chromatography A, 2020, 1620, 461002.	1.8	7
95	Microfabricated porous layer open tubular (PLOT) column. Lab on A Chip, 2019, 19, 3979-3987.	3.1	6
96	Peak focusing based on stationary phase thickness gradient. Journal of Chromatography A, 2020, 1614, 460737.	1.8	6
97	Quantification and immunoprofiling of bladder cancer cell-derived extracellular vesicles with microfluidic chemiluminescent ELISA. Biosensors and Bioelectronics: X, 2021, 8, 100066.	0.9	6
98	A Microcolumn DC Graphene Sensor for Rapid, Sensitive, and Universal Chemical Vapor Detection. Nano Letters, 2021, 21, 10301-10308.	4.5	5
99	Bioinspired optofluidic lasers for DNA and protein detection. Proceedings of SPIE, 2013, , .	0.8	3
100	Demonstration of on-chip quantum dot microcavity lasers in a molecularly engineered annular groove. Optics Letters, 2019, 44, 495.	1.7	3
101	Breath analysis for detection and trajectory monitoring of acute respiratory distress syndrome in swine. ERJ Open Research, 2022, 8, 00154-2021.	1.1	3
102	Rapid and Quantitative In Vitro Evaluation of SARS-CoV-2 Neutralizing Antibodies and Nanobodies. Analytical Chemistry, 2022, 94, 4504-4512.	3.2	3
103	Refractometric Characterization of Microsphere Resonator Based Optical Sensors. , 0, , .		2
104	Analysis of single nanoparticle detection by using 3-dimensionally confined optofluidic ring resonators. , 2010, , .		2
105	Portable multi-dimensional gas chromatography device for rapid field analysis of chemical compounds. , 2017, , .		2
106	Smart multi-dimensional gas chromatography. , 2013, , .		1
107	A fast and reproducible ELISA laser platform. , 2019, , .		1
108	Optofluidic ring resonator lasers: Principles and applications. , 2011, , .		0

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109	Guest Editorial Introduction to the Issue on Nanobiophotonics. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 3-5.	1.9	0
110	Novel distributed fiber optofluidic laser sensor for multi-channel detection of enzyme. , 2018, , .		0
111	Laser-emission Based Microscopy for Cancer Diagnosis. , 2018, , .		0
112	Ultrasound modulated droplet lasers. , 2019, , .		0
113	Automated Multi-modal Laser Emission Microscopy towards Cancer Diagnosis. , 2020, , .		0