

Yasser M Sabry

List of Publications by Year in descending order

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papers

1,070
citations

516710

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147
all docs

147
docs citations

147
times ranked

603
citing authors

#	ARTICLE	IF	CITATIONS
1	On-Chip Micro-Electro-Mechanical System Fourier Transform Infrared (MEMS FT-IR) Spectrometer-Based Gas Sensing. <i>Applied Spectroscopy</i> , 2016, 70, 897-904.	2.2	105
2	Monolithic silicon-micromachined free-space optical interferometers onchip. <i>Laser and Photonics Reviews</i> , 2015, 9, 1-24.	8.7	81
3	Silicon micromirrors with three-dimensional curvature enabling lensless efficient coupling of free-space light. <i>Light: Science and Applications</i> , 2013, 2, e94-e94.	16.6	46
4	Integrated wide-angle scanner based on translating a curved mirror of acylindrical shape. <i>Optics Express</i> , 2013, 21, 13906.	3.4	39
5	Deeply-Etched Optical MEMS Tunable Filter for Swept Laser Source Applications. <i>IEEE Photonics Technology Letters</i> , 2014, 26, 37-39.	2.5	37
6	Wideband Subwavelength Deeply Etched Multilayer Silicon Mirrors for Tunable Optical Filters and SS-OCT Applications. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015, 21, 157-164.	2.9	35
7	On-chip parallel Fourier transform spectrometer for broadband selective infrared spectral sensing. <i>Microsystems and Nanoengineering</i> , 2020, 6, 10.	7.0	31
8	Optical modeling of black silicon using an effective medium/multi-layer approach. <i>Optics Express</i> , 2018, 26, 13443.	3.4	29
9	All-Silicon Double-Cavity Fourier Transform Infrared Spectrometer On-Chip. <i>Advanced Materials Technologies</i> , 2019, 4, 1900441.	5.8	28
10	In-plane deeply-etched optical MEMS notch filter with high-speed tunability. <i>Journal of Optics (United Kingdom)</i> , 2017, 16, 1701001.	2.2	25
11	Wideband Optical MEMS Interferometer Enabled by Multimode Interference Waveguides. <i>Journal of Lightwave Technology</i> , 2016, 34, 2145-2151.	4.6	25
12	Direct Absorption and Photoacoustic Spectroscopy for Gas Sensing and Analysis: A Critical Review. <i>Laser and Photonics Reviews</i> , 2022, 16, .	8.7	25
13	Characterization of MEMS FTIR spectrometer. <i>Proceedings of SPIE</i> , 2011, , .	0.8	24
14	Curved Silicon Micromirror for Linear Displacement-to-Angle Conversion With Uniform Spot Size. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015, 21, 165-173.	2.9	23
15	In-plane external fiber Fabry-Perot cavity comprising silicon micromachined concave mirror. <i>Journal of Micro/ Nanolithography, MEMS, and MOEMS</i> , 2013, 13, 011110.	0.9	22
16	Novel Fourier transform infrared spectrometer architecture based on cascaded Fabry-Perot interferometers. <i>Proceedings of SPIE</i> , 2016, , .	0.8	16
17	Optofluidic Fabry-Perot Micro-Cavities Comprising Curved Surfaces for Homogeneous Liquid Refractometry-Design, Simulation, and Experimental Performance Assessment. <i>Micromachines</i> , 2016, 7, 62.	2.9	15
18	Ultra-compact MEMS FTIR spectrometer. <i>Proceedings of SPIE</i> , 2017, , .	0.8	14

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19	Simulation of quantum transport in double-gate MOSFETs using the non-equilibrium Green's function formalism in real-space: A comparison of four methods. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2011, 24, 322-334.	1.9	13
20	High-throughput deeply-etched scanning Michelson interferometer on-chip. , 2014, , .		13
21	Multi-step etching of three-dimensional sub-millimeter curved silicon microstructures with in-plane principal axis. Microelectronic Engineering, 2014, 114, 78-84.	2.4	13
22	In-plane coupled Fabry-Pérot micro-cavities based on Si-air Bragg mirrors: a theoretical and practical study. Applied Optics, 2018, 57, 5112.	1.8	13
23	In-Line Optical MEMS Phase Modulator and Application in Ring Laser Frequency Modulation. IEEE Journal of Quantum Electronics, 2016, 52, 1-8.	1.9	12
24	High-Q Fabry-Pérot Micro-Cavities for High-Sensitivity Volume Refractometry. Micromachines, 2018, 9, 54.	2.9	12
25	Continuous Monitoring of Air Purification: A Study on Volatile Organic Compounds in a Gas Cell. Sensors, 2020, 20, 934.	3.8	12
26	Transformation algorithm and analysis of the Fourier transform spectrometer based on cascaded Fabry-Pérot interferometers. Applied Optics, 2018, 57, 7225.	1.8	11
27	Intrinsic improvement of diffraction-limited resolution in optical MEMS fourier-transform spectrometers. , 2014, , .		10
28	Analysis of dual coupler nested coupled cavities. Applied Optics, 2017, 56, 9457.	1.8	10
29	Spectroscopic Gas Sensing Based on a MEMS-SOA Swept Fiber Laser Source. Journal of Lightwave Technology, 2019, 37, 5354-5360.	4.6	10
30	Ultra-Compact Fourier Transform Near-Infrared MEMS Spectral Sensor for Smart Industry and IoT. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-9.	2.9	10
31	Electrostatic Comb-Drive Actuator with High In-Plane Translational Velocity. Micromachines, 2016, 7, 188.	2.9	9
32	Nanowire Length, Density, and Crystalline Quality Retrieved from a Single Optical Spectrum. Nano Letters, 2019, 19, 2509-2515.	9.1	9
33	On-Channel Integrated Optofluidic Pressure Sensor with Optically Boosted Sensitivity. Sensors, 2019, 19, 944.	3.8	9
34	Mid infrared MEMS FTIR spectrometer. Proceedings of SPIE, 2016, , .	0.8	8
35	Silicon photonic mid-infrared grating coupler based on silicon-on-insulator technology. , 2017, , .		8
36	Deeply-Etched MEMS Slotted Micromirrors With Controlled Transmittance. IEEE Journal of Quantum Electronics, 2017, 53, 1-8.	1.9	8

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37	In-Plane Optical Beam Collimation Using a Three-Dimensional Curved MEMS Mirror. <i>Micromachines</i> , 2017, 8, 134.	2.9	8
38	Incoherent Gain-Assisted Ring Enhanced Gas Absorption Spectroscopy. <i>IEEE Journal of Quantum Electronics</i> , 2019, 55, 1-8.	1.9	8
39	Parameter extraction of MEMS comb-drive near-resonance equivalent circuit: physically-based technique for a unique solution. <i>Journal of Micro/ Nanolithography, MEMS, and MOEMS</i> , 2012, 11, 021205-1.	0.9	7
40	On the environmental gas sensing using MEMS FTIR spectrometer in the near-infrared region. , 2016, , .		7
41	Transmission-enabled fiber Fabry-Pérot cavity based on a deeply etched slotted micromirror. <i>Applied Optics</i> , 2018, 57, 4610.	1.8	6
42	Visible Laser on Silicon Optofluidic Microcavity. <i>Advanced Materials Technologies</i> , 2020, 5, 1901132.	5.8	6
43	MEMS FTIR optical spectrometer enables detection of volatile organic compounds (VOCs) in part-per-billion (ppb) range for air quality monitoring. , 2019, , .		6
44	Uncoupled mode-space simulation validity for double gate MOSFETs. , 2007, , .		5
45	Deeply-etched 1 micron-thick silicon layers enabling 170-NM bandwidth highly-reflective Bragg mirrors. , 2014, , .		5
46	Optical filter finesses enhancement based on nested coupled cavities and active medium. , 2016, , .		5
47	Ring laser gyroscope based on standard single-mode fiber and semiconductor optical amplifier. , 2016, , .		5
48	Environmental mid-infrared gas sensing using MEMS FTIR spectrometer. , 2017, , .		5
49	Gain-assisted broadband ring cavity enhanced spectroscopy. <i>Proceedings of SPIE</i> , 2017, , .	0.8	5
50	Quasi-homogeneous partial coherent source modeling of multimode optical fiber output using the elementary source method. <i>Journal of Optics (United Kingdom)</i> , 2017, 19, 105605.	2.2	5
51	Micro-Electro-Mechanical System Fourier Transform Infrared (MEMS FT-IR) Spectrometer Under Modulated Pulsed Light Source Excitation. <i>Applied Spectroscopy</i> , 2020, 74, 799-807.	2.2	5
52	Silicon photonics dual-coupler nested coupled cavities. , 2019, , .		5
53	Optical Gas Sensing Based on MEMS FTIR Spectrometers. , 2017, , .		5
54	Inclination-independent transformation of light beams using high-throughput uniquely-curved micromirrors. , 2014, , .		4

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55	In-plane comb-drive actuator with high frequency-displacement product for micro-optical bench applications. , 2014, , .		4
56	MMI-based MOEMS FT spectrometer for visible and IR spectral ranges. , 2014, , .		4
57	Deeply-etched micromirror with vertical slit and metallic coating enabling transmission-type optical MEMS filters. Proceedings of SPIE, 2016, , .	0.8	4
58	Black silicon-based infrared radiation source. Proceedings of SPIE, 2016, , .	0.8	4
59	MEMS-SOA Spectrum-Sliced Auto-Equalized Source Enabling Uniformly Tunable Microwave Photonic Filter. IEEE Photonics Technology Letters, 2021, 33, 15-18.	2.5	4
60	Ultra wide band MIR MEMS FTIR spectrometer. , 2019, , .		4
61	Modal analysis of TE and TM excitations in a metallic slotted micromirror. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 610.	2.1	4
62	Spatiotemporal dynamics of nanowire growth in a microfluidic reactor. Microsystems and Nanoengineering, 2021, 7, 77.	7.0	4
63	MEMS FTIR spectrometer with enhanced resolution for low cost gas sensing in the NIR. , 2018, , .		4
64	In-plane diffraction loss free optical cavity using coated optical fiber and silicon micromachined spherical mirror. , 2013, , .		3
65	Dual-fiber OCT measurements. Proceedings of SPIE, 2014, , .	0.8	3
66	MEMS optical tunable filter based on free-standing subwavelength silicon layers. Proceedings of SPIE, 2014, , .	0.8	3
67	Thermal stability of multi-longitudinal mode laser beating frequencies in hybrid semiconductor-fiber ring lasers. Proceedings of SPIE, 2015, , .	0.8	3
68	Staggered mode MEMS gyroscope. , 2016, , .		3
69	Theoretical and experimental analysis of the fabrication tolerance on deeply etched silicon/air Bragg micromirrors. , 2017, , .		3
70	Overcoming the near-infra-red spectral range limit with Fabry-Perot silicon microcavity enabled by slotted micromirrors. , 2017, , .		3
71	Strip Waveguide Enabling Low Loss for Silicon on Silica Technology in the MIR. , 2018, , .		3
72	Optical MEMS-scale multipass white cell for onchip gas sensing. , 2018, , .		3

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73	On the Detection of Volatile Organic Compounds (VOCs) Using Machine Learning and FTIR Spectroscopy for Air Quality Monitoring. , 2019, , .		3
74	NIR and MIR Absorption of Ultra-Black Silicon (UBS). Application to High Emissivity, All-Silicon, Light Source. , 2019, , .		3
75	Capturing the Instantaneous Spectral Response of a MEMS Swept Laser Source Using a Quasi-Static Tunable Filter. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-8.	2.9	3
76	Silicon photonic coupled-ring resonator in nested configuration comprising different length scales. , 2019, , .		3
77	Silicon Multi-Pass Gas Cell for Chip-Scale Gas Analysis by Absorption Spectroscopy. Micromachines, 2020, 11, 463.	2.9	3
78	Single MEMS Chip Enabling Dual Spectralâ€Range Infrared Microâ€Spectrometer with Optimal Detectors. Advanced Materials Technologies, 2021, 6, 2001013.	5.8	3
79	Optimization of silicon on silica waveguides for mid-infrared applications at 4.28 um. , 2019, , .		3
80	Autoregressive superresolution microelectromechanical systems Fourier transform spectrometer. Applied Optics, 2019, 58, 6784.	1.8	3
81	Deep Learning on Synthesized Sensor Characteristics and Transmission Spectra Enabling MEMS-Based Spectroscopic Gas Analysis beyond the Fourier Transform Limit. Foundations, 2021, 1, 304-317.	1.3	3
82	Quantum transport based simulation and design optimization of a 10 nm FinFET. , 2009, , .		2
83	Partial-Coupled Mode Space for quantum transport simulation in nanoscale double-gate MOSFETs. , 2010, , .		2
84	Wide steering angle microscanner based on curved surface. Proceedings of SPIE, 2013, , .	0.8	2
85	MEMS corner-cube transmission-type optical phase modulator in DRIE technology. , 2014, , .		2
86	D3. Optical coupling of cylindrical micromirrors in micro-optical benches. , 2015, , .		2
87	Beating signal power level improvement in ring lasers based on coupled ring resonators. , 2016, , .		2
88	Optical diffuse reflectance of Black Silicon and its isotropicity. , 2016, , .		2
89	Multi-segment tapered optical mirror for MEMS LiDAR application. , 2017, , .		2
90	Optical characterization of high speed microscanners based on static slit profiling method. Optics and Lasers in Engineering, 2017, 88, 129-138.	3.8	2

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91	Toward On-Chip MEMS-Based Optical Autocorrelator. Journal of Lightwave Technology, 2018, 36, 5003-5009.	4.6	2
92	Near-infrared optical MEMS spectrometer-based quantification of fat concentration in milk. , 2018, , .		2
93	Combining MEMS FTIR Spectrometer and Widened-Spectrum Mode-Locked Fiber Laser for Gas-Sensing. , 2019, , .		2
94	Effects of Doping on the Morphology and Infrared Radiative Properties of Black Silicon. , 2019, , .		2
95	Rapid assessment of nanomaterial homogeneity reveals crosswise structural gradients in zinc-oxide nanowire arrays. Nanoscale, 2020, 12, 1397-1405.	5.6	2
96	MEMS FTIR Parallel Spectrometer for Non-Invasive Skin Biochemistry Analysis. , 2021, , .		2
97	Physical Parameter Extraction and Modeling of Metallized Deeply-Etched Vertical Mirrors. Journal of Microelectromechanical Systems, 2021, 30, 930-938.	2.5	2
98	Modeling of Fabry-Perot Micro Cavities Under Partial Spatial Coherence Illumination Using Multimode Optical Fibers. Journal of Lightwave Technology, 2021, 39, 4424-4430.	4.6	2
99	Complex Kernel-based spectrum reconstruction algorithm for cascaded Fabry-Perot interferometric spectrometer. Applied Optics, 2021, 60, 8999.	1.8	2
100	Modelling of ATR-FTIR MEMS Spectrometer Under Partially-Coherent Multimode-Fiber Illumination. Journal of Lightwave Technology, 2021, 39, 7092-7098.	4.6	2
101	Dual coupler coupled cavities optical gyroscope with enhanced performance. , 2018, , .		2
102	MEMS-based Fourier transform spectrometer using pulsed infrared light source. , 2018, , .		2
103	Active fiber-ring enhanced absorption gas spectroscopy using multi-longitudinal mode tunable laser in the NIR. , 2019, , .		2
104	Optical constants of gamma-irradiated silver-doped PVA in the near-infrared range. Micro and Nano Letters, 2020, 15, 480-485.	1.3	2
105	Simulation of quantum transport in double gate MOSFETs: Coupled-mode space versus real space. , 2012, , .		1
106	Three-dimensional collimation of in-plane-propagating light using silicon micromachined mirror. , 2014, , .		1
107	Fiber-coupled Fabry-Perot notch filter combining in-plane axis, high speed MEMS tunability and large etching depth. Proceedings of SPIE, 2015, , .	0.8	1
108	Bidirectional single-longitudinal mode SOA-fiber ring laser based on optical filter assisted gain starvation. Proceedings of SPIE, 2015, , .	0.8	1

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109	Characterization technique for long optical fiber cavities based on beating spectrum of multi-longitudinal mode fiber laser and beating spectrum in the RF domain. , 2016, , .		1
110	Tunable and non-reciprocal dual-wavelength SOA-fiber ring laser. , 2017, , .		1
111	Multimode spot-size converter for optical MEMS applications. , 2017, , .		1
112	MEMS-Based Tunable Single-Passband Microwave Photonic Filter. , 2019, , .		1
113	Silicon Microcavity in the Visible Range Enabled by Curved Slotted Micromirrors. , 2019, , .		1
114	Micro-Machined Heater Designed for Miniaturized Thermal IR Sources. , 2019, , .		1
115	Tunable Microwave Single-Bandpass Photonic Filter Based on Amplified Mems-Based Giresâ€™Tournois Interferometer. , 2020, , .		1
116	Optical Cavity with Large Operational Bandwidth using Silicon-Based Slotted Micromirrors. , 2020, , .		1
117	Kinetics Study and Online Monitoring of in-Situ Growth of Zinc-Oxide Nanowire Arrays Within Microfluidic Chambers. , 2020, , .		1
118	Sensitivity Enhancement Factor for Gain-Assisted Cavity Enhanced Spectroscopy. IEEE Journal of Quantum Electronics, 2020, 56, 1-8.	1.9	1
119	Differential Optical Spectrometer Based on Critical Angle Dispersion. Journal of Lightwave Technology, 2021, 39, 2911-2916.	4.6	1
120	Simulation of Quantum Ballistic Transport in FinFETs. Lecture Notes in Nanoscale Science and Technology, 2013, , 1-24.	0.8	1
121	Ring-patterned plasmonic photonic crystal thermal light source for miniaturized near-infrared spectrometers. , 2018, , .		1
122	MEMS tunable-finesse slotted micromirror resonator. , 2018, , .		1
123	Modeling and characterization of the reflectance of vertical metal-coated micromirrors in deeply-etched optical benches. , 2020, , .		1
124	Subthreshold Spectral Bi-Modality of Double Layer InP/AlGaInP Quantum Dot Laser. , 2021, , .		1
125	Photonic Monte Carlo Analysis and Deep Learning Predicting the Performance of Non-Invasive Glucose Detection Using Compact NIR Spectrometers. , 2021, , .		1
126	Critical analysis of in-plane free-space light beam coupling using photonic curved micromirrors. Journal of Optical Microsystems, 2022, 2, .	1.5	1

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127	Novel Method for Modeling IBIS4.2 Four-Level Hysteresis Behavior in an Analog Simulator. , 2008, , .		0
128	MEMS-based frequency modulation of fiber ring laser. , 2015, , .		0
129	D1. High frequency in-plane MEMS actuator. , 2015, , .		0
130	Characterization and modelling of multimode optical fiber for MOEMS applications using the elementary source method. Proceedings of SPIE, 2017, , .	0.8	0
131	Distortion of Gaussian beams reflected off-axis on curved mirrors in the MEMS scale. , 2017, , .		0
132	Omnidirectional optical MEMS scanner based on two degrees-of-freedom translation of acylindrical micromirrors. , 2018, , .		0
133	Long travel range thermal actuator for deeply etched MEMS components. , 2018, , .		0
134	Corrections to "Toward On-Chip MEMS-Based Optical Autocorrelator"[Oct 18 5003-5009]. Journal of Lightwave Technology, 2019, 37, 3432-3432.	4.6	0
135	Gas Detection using a MEMS-Based Swept Laser Source. , 2019, , .		0
136	Optical Fiber Filters Linewidth Enhancement Based on Erbium-doped Photonic Crystal Fiber Cavities. , 2021, , .		0
137	Optical MEMS notch filter based on the multi-mode interference in a butterfly metallic waveguide. , 2018, , .		0
138	Modeling of the emissivity of super-wavelength black silicon in the geometrical optics regime. , 2018, , .		0
139	Vernier effect-based multiplication of the Sagnac beating frequency in ring laser gyroscope sensors. , 2018, , .		0
140	Monitoring the purification of tobacco smoke in air assisted by ZnO nanowires and using MEMS-FTIR spectrometer for online continuous analysis of volatile organic compounds (VOCs). , 2019, , .		0
141	Zinc-oxide nanowires growth in-situ in microfluidic chamber. , 2019, , .		0
142	MEMS swept laser source with enhanced performance. , 2019, , .		0
143	Zinc-oxide nanowires characterization using optical reflectance. , 2019, , .		0
144	Analysis of metallic slotted micromirrors using modal decomposition and multiple reflections. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 586.	2.1	0

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145	Deep Learning Enabling Analysis of Exhaled Breath Using Fourier Transform Spectroscopy in the Mid-Infrared. , 2021, , .		0
146	Infrared Absorbance of Distributed-Size HgTe Quantum Dots Under Diffuse Reflectance. , 2022, , .		0