

# Arup Lal Chakraborty

## List of Publications by Year in descending order

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36  
papers

319  
citations

840776

11  
h-index

839539

18  
g-index

36  
all docs

36  
docs citations

36  
times ranked

249  
citing authors

#	ARTICLE	IF	CITATIONS
1	Elimination of residual amplitude modulation in tunable diode laser wavelength modulation spectroscopy using an optical fiber delay line. Optics Express, 2009, 17, 9602.	3.4	56
2	Calibration-free 2f WMS with in situ real-time laser characterization and 2f RAM nulling. Optics Letters, 2015, 40, 4086.	3.3	36
3	Plasmonic CoO-Decorated Au Nanorods for Photoelectrocatalytic Water Oxidation. ACS Applied Nano Materials, 2019, 2, 5795-5803.	5.0	23
4	Compensation for temperature dependence of Stokes signal and dynamic self-calibration of a Raman distributed temperature sensor. Optics Communications, 2007, 274, 396-402.	2.1	22
5	Design and Evaluation of an FBG Sensor-Based Glove to Simultaneously Monitor Flexure of Ten Finger Joints. IEEE Sensors Journal, 2021, 21, 7620-7630.	4.7	22
6	Suppression of intensity modulation contributions to signals in second harmonic wavelength modulation spectroscopy. Optics Letters, 2010, 35, 2400.	3.3	20
7	Detection of CH <sub>4</sub> in the Mid-IR Using Difference Frequency Generation With Tunable Diode Laser Spectroscopy. Journal of Lightwave Technology, 2010, 28, 1435-1442.	4.6	18
8	Residual Amplitude Modulation Method Implemented at the Phase Quadrature Frequency of a 1650-nm Laser Diode for Line Shape Recovery of Methane. IEEE Sensors Journal, 2015, 15, 1153-1160.	4.7	18
9	An FBG-Based Sensing Glove to Measure Dynamic Finger Flexure With an Angular Resolution of 0.1° up to Speeds of 80 m/s. Journal of Lightwave Technology, 2019, 37, 4734-4740.	4.6	16
10	Intensity Modulation-Normalized Calibration-Free 1 <sup>st</sup> and 2 <sup>nd</sup> Wavelength Modulation Spectroscopy. IEEE Sensors Journal, 2020, 20, 12691-12701.	4.7	14
11	Influence of the wavelength-dependence of fiber couplers on the background signal in wavelength modulation spectroscopy with RAM-nulling. Optics Express, 2010, 18, 267.	3.4	12
12	Fiber Bragg grating interrogation using wavelength modulated tunable distributed feedback lasers and a fiber-optic Mach-Zehnder interferometer. Applied Optics, 2017, 56, 3562.	2.1	11
13	Measurement of atmospheric carbon dioxide and water vapor in built-up urban areas in the Gandhinagar-Ahmedabad region in India using a portable tunable diode laser spectroscopy system. Applied Optics, 2017, 56, H57.	1.8	9
14	Light-induced in situ active tuning of the LSPR of gold nanorods over 90 nm. Optics Letters, 2021, 46, 4562.	3.3	5
15	Bidirectional frequency-domain digital filtering to simultaneously improve temperature resolution and eliminate spatial inaccuracy of a distributed temperature sensor. Optical Engineering, 2004, 43, 2724.	1.0	4
16	Absolute noninvasive measurement of CO <sub>2</sub> mole fraction emitted by E coli and S aureus using calibration-free 2f WMS applied to a 2004 nm VCSEL. Optics Letters, 2017, 42, 2138.	3.3	4
17	A Fiber Bragg Grating Strain Sensor-Based Glove to Accurately Measure the Bend Angle of the Finger Flexed at the Proximal Interphalangeal Joints. , 2018, , .		4
18	Real-time Accurate Monitoring of Ten Finger Joint Angles Using a Fiber Bragg Grating Sensor-based Glove for use in Virtual Rehabilitation. , 2019, , .		4

#	ARTICLE	IF	CITATIONS
19	Time-Resolved Studies of Bioluminescence From <i>Photobacterium Leignathi</i> and Rapid Antimicrobial Susceptibility Testing on <i>E. Coli</i> Using Tunable Diode Laser Spectroscopy. IEEE Sensors Journal, 2020, 20, 11073-11081.	4.7	4
20	A Fiber Bragg Grating-based Sensing Glove with a Sensitivity of 18.45 pm/degree to Accurately Assess Finger Flexure. , 2018, , .		4
21	A Fiber Bragg Grating-Based Sensor for Passive Cavitation Detection at MHz Frequencies. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2022, 69, 1682-1690.	3.0	4
22	Quantifying the CO and CO <sub>2</sub> Mole Fraction in the Plume of an Aerosol-Based Fire Extinguishing Agent Using 4560 nm and 4320 nm QCLs. IEEE Sensors Journal, 2019, 19, 9728-9735.	4.7	3
23	QCL-Based Open-Path, Single-Pass Measurement of Ambient Carbon Monoxide Using R <sub>1f</sub> WMS. IEEE Photonics Technology Letters, 2021, 33, 982-985.	2.5	2
24	Wavelength Modulation Spectroscopy. Progress in Optical Science and Photonics, 2021, , 321-362.	0.5	2
25	Absolute concentration measurements of bacterial CO <sub>2</sub> emission using a 2004 nm vertical cavity surface emitting tunable diode laser. , 2015, , .		1
26	A Fiber Bragg Grating Sensor-based Wearable System to Detect the Pre-dicrotic and Dicrotic Notch in the Arterial Pulse Pressure Waveform. , 2019, , .		1
27	Rapid detection of methane, carbon dioxide and ammonia for harsh environments using tunable diode laser spectroscopy. , 2013, , .		0
28	Detecting metabolic carbon dioxide using a tunable laser for non-invasive monitoring of growth of bacterial pathogens. , 2017, , .		0
29	Photoelectrochemical Water Splitting with Cobalt Oxide Coated Gold Nanorods under Visible Excitation. , 2019, , .		0
30	Quantum cascade laser-based in situ measurement of atmospheric CO and CO <sub>2</sub> in Gandhinagar using 1f and 2f wavelength modulation spectroscopy. , 2019, , .		0
31	Synthesis of Gold Nanodroplets with Field Enhancement of 10 <sup>5</sup> at their Tips using a Simple Wet-Chemical Method. , 2019, , .		0
32	Correlating microbial bioluminescence to the different phases of growth using a 2004 nm VCSEL-based 2f wavelength modulation spectroscopy. , 2021, , .		0
33	Quantum cascade laser-based wavelength modulation spectroscopy. , 2020, , .		0
34	Field deployment of a 4320-nm quantum cascade laser-based TDLS system to compare the background CO <sub>2</sub> levels in Mt. Abu with foreground measurements in Gandhinagar, India. Optical Engineering, 2020, 59, 1.	1.0	0
35	A fibre Bragg grating sensor-based instrumented glove for virtual rehabilitation applications. , 2022, , .		0
36	Detection of ultrasound up to 10 MHz frequency using an FBG sensor. , 2022, , .		0