PUBLICATIONS

Journal papers

1. A Roy, N K Sharma, **A L Chakraborty** and A Upadhyay, "Measurement of atmospheric carbon dioxide and water vapour in urban built-up areas in the Gandhinagar-Ahmedabad region in India using a portable tunable diode laser spectroscopy system", **Applied Optics** (Feature issue: Near- to mid-IR (1–13 μm) III-V Semiconductor Lasers), Vol 56, No 31, H57-H66, Nov 2017 https://doi.org/10.1364/AO.56.000H57
2. Zarin A S, **A L Chakraborty** and A Upadhyay, "*Absolute non-invasive measurement of CO_2 mole fraction emitted by E. coli and S. aureus using calibration-free 2f WMS applied to a 2004 nm VCSEL*", **Optics Letters,** Vol 42, Iss 11, 2138-2141 (2017), https://doi.org/10.1364/OL.42.002138
3. A Roy, **A L Chakraborty** and C K Jha, "*Fiber Bragg grating interrogation using wavelength modulated tunable DFB lasers and a fiber-optic Mach-Zehnder interferometer*," **Applied Optics**, Vol 56, Iss 12, 3562-3569 (2017) https://doi.org/10.1364/AO.56.003562
4. A Upadhyay, D Wilson, M Lengden, **A L Chakraborty**, G Stewart and W Johnstone, "C*alibration-free WMS measurement of gas parameters using a cw-DFB-QCL, a VCSEL and an edge-emitting DFB laser with in situ real-time laser parameter characterization*", **IEEE Photonics Journal**, Vol 9, Iss 2, 6801217 (2017), https://doi.org/10.1109/JPHOT.2017.2655141
5. A Upadhyay and **A L Chakraborty**, "*Calibration-free 2f WMS with in situ real time laser characterization and 2f RAM nulling*," **Optics Letters**, Vol. 40, Iss 17, pp 4086-4089 (2015), https://doi.org/10.1364/OL.40.004086
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9. I Armstrong, W Johnstone, K Duffin, M Lengden, **A L Chakraborty** and K Ruxton, "*Detection of CH_4 in the mid-IR using difference frequency generation with tunable diode laser spectroscopy*", **IEEE Journal of Lightwave Technology**, Vol 28, No 10, pp1435-1442, February 2010. https://doi.org/10.1109/JLT.2010.2042789
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11. **A L Chakraborty**, K Ruxton, W Johnstone, M Lengden and K Duffin, "*Elimination of residual amplitude modulation in tunable diode laser wavelength modulation spectroscopy using an optical fiber delay line*", **Optics Express**, Vol 17, Iss 12, pp 9602-9607 (2009). https://doi.org/10.1364/OE.17.009602

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1. A Roy, N K Sharma, A L Chakraborty, A Upadhyay, "*Current scenario of ambient carbon dioxide levels at multiple locations in urban Ahmedabad revealed by a 2004 nm tunable diode laser spectroscopy system*", **IEEE Sensors 2017**, Optical Sensors and Systems II Poster session C2P-J, Glasgow, UK, Oct 2017

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3. A Roy, **A L Chakraborty**, C K Jha, "*Fiber Bragg grating interrogation using a wavelength modulated 1651 nm tunable distributed feedback laser and a fiber ring resonator for wearable biomedical sensors*", 25th International Conference on Optical Fiber Sensors (**OFS-25**), 25-28 April 2017, Korea

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28. **A L Chakraborty**, S Kher, S Chaubey, T P S Nathan, "*Application of bidirectional frequency-domain digital filtering to simultaneously improve the temperature resolution and eliminate spatial inaccuracy of a distributed temperature sensor*", National Symposium on Instrumentation **(NSI-28)**, G B Pant University of Agriculture and Technology, Pantnagar, 2003