

List of publications

In referred journal:

1. **Das, P.**, Paul, S., Bhattacharya, S. S., & Nath, P. Smartphone-based spectrometric analyzer for accurate estimation of pH value in soil. *IEEE Sensors Journal*, 21(3): 2839-2845, 2020.
2. **Das, P.**, Chetry, B., Paul, S., Bhattacharya, S. S., & Nath, P. Detection and quantification of phosphate in water and soil using a smartphone. *Microchemical Journal*, 172: 106949, 2021.
3. **Das, P.**, Biswas, S., Bhattacharya, S. S., & Nath, P. Carbon Nanodot–Neutral Red-Based Photometric and Fluorescence Sensing for Trace Detection of Nitrite in Water and Soil Using Smartphone. *ACS Applied Nano Materials*, 5(3): 3265-3274, 2022.
4. **Das, P.**, Pegu, R., Bhattacharya, S. S., & Nath, P. Fluorescence based sensing for accurate estimation of chlorophyll in tea leaves using a smartphone. (Under review).
5. **Das, P.**, Pegu, R., Bhattacharya, S. S., & Nath, P. LSPR based quantification of toxic metal ions Arsenic(III) and Lead(II) in soil using a smartphone sensing platform. (submitted).
6. Rabha, D., Biswas, S., Hatiboruah, D., **Das, P.**, Rather, M. A. and Mandal, M., & Nath, P. An affordable, handheld multimodal microscopic system with onboard cell morphology and counting features on a mobile device. *Analyst*, 2022.

Conference Proceedings:

1. Das, P., Chetry B., & Nath, P. Smartphone-Based Colorimetric Analyzer for Detection of Phosphate in Water. *Selected Progresses in Modern Physics, Springer*, 327-335, 2021.
2. Das, P., & Nath, P. Smartphone-Based Photometric Detection of Nitrite Level in Water. *2022 Workshop on Recent Advances in Photonics (WRAP), IEEE*, 1-2, 2022.

Conference presentations:

1. Das, P. & Nath, P. Smartphone based colorimetric analyzer for detection of phosphate in water. *International conference on Trends in Modern Physics (TiMP)*, 26th to 27th February, 2021, Assam Don Bosco University, Assam.
2. Das, P. & Nath, P. Smartphone based photometric sensor for detection of nitrite level in water. *National Conference on Emerging Trends in Physics (NCETP)*, 16th of June, 2021, Dept. of Physics, TU. (*Best poster presentation award*).
3. Das, P. & Nath, P. Applications of Smartphone Camera-based Sensing Platform for Environmental Monitoring. *International Conference on Advances in Physics and its Applications (APA)*, 26th to 27th November, 2021, Duliajan College, Assam.
4. Das, P. & Nath, P. Carbon Nanodot-Based Photometric Estimation of Trace Nitrite in Water using Smartphone. *inSCIgnis-One Day National Symposium*, 1st March, 2022, Dept. of Physics, TU. (*Best oral presentation award*).
5. Das, P. & Nath, P. Smartphone-Based Sensing Platform for Quantitative Es-

timination of Trace Nitrite Using Fluorescent Carbon Nano-dots. *National Conference on Emerging Trends in Material Science (NCETMS)*, 17th May, 2022, Dept. of Physics, TU.

Book chapters:

1. **Das, P.** & Nath, P. UV-Visible Spectroscopy and its Application in Quantitative Analysis. *Frontiers in Basics Physics and Applications*, 2: 26-31, ISBN: 978-81-948719-3-4.
2. **Das, P.**, Hatibaruah, D., & Nath, P. Applications of Smartphone Camera-based Sensing Platform for Environmental Monitoring. *Advances in Physics and its Applications*, 2: 73-79, ISBN: 978-93-91953-55-3.