Debangana Das, M. Tech

Designation: Assistant Professor

Department: Department of Electronics and Communication Engg.

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RESEARCH INTERESTS:

- ✓ Electronic tongue
- ✓ Development of electrochemical sensors, capacitive sensors
- ✓ Synthesis of nano-materials
- ✓ Chemometricsand molecularly imprinted polymer technology

Academic Qualifications

Ph. D. (Cont…) : Jadavpur University, Kolkata, India

M. Tech. : Jadavpur University, Kolkata, India

Specialization: Instrumentation and Electronics

Teaching Experience/Industrial Experience/Research Experience

Teaching Experience: TA in Jadavpur University (during PhD)

Research Experience: 1 Year (JRF at Jadavpur University, Kolkata, West Bengal)
2 Years (SRF at Jadavpur University, Kolkata, West Bengal)

PUBLICATIONS

JOURNAL, CONFERENCES& BOOK CHAPTERS:

JOURNALS:

1. **D. Das,** D. Biswas, A.K. Hazarika, S. Sabhapondit, R. B. Roy, B. Tudu, R. Bandyopadhyay, "Electrochemical Detection of Epicatechin in Green Tea Using Quercetin-Imprinted Polymer Graphite Electrode," IEEE Sens. J., vol. 21 (23), pp. 265226-265234, 2021 Digital Object Identifier: 10.1109/JSEN.2021.3122145
2. **D. Das**, D. Biswas, A.K. Hazarika, S. Sabhapondit, R. B. Roy, B. Tudu, R. Bandyopadhyay, "CuO Nanoparticles modified MIP-Based Electrode for Sensitive Determination of Gallic Acid in Green Tea," IEEE Sens. J., vol. 21, pp. 5687-5694, 2021.

3. **D. Das,** T. N. Chatterjee, R. B.Roy, B. Tudu, A. K.Hazarika, S.Sabhapondit, R. Bandyopadhyay, "Titanium oxide nanocubes embedded molecularly imprinted polymer based electrode for selective detection of caffeine in green tea", IEEE Sens. J., vol. 20 pp. 6240-6247, 2019.

4. **D. Das**, S. Nag, S.Acharya, S.Barik, B.Tudu, R. Banerjee Roy , "Discrimination of Tea using Caffeine-Sensitive Sensor by Employing different Classifiers and various Data Analysis Techniques", Journal of The Institution of Engineers (India): Series B, doi: 10.1007/s40031-021-00611-8 May 2021

5. **D. Das**, T.N.Chatterjee, R. B. Roy, B.Tudu, S.Sabhapondit, P. Pramanik, R. Bandyopadhyay, "Discrimination of green tea using an Epigallocatechin-3-gallate (EGCG) sensitive molecular imprinted polymer (MIP) based electrode," Carbon - Science and Technology p. 27 – 37 (2018).
6. T. N. Chatterjee, **D. Das**, R. Banerjee Roy, B. Tudu, A. K.Hazarika, S. Sabhapandit, P.Tamuly, R.Bandyopadhyay, "Development of a nickel hydroxide nanopetal decorated molecular imprinted polymer based electrode for sensitive detection of epigallocatechin-3-gallate in green tea", Sensors and Actuators B: Chemical, pp. 69-78, March , 2019.
7. T. N.Chatterjee, **D. Das**, R. Banerjee Roy, B. Tudu, S. Sabhapondit, P. Tamuly, P. Pramanik, R.Bandyopadhyay, "Molecular Imprinted Polymer Based Electrode for Sensing Catechin (+C) in Green Tea", IEEE Sensors Journal, pp. March 15, 2018
8. S. Acharya, **D. Das**, T. N. Chatterjee, S. Roy, R. B. Roy, B.Tudu, and R.Bandyopadhyay, "Voltammetric Electrode Array Optimization for Black Tea Discrimination Using Computational Intelligence Approach", IEEE Sensors Journal, doi: 10.1109/JSEN.2021.3098036
9. S. Nag, S. Pradhan, **D. Das,** B. Tudu, R. Bandyopadhyay, R. B. Roy, " Fabrication of a Molecular Imprinted Polyacrylonitrile engraved Graphite Electrode for Detection of Formalin in Food Extracts", IEEE Sensors Journal, DOI 10.1109/JSEN.2021.3128520, 2021
10. D. Bandyopadhyay, S. Nag, **D. Das**, S. Acharya, B. Tudu, R. Bandyopadhay, R. B. Roy. "Voltammetric Detection Of Inositol Using A Platinum Based Electrode ", NanoLife, just accepted (2022).

CONFERENCES:

1. **D. Das**, T. N.Chatterjee, A. K. Hazarika, S. Sabhapondit, R. Banerjee Roy, B. Tudu, R. Bandyopadhyay, "Development of a Highly Selective Nickel Cobalt Oxide Nanoparticles Modified Molecular Imprinted Polymer Based Sensor For Detection Of Gallic Acid In Green Tea," doi.: 10.1109/ISOEN.2019.8823267, ISOEN, 2019, Fukuoka, Japan.

2. **D. Das**, S. Nag, H.Naskar, R. B. Roy, B.Tudu, R.Bandyopadhyay, "Discrimination of Green Tea Samples on the Basis of Gallic Acid Content Using Near Infrared Spectroscopy" February 2020, Conference: The 7th Asian Near Infrared Symposium, At: RMUTI Khonkaen campus, Khonkaen 40000, Thailand.

3. **D. Das**, T.Sau, R. Ray, R. B. Roy, B.Tudu, A. K.Hazarika, MSSND, JadavpurUniveristy, 2019.

4. **D. Das**, T. N.Chatterjee, R. B. Roy, B.Tudu, S.Sabhapondit, A. Kumar Hazarika, P.Pramanik and R.Bandyopadhyay, " Identification of Different Variants of Green Tea by using an Epigallocatechin-3-gallate (EGCG) Sensitive Molecular Imprinted Polymer (MIP) Based Electrode", Abstract ID: 75, International Conference on Current Trends and Material Science Engineering (CTMSE 2018).

5. **D. Das**, S. Nag, H.Naskar, R. Banerjee Roy, B.Tudu, R.Bandyopadhyay, "Discrimination of various types of black tea clones using NIR spectroscopy", ICEFEET 2020, NIT Patna, doi: 10.1109/ICEFEET49149.2020.9186954.
6. **D. Das**, S. Nag, U. Saha, B. Tudu, R. Bandyopadhyay, "Development of Molecularly Engraved Polymer Based Sensor for Detection of Theobromine in Tea" 2021 IEEE Second International Conference on Control, Measurement and Instrumentation (CMI), 10.1109/CMI50323.2021.9362831
7. S. Nag, **D. Das**, H.Naskar, R. Banerjee Roy, B.Tudu, R.Bandyopadhyay"Estimation of a Few Important Biomarkers in Black Tea Using NIR Spectroscopy and Chemometrics," February 2020, Conference: The 7th Asian Near Infrared Symposium, At: RMUTI Khonkaen campus, Khonkaen 40000, Thailand.
8. H.Naskar, **D. Das**, S. Nag, R. B. Roy, B.Tudu, R.Bandyopadhyay, "Adulteration detection of mustard oil using near infrared spectroscopy" February 2020, Conference: The 7th Asian Near Infrared Symposium, At: RMUTI Khonkaen campus, Khonkaen 40000, Thailand.
9. S.Nag, **D. Das**, H.Naskar, R. Banerjee Roy, B.Tudu, R.Bandyopadhyay, "Estimation of theophylline content in black tea", ICEFEET 2020, NIT Patna, India.
10. H. Naskar, **D. Das**, S. Nag, R. Banerjee Roy, B.Tudu, R. Bandyopadhyay, "Determination of curcumin in turmeric powder using MIP electrode", ICEFEET, 2020, NIT Patna, India.

BOOK CHAPTERS:

1. "Personal Protective Equipments for COVID-19: A Comprehensive Review", Intelligent Healthcare Informatics for Fighting the COVID-19 and Other Pandemics and Epidemics" Springer, pp. 141-154.
   By: **D. Das**, S. Nag, H.Naskar, S.Acharya, S.Bakchi, S.Saharuk Ali, R.Banerjee Roy, B.Tudu, R.Bandyopadhyay, doi: 10.1007/978-3-030-72752-9_7

2. "SmartCovSens: A Multimodal Approach for Detection of COVID-19", Intelligent Healthcare Informatics for Fighting the COVID-19 and Other Pandemics and Epidemics" Springer, communicated on acceptance of the title, pp.285-310.
   By: S. Banerjee, **D. Das,** B. GhatakSk Babar Ali, P. Sharma, .S. Pal, N. Das, A. Sengupta, P.Patra, C.Kundu, A.Ghosh, R.Bandyopadhyay D. Mandal,.B.Tudu. DOI: 10.1007/978-3-030-72752-9_15.