

DEBANGANA DAS

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Educational details:

Examination Passed	Year	Board/University and location	% of marks	Specialization
PhD	2023	Jadavpur University, Kolkata		Instrumentation and Electronics Engineering
M. Tech	2018	Jadavpur University, Kolkata	80.50	Instrumentation and Electronics Engineering
B. Tech	2015	MAKAUT (West Bengal University of Technology)	81.1	Applied Electronics and Instrumentation Engineering
AISSCE	2011	CBSE, Barrackpore, Kolkata	86.2	-
Class X	2009	NBSE, , Kohima, Nagaland	90	-

Work experience:

- **Assistant Professor**, Department of Electronics and Communication Engineering, Silicon Institute of Technology, Bhubaneswar , Odisha (Jan 31'22- present)
- **Senior Research Fellow**, Department of Instrumentation and Electronics Engineering, Jadavpur University, Kolkata (Aug 1'18- Aug 1'20)
- **Junior Research Fellow**, Department of Instrumentation and Electronics Engineering, Jadavpur University, Kolkata (Aug 1'18- Aug 1'20)

Academic skills:

➤ Responsibilities

In Silicon Institute of Technology:

- Assigned to take classes and labs for 1st semester, 2nd semester, 3rd semester, 5th semester, 6th semester and 8th semester for subjects Basic Electronics Engineering, Instrumentation

Devices and Systems. Industrial Instrumentation, Digital Electronics, Transducers and Measurements.

- **Administration level:** Examination Committee member (Departmental coordinator of ECE), SAGA committee member (Preparing notes of various subjects) and Food Court member.
- **Works done at the departmental level:** Member of the syllabus committee in the ECE department, drafting the MoM of departmental meeting and drafting the MoM of BoS meeting.
- An organizing committee member of few events executed by our department like NES, WCISP and (CCPIS 2023).

In Jadavpur University:

- Assigned to take **Process Control I** (Level Control System, Temperature Control System, PID simulator, etc), assigned to take **Process Instrumentation** (Differential Pressure Transformer, Linear Variable Differential Transformer, Basic PLC) laboratory classes during Teaching Assistantship (TA) for two consecutive years (3rd year BE students, Dept. of Instrumentation and Electronics Engineering, Jadavpur University).
- Assigned the responsibility of **guiding B.E students** of Jadavpur University under Dr. Banerjee Roy for completing their B.E final year project in various domains.

➤ **Software Skills**

- **Software applications:** MATLAB/Simulink, Lab View, Origin, Nova.
- **Programming Language:** C and R

Academic Honors:

- Stood **2nd** in the class of Masters of Technology (M.Tech), Department of Instrumentation and Electronics Engg, Jadavpur University, Kolkata.
- **Topper** of the Applied Electronics and Instrumentation Engineering Department (B.Tech) and felicitated with an award of academic excellence by the JIS group.
- Invitation to receive “KRITI Award” as **Distinguished Alumni** on 20th September 2019 by Dr. Santanu Sen (Principal of the Guru Nanak Institute of Technology, JIS group, Kolkata).
- Secured the **1st position** in school and **10th position** in the state (Matriculation 2009)
- Secured the 1st position in “Anweshan”: National Student Research Convention (2019) (both at the zonal level and National level), **held at Ganpat University, Gujarat.**

Project: - “Qualitative assessment of Health-beneficial Agro-products using Molecularly Imprinted Polymer based Sensors”.

Supervisors of the project: **Prof. Rajib Bandyopadhyay** and **Prof. Runu Banerjee Roy**.

- **Selected in Quarter-final of India Innovation Challenge Design Contest 2019**, sponsored by DST & Texas Instruments, anchored by IIM Bangalore.
- Honored with the title ‘Vidyasree’ for academic excellence by the Amul Company, Gujarat to inspire a million hearts.

Publications related to field:

Journal:

1. **D. Das**, S. Nag, A. Adaval, A. K. Hazarika, S. Sabhapondit, A. R. Bhattacharyya, B. Tudu, R. Bandyopadhyay, R.B. Roy, “Amine Functionalized MWCNTs Modified MIP-Based Electrode for Detection of Epicatechin in Tea, *IEEE Sensors Journal*, doi: 10.1109/JSEN.2022.3169169. **IMPACT FACTOR: 4.33**
2. **D. Das**, S. Nag, S. De, A. K. Hazarika, S. Sabhapondit, B. Tudu, R. Bandyopadhyay, R.B. Roy. Electrochemical Detection of Epicatechin in Green Tea Using Quercetin-Imprinted Polymer Graphite Electrode, *IEEE Sensors Journal* (23) 265226- 265234 2021. **IMPACT FACTOR: 4.33**
3. **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. **IMPACT FACTOR: 4.33**
4. **D. Das**, Trisita Nandy Chatterjee, Runu Banerjee Roy, Bipan Tudu, Ajanto Kumar Hazarika, Santanu Sabhapondit, Rajib 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. **IMPACT FACTOR: 4.33**
5. **D. Das**, Shreya Nag, Srikanta Acharya, Srikanta Barik, Bipan Tudu, Runu 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, No IF
6. Dipan Bandyopadhyay, Srikanta Acharya, Shreya Nag, **D. Das**, Runu Banerjee Roy A Molecular Imprinted Bi-Polymer Infused Capacitive Sensor for Inositol Detection in Fruits, *IEEE Transactions on Instrumentation and Measurement*, August, 2023. **IMPACTFACTOR: 5.33**

7. 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. . **IMPACT FACTOR: 4.33**
8. D. Bandyopadhyay, S. Nag, **D. Das**, S. Acharya, B. Tudu, R. Bandyopadhyay, R. B. Roy. “Voltammetric Detection Of Inositol Using A Platinum Based Electrode ”, NanoLife, \accepted (2022). . **IMPACT FACTOR: 0.3**
9. **D. Das**, Trisita Nandy Chatterjee, Runu Banerjee Roy, Bipan Tudu, Santanu Sabhapondit, Panchanan Pramanik, Rajib 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). No IF
10. S. Acharya, **D.Das**, Trisita Nandy Chatterjee, Soumen Roy, Runu Banerjee Roy, Bipan Tudu, and Rajib Bandyopadhyay, “Voltammetric Electrode Array Optimization for Black Tea Discrimination Using Computational Intelligence Approach”, IEEE Sensors Journal, doi: 10.1109/JSEN.2021.3098036, . **IMPACT FACTOR: 4.33**
11. Trisita Nandy Chatterjee, **Debangana Das**, Runu Banerjee Roy, Bipan Tudu, Ajanto Kumar Hazarika, Santanu Sabhapandit, Pradip Tamuly, Rajib 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. . **IMPACT FACTOR: 0.3**
12. Trisita Nandy Chatterjee, **Debangana Das**, Runu Banerjee Roy, Bipan Tudu, Santanu Sabhapondit, Pradip Tamuly, Panchanan Pramanik, Rajib Bandyopadhyay, “Molecular Imprinted Polymer Based Electrode for Sensing Catechin (+C) in Green Tea”, IEEE Sensors Journal, pp.103-107 March 15, 2018. . **IMPACT FACTOR: 4.33**
13. Electrochemical Sensor Based on CuO Nanoparticles-Modified Graphite Electrode for the Detection of Malachite Green, Samhita Dasgupta, Shreya Nag, Debangana Das, Runu Banerjee Roy, Deepak Kumar Das, Panchanan Pramanik, Rajib Bandyopadhyay, Bipan Tudu Publication date 2023/11/8 Journal, Nano LIFE page-2350015 **IMPACT FACTOR: 0.3**
14. Shreya Nag, D. Das, Runu Banerjee Roy, “A Novel Molecular Imprinted Polymethacrylic Acid Decorated Graphite Electrochemical Sensor for Analyzing Metanil Yellow Adulteration in Food”, September 2023 IEEE Sensors Journal PP(99):1-1DOI:10.1109/JSEN.2023.3300732 . **IMPACT FACTOR: 4.33**

15. Srikanta Acharya, **Debangana Das**, Shreya Nag, Amit Mandal, Bipan Tudu, Runu Banerjee Roy, Optimization Techniques for a Voltammetric Signal to Predict Green Tea Quality Parameters Using MIP Electrode September 2023 IEEE Sensors Journal PP(99):1-1 DOI:10.1109/JSEN.2023.3297140 . **IMPACT FACTOR: 4.33**
16. Madhurima Moulick, Debnagana Das, Shreya Nag, Runu Banerjee Roy, Detection Of theophylline using Samarium oxide nanoparticles ingrained graphite electrode February 2023 Nano LIFE 13(02) DOI:10.1142/S1793984423500071 . **IMPACT FACTOR: 0.3**
17. Shreya Nag, Debangana Das, Runu Banerjee Roy, Detection of metanil yellow adulteration in turmeric powder using nano nickel cobalt oxide modified graphite electrode, S Nag, D Das, H Naskar, B Tudu, R Bandyopadhyay, RB Roy, IEEE Sensors Journal 22 (13), 12515-12521. . **IMPACT FACTOR: 4.33**

Conferences:

1. D. Das, Trisita Nandy Chatterjee, Ajanto Kumar Hazarika, Santanu Sabhapondit, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, Development of a Highly Selective Nickel Cobalt Oxide Nanoparticles Modified Molecular Imprinted Polymer Based Sensor For Detection Of Gallic Acid In Green Tea, ISOEN, Fukuoka, Japan, 2019
2. D. Das, Trisita Nandy Chatterjee, Runu Banerjee Roy, Bipan Tudu, Santanu Sabhapondit, Ajant Kumar Hazarika, Panchanan Pramanik and Rajib 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).
3. Debangana Das, Shreya Nag, Ajanto Kumar Hazarika, Santanu Sabhapondit, Bipan Tudu, Rajib Bandyopadhyay, Runu banerjee roy "Development of CeO₂ embedded carbon paste electrode for detection of theophylline- A broncho dilator," 33rd Anniversary World Congress on BIOSENSORS, 5-8 June 2023, Busan, South Korea.
4. Debangana Das, Shreya Nag, Sawon Bhowmick, Ajanto Kumar Hazarika, Santanu Sabhapondit, Bipan Tudu, Rajib Bandyopadhyay, Runu Banerjee Roy "Determination of Epicatechin Content in Green Tea Samples Using Near Infrared Spectroscopy", 33rd Anniversary World Congress on BIOSENSORS, 5-8 June 2023, Busan, South Korea.
5. Debangana Das, Shreya Nag, Hemanta Naskar, Runu Banerjee Roy, Bipan Tudu, Rajib 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.

6. Debangana Das, Tanmay Sau, Rishiraj Ray, Runu Banerjee Roy, Bipan Tudu, Ajanto Kumar Hazarika, “Development of carbon paste electrode for theophylline detection ” MSSND, Jadavpur Univeristy, 2019.
7. Debangana Das, Shreya Nag, Hemanta Naskar, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, “Discrimination of various types of black tea clones using NIR spectroscopy”, ICEFEET 2020.
8. Shreya Nag, Debangana Das, Hemanta Naskar, Runu Banerjee Roy, Bipan Tudu, Rajib 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.
9. Hemanta Naskar, Debangana Das, Shreya Nag, Runu Banerjee Roy, Bipan Tudu, Rajib 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.
10. Shreya Nag, Debangana Das, Hemanta Naskar, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, “Estimation of theophylline content in black tea”, ICEFEET 2020.
11. Hemanta Naskar, Debangana Das, Shreya Nag, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, “Determination of curcumin in turmeric powder using MIP electrode”, ICEFEET, 2020.
12. Sensitive Electrochemical Detection of Carvacrol using Carbon Paste Electrode, Sounak Banerjee;Hemanta Naskar;Barnali Ghatak;Sanjoy Banerjee;Shreya Nag;Debangana Das;Runu Banerjee Roy;Nityananda Das;Bipan Tudu;Rajib Bandyopadhyay, 2022 2nd International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET)
13. Optimization of Electrode Array in Electronic Tongue for Classification of Black Tea Srikanta Acharya;Trisita Nandy Chatterjee; Soumen Mukherjee;Debangana Das;Bipan Tudu;Rajib Bandyopadhyay;Runu Banerjee Roy,2018 IEEE Applied Signal Processing Conference (ASPCON)

14. Shreya Nag;Debangana Das;Bipan Tudu;Runu Banerjee RoyMultivariate Analysis of Formalin Using UV-Vis Spectroscopy 2021 IEEE Second International Conference on Control, Measurement and Instrumentation (CMI) Year: 2021 | Conference Paper | Publisher: IEEE
15. Development of Molecularly Engraved Polymer Based Sensor for Detection of Theobromine in Tea, Debangana Das;Shreya Nag;Upasana Saha;Bipan Tudu;Runu Banerjee Roy, 2021 IEEE Second International Conference on Control, Measurement and Instrumentation (CMI), Year: 2021 | Conference Paper | Publisher: IEEE
16. Madhurima Moulick;Shreya Nag;Debangana Das;Bipan Tudu;Rajib Bandyopadhyay;Runu Banerjee Roy, Detection of Tannic Acid using Nd₂O₃ Modified Graphite Electrode 2022 2nd International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET)
17. Shreya Nag;Debangana Das;Sawon Bhowmik;Bipan Tudu;Rajib Bandyopadhyay;Runu Banerjee Roy, An assessment of Metanil Yellow Adulteration in Pigeon Pea using NIR Spectroscopy 2022 2nd International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET)
18. A.H.M. Toufique Ahmed;Shreya Nag;Debangana Das;Hemanta Naskar;Runu Banerjee Roy;Rajib Bandyopadhyay;Bipan Tudu Detection of Andrographolide Using Platinum Electrode Based Electrochemical System 2022 2nd International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET)

Book Chapters:

- **“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: **Debangana Das**, Shreya Nag, Hemanta Naskar, Srikanta Acharya, Sourav Bakchi, Sheikh Saharuk Ali, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, doi: 10.1007/978-3-030-72752-9_7
- **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: Sanjoy Banerjee Barnali Ghatak Sk Babar Ali **Debangana Das**, Prolay Sharma, .Saurabh Pal, Nityananda Das, Anwesha sengupta, Prabal Patra, Chitresh Kundu,.Arunangshu Ghosh, Rajib Bandyopadhyay Dipankar Mandal,.Bipan Tudu. DOI: 10.1007/978-3-030-72752-9_15.

- Assay of Molecular Imprinted Polymers as Food Additive Detectors October 2023
DOI:10.4018/978-1-6684-9094-5.ch016 In book: Impactful Technologies Transforming the Food Industry (pp.255-267) Authors: Shreya Nag, Debangana Das, Runu Banerjee Roy

Patent filing:

1. A novel molecular imprinted polymer based electrochemical sensor for the selective and sensitive detection of metanil yellow adulteration in food- Application No: 202231071419, Examination report received.
2. A formulation of eco e-paint for flexible electronics- Application No: 202231044198

Personal details:

Date of birth: 8th June, 1993

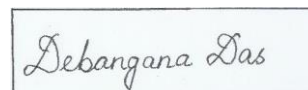
Father's name: Mr. Gopal Chandra Das

Mother's name: Mrs. Mallika Das

Nationality: Indian

Languages known: English, Hindi, Nagamese and Bengali.

Date: 26.01.2023



Signature