



DESHBANDHU COLLEGE
(UNIVERSITY OF DELHI)
KALKAJI, NEW DELHI - 110019
Faculty Details Proforma for College Website

Title	Dr.	First Name	Maku	Last Name	Moronshing	Photograph
Designation	Assistant Professor					
Address	H. 13 Saibol Village, Tengnoupal, Manipur 795131					
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Residence						
Mobile	+91-9769231017					
Email	mmoronshing@db.du.ac.in					
Web-Page	https://sites.google.com/db.du.ac.in/maku-moronshing/home					
Educational Qualifications						
Degree	Institution				Year	
Ph.D.	Indian Institute of Technology Bombay				2020	
M.Phil.	Indian Institute of Technology Delhi (MTech)				2013	
PG	Jamia Millia Islamia New Delhi				2010	
UG	Patkai Christian College Dimapur				2008	
Any other qualification/Experience	Visiting Research Scholar (SUSTech, Shenzhen China)				2020	
	Guest Faculty, Department of Chemistry, Delhi University, Delhi.				2021	
Career Profile						
<ol style="list-style-type: none"> 1. Visiting Research Scholar, SUSTech, Shenzhen China (2020). 2. Guest Faculty, Department of Chemistry, Delhi University (2021) 						
Administrative Assignments						
<ol style="list-style-type: none"> 1. Coordinator Vidhya Vistar (V2S) Scheme, Deshbandhu College, University of Delhi. 2. Coordinator Ek Bharat Shrestha Bharat (EBSB) unit Deshbandhu College, University of Delhi 3. Coordinator North East Cell Deshbandhu College, University of Delhi 4. Football coordinator, Football team, Deshbandhu College, University of Delhi. 5. IQAC: Extended IQAC committee, Deshbandhu college, University of Delhi. 6. Member Eco-Club Deshbandhu College, University of Delhi. 						
Areas of Interest/Specialization						
<p>Nanomaterials for environment, energy and healthcare. Used of Nanostructured materials and assemblies for environmental sensing, detection and remediation. Waste water treatment and desalination. Capacitive deionization (CDI). Surface Enhanced Raman spectroscopy (SERS). Nanomaterials for air and water pollution monitoring. Electrochemical and plasmonic sensors. Policy based research for sustainable development.</p>						
Subjects Taught						

- 1) **Physical Chemistry Course 303 Molecular Spectroscopy for PG students.**
- 2) **M.Sc. Practical Physical Chemistry 3303.**
- 3) **Two year (24 months) as institute teaching assistant (TA) in institute central facility for CRYO-FEG-SEM performing sample analysis from various departments.**
- 4) **Two-year teaching assistant (TA) experience with undergraduate course CH 117: Chemistry Lab, Experimental course illustrating the concepts of 1) galvanic cells, (2) thermochemistry, (3) chemical kinetics, (4) equilibrium constant, (5) analysis by oxidation reduction titration.**

Research Guidance

NA

Publications Profile

1. **Maku Moronshing**, C. Subramaniam, Scalable Approach to Highly Efficient and Rapid Capacitive Deionization with CNT-Thread as electrodes. *ACS Appl. Mater. Interfaces*, **2017**, 9, 39907.
2. **Maku Moronshing**, C. Subramaniam, Room temperature, multi-phasic detection of explosives and volatile organic compounds using thermodiffusion driven Soret colloids. *ACS Sustain. Chem. Eng.* **2018**, 6, 9470–9479.
3. **Maku Moronshing**, Seemesh Bhaskar, Sudeshna Mondal, Sai Sathish Ramamurthy and C. Subramaniam, SERS platform operating over wide pH range with minimal chemical enhancement effects: test case of tyrosine *J. Raman Spectrosc.* **2019**, 50, 826-836.
4. **Maku Moronshing**, Ananya Sah, Viswanath Kalyani, C. Subramaniam, Nanostructured Carbon Florets as Scavenger of As³⁺, Cr⁶⁺, Cd²⁺, and Hg²⁺ for Water Remediation. *ACS Appl. Nano Mater.* **2020**, 1, 468-478.
5. Seemesh Bhaskar, **Maku Moronshing**, Venkatesh Srinivasan, Pradeep Kumar Badiya, Chandramouli Subramaniam and Sai Sathish Ramamurthy. Silver Soret Nanoparticles for Femtomolar Sensing of Glutathione in a Surface Plasmon-Coupled Emission Platform. *ACS Appl. Nano Mater.* **2020**, 3, 4329–4341.
6. Seemesh Bhaskar, Pratyusha Das, **Maku Moronshing**, Aayush Rai, Chandramouli Subramaniam, Shivakaran Bhaktha B N, Sai Sathish Ramamurthy. Photoplasmonic Assembly of Dielectric–Metal, Nb₂O₃-Gold Soret Nanointerfaces for Dequencing the Luminophore. (Nanophotonics, <https://doi.org/10.1515/nanoph-2021-0124>)
7. Method and Apparatus for Water Treatment Using Capacitive Deionization Based On CNT-Thread Electrode", **Indian Patent No 350196.**
8. Fabrication of metal nanoparticle aggregates as SERS substrate for multi-phasic detection of analytes" **Indian Patent Application No 201621042432.**

Conference Organization/ Presentations

1. Organized talk on “**Stress Management and Building Resilience**” under Vidhya Vistar Scheme jointly organized by Deshbandhu college, Delhi University and Pettigrew College, Manipur University. 28th January 2022.
2. Organized talk on “**Understanding Sustainability Development Goals**” under Vidhya Vistar Scheme jointly organized by Deshbandhu college, Delhi University and Pettigrew College, Manipur University. 21st January 2022.
3. As an organizing secretary, organized an **International Symposium “Chemical wisdom by Her”** on 31st January 2022, organized by Department of Chemistry, Deshbandhu College, University of Delhi.
4. Participate in **Intellectual Property Right awareness/Training Program** organized by NIPAM, Intellectual Property India Office. 12th January 2022
5. Gave talk on Electrical safety in the laboratory at “**Skill-Up” a three-day workshop on laboratory safety and management in Chemistry Laboratory**. Organized by Department of Chemistry Deshbandhu College, University of Delhi.
6. **International Winter School-2021** on “Frontiers in Materials Science” Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru. **December 06-10, 2021.**
7. Oral presentation, International Union of Materials Research Society – International Conference in Asia (**IUMRS-ICA**) - **2017**, Taipei, Taiwan.
8. Oral presentation, Japan Society for the Promotion of Science –Department of Science and Technology (**JSPS-DST**) **Asian Academic Seminar - 2016**, Tokyo, Japan
9. Poster/Oral, 7th Indian Scientist association in Japan (**ISAJ**) Symposium on Science and Technology for Sustainability, **2016**, Tokyo, Japan.
10. Oral presentation, Department of Chemistry IIT-Bombay In-House Symposium – **2017**.
11. Participants 16th Chemical Research Society of India (CRSI) National Symposium in Chemistry (**NSC-16**), IIT-Bombay February 7-9, 2014.

Research Projects (Major Grants/Research Collaboration)

NA

Awards and Distinctions

1. Nation eligibility test for lectureship (NET-LS) 2012, All India ranking (AIR) rank 52.
2. Graduate aptitude test for engineering (GATE) 2011, AIR rank 2357
3. Certified Mentor for Teach India initiative, English for Employability from British Council UK.
4. Impactful research award 2017, IIT-Bombay awarded to C. Subramaniam (PhD supervisor) for the work on low power portable ground water desalination device.
5. Most read paper in Journal of Raman Spectroscopy in 2018.
6. Capacitive deionization work highlighted in major Indian newspaper. (The Hindu, IIT Bombay’s very low power water filter, November 11, 2017).
7. SERS work on Soret colloids highlighted in major Indian newspaper.
 - a) IIT-Bombay develops platform that can detect lung cancer from breath, The Indian Express, December 17th 2018.

b) IIT-B: Sniffing out lung cancer, explosives, The Hindu, September 15 th 2018.
Association With Professional Bodies
NA
Other Activities

Signature of Faculty
Member



- You are also requested to give your complete resume as a Word or PDF file to be attached as a link on your department page.