

Curriculum Vitae: Dr. Bhawana Thakur

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EDUCATION

2010 - 2016 Ph.D., Bhabha Atomic Research Centre, India
2008 - 2010 MSc. Chemistry, Fergusson College (Pune University), India
2005 - 2008 BSc. Chemistry, VG Vaze College (Mumbai University), India

RESEARCH EXPERIENCE

2019- current Marie Skłodowska-Curie Eurotech Postdoctoral Fellow
Host Institute: Prof. Bernhard Wolfrum, Neuroelectronics group, Department of Electrical and Computer Engineering, Technical University of Munich, Germany
Co-host Institute: Prof. Wendy L. Queen, EPFL Valais Wallis, Switzerland
Project: Metal Organic Frameworks Based Electronic Sensing Platform for Detection of Multiple Species of Pathogens
<http://postdoc.eurotech-universities.eu/our-fellows-with-data/>

2016-2017 Postdoctoral fellow
Department of Mechanical Engineering, University of Wisconsin- Milwaukee, USA
Project: Graphene Based Field-Effect Transistor for Biosensing Application

June- August, 2015 Visiting researcher
Manchester Metropolitan University (MMU), United Kingdom
Project: Rapid and Disposable Electrochemical Sensor for Detection of Salmonella Typhimurium

2010-2016 Doctoral studies
Chemistry Department, Bhabha Atomic Research Centre, India
Thesis: Conducting Polymer for Biosensing Application

May-July, 2009 Project fellow
School of Chemistry, University of Hyderabad, India
Project: Quinoline based photoactive molecule for sensing application

PUBLICATIONS

1. Rapid detection of single E. coli on a passivated surface of thermally reduced graphene oxide field effect transistor, **B. Thakur**, G. Zhou, J. Chang, H. Pu, B. Jin, X. Sui, X. Yuan, C.H. Yang, M. Magruder, and J. Chen Biosens. Bioelectron., 2018, 110, 16-22
2. Porous carbon and Prussian blue composite: A highly sensitive electrochemical platform for glucose biosensing, **B. Thakur**, X. Guo, J. Chang, M. Kron and J. Chen, Sensing and Bio-Sensing Research, 2017, 14, 47–53.
3. The mediatorless electroanalytical sensing of sulfide utilizing unmodified graphitic electrode materials, **B. Thakur**, E. Bernalte, J. P. Smith, C. W. Foster, P. E. Linton, S. N. Sawant and Craig E. Banks, C-Journal of carbon research, 2016, 2, 14-36.
4. Utilising copper screen-printed electrodes (CuSPE) for the electroanalytical sensing of sulfide, **B. Thakur**, E. Bernalte, J. P. Smith, C. W. Foster, P. E. Linton, S. N. Sawant and Craig E. Banks, Analyst, 2016, 141, 1233-1238.
5. Can the mechanical activation (polishing) of screen-printed electrodes enhance their electroanalytical response? L.R. Cumba, J.P. Smith, J. Iniesta, **B. Thakur**, D. R. do Carmo and C.E. Banks, Analyst, 2016, 141, 2791-2799.

6. Probing extracellular acidity of live cells in real time for cancer detection and monitoring anti-cancer drug activity, **B. Thakur**, S. Jaykumar and S. N. Sawant, Chem. Commun.2015, 51, 7015-7018.
7. Polyaniline nanoparticle based colorimetric sensor for monitoring bacterial growth, **B. Thakur**, C.A. Amarnath, S.H. Mangoli and S. N. Sawant, Sens. Actuators B, 2015, 207, 262.
8. Pectin coated polyaniline nanoparticles for an amperometric glucose biosensor, **B. Thakur**, C. A. Amarnath and S. N. Sawant, RSC Adv., 2014, 4, 40917.
9. Polyaniline-Prussian blue based amperometric biosensor for detection of uric acid, **B. Thakur** and S. N. Sawant, ChemPlusChem, 2013, 78, 166.
10. Synthesis of mesostructured polyaniline using mixed surfactants, anionic sodium dodecylsulfate and non-ionic polymers and their applications in H₂O₂ and glucose sensing, M.U. Anuprathap, **B. Thakur**, S. N. Sawant and R. Srivastava, Colloids and Surfaces B: Biointerfaces, 2012, 89, 108.

ACHIEVEMENTS AND AWARDS

- Marie Skłodowska-Curie Eurotech Postdoctoral Fellow (European commission H2020), 2018
- Developing World Scholarship by Royal Society of Chemistry, United Kingdom, 2015
- Travel grant awarded by Department of Science and Technology, India, 2014
- Funding for PhD studies, Department of Atomic Energy, India, 2010-2015
- Award from Council of Scientific & Industrial Research (CSIR)- University Grants Commission (UGC), India to pursue PhD studies, 2010
- Summer research fellowship, University Grants Commission, India, 2009

RESEARCH INTERESTS

• Electrochemical and optical Biosensors • Graphene Based Field Effect Transistors • Surface Plasmon Resonance • Electrode Modification • Immunoassays • Conducting Polymers • Metal Organic Frameworks