

AHIN ROY

Electron microscopist, Materials chemist & Nanomaterials simulist

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EMPLOYMENT

Assistant Professor

Materials Science Centre, IIT Kharagpur, WB, India

Jan 2022 – Ongoing Kharagpur, WB, India

- Synthesis, simulation and electron microscopy of nanomaterials

Research Fellow

CRANN- Advanced Microscopy Laboratory, Trinity College, Dublin

Aug 2019 – Oct 2021 Dublin, Ireland

- Synthesis and AC-STEM of oxide & 2D materials

Research Associate

Indian Institute of Science, Bangalore

Nov 2017 – July 2019 Bangalore, India

- Electron microscopy & simulation of catalytic nanomaterials

JSPS Postdoctoral Fellow

Kyushu University, Japan

Sep 2015 – Sep 2017 Fukuoka, Japan

- Electron microscopy & simulation of nanomaterials, operation and maintenance of JEOL ARM-200F microscope

PROJECTS

Atomic-scale Structural and Electronic Interrogation of Symmetry-broken Noble Metal Nanostructures for Oxygen Reduction Reaction

PI, Startup Research Grant (SRG), Science and Engineering Research Board (SERB), India

2022 – 2024 IIT Kharagpur

Three-dimensional nanoanalyses of catalytic nanocomposite by electron tomography

Fellow, Japan Society for Promotion of Science, MEXT, Japan

2015 – 2017 Kyushu University, Japan

Engineering Photoluminescence of WS₂ through Doping and Electrical Biasing

co-PI, DST, India & JSPS, MEXT, Japan

2019 – 2021 IISc Bangalore, Kyushu University

AWARDS

- Best Poster Award**
EMSI Meeting, Mahabalipuram, Chennai - 2017
- Young Scientist Award in Physics**
Dr. K. V. Rao Scientific Society - 2015
- JSPS Postdoctoral Fellowship**
JSPS, MEXT, Japan - 2015
- Gold Award, Shell India Computational Talent Prize**
Shell India - 2014
- Science Communication Scholarship**
RSC & Imperial College, London - 2012
- Integrated Ph. D Fellowship**
IISc Bangalore - 2009
- Certificate of Distinction**
International Australian Mathematics Olympiad - 2002

SELECTED PAPERS

- Adv. Funct. Mater., 2214883 (2023)
- Adv. Energy Mater., 2203747 (2023)
- Adv. Energy Mater., 2203013 (2022)
- Nat. Electron., 4, 893–905 (2021)
- Nat. Nanotechnol., 16, 592–598 (2021)
- ACS Nano, 14, 13418–13432 (2020)
- ACS Nano, 14, 5909–5916 (2020)
- ACS Catal. 10, 43–50 (2020)
- J. Mater. Chem. C, 5, 7307–7316 (2017)
- ACS Appl. Mater. Interfaces, 9, 19462–19469 (2017)
- J. Phys. Chem. C, 118, 18676–18682 (2014)
- Nano Lett., 14, 4859–4866 (2014)