

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

Postdoctoral experience

Research Fellow, Trinity College, Dublin; Visiting Scientist, IISc Bangalore & JSPS postdoc, Kyushu University, Japan

📅 Sep 2015 – Oct 2021 📍 Dublin, Bangalore & Fukuoka

- Synthesis, atomic-scale STEM and simulation of oxide & 2D materials

PROJECTS

Atomic-scale Interrogation and Engineering of Inorganic Heterostructure Catalysts for CO Oxidation

PI, Relevant Research Project, Board of Research in Nuclear Sciences (BRNS), India

📅 2024 – 2027 📍 IIT Kharagpur

Atomic-scale Electron Microscopic Interrogation and Electronic Structure Simulations of Heterostructure Catalysts for CO Oxidation (AtomCAT)

PI, Faculty Startup Research Grant, SRIC, IIT Kharagpur

📅 2023 – 2025 📍 IIT Kharagpur

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

- ➡ Chem. Mater., 36, 5741–5752 (2024)
- ➡ Adv. Funct. Mater., 2402103 (2024)
- ➡ 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 Appl. Mater. Interfaces, 9, 19462–19469 (2017)
- ➡ J. Phys. Chem. C, 118, 18676–18682 (2014)
- ➡ Nano Lett., 14, 4859–4866 (2014)