Department of Materials Science and Engineering
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Wahidur Rahman Sajal
Assistant Professor
Research Area Materials Recycling
Nanostructured Materials

Biography

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Education

Master of Science in Materials and Metallurgical Engineering
Bangladesh University of Engineering and Technology (BUET),Bangladesh(2018-2022)
Thesis Title: **Thermodynamic Analysis of Caustic Roasting and Investigation of Caustic Roasting-Leaching Parameters of Electric Arc Furnace Dust**
Bachelor of Science in Materials and Metallurgical Engineering
Bangladesh University of Engineering and Technology (BUET),Bangladesh(2013-2018)Achievement:Passed with an Honors (CGPA>3.75)
Higher Secondary Certificate
Shahid Smrity College,Bangladesh(2011-2013)Achievement:General Scholarship
Secondary School Certificate
Maluhar Wazedia Secondary School,Bangladesh(2006-2011)Achievement:Talent Pool Scholarship

Service Records

- **Assistant Professor**
  Department/Section: Materials Science and Engineering
  Khulna University of Engineering & Technology(KUET) *From 15-12-2022 to 01-01-1970*
- **Lecturer**
  Department/Section: Materials Science and Engineering
  Khulna University of Engineering & Technology(KUET) *From 28-07-2019 to 14-12-2022*
- **Research Fellow**
  Department/Section: Materials Science Devision, Pilot Plant and Process Development Centre
  Bangladesh Council of Scientific and Industrial Research(BCSIR) *From 16-06-2019 to 27-07-2019*

Research Interest

Materials Recycling

Extracted Iron and Zinc from electric arc furnace dust using a combination of pyro and hydrometallurgical route. Systematic thermodynamic caustic-roasting assessments of electric arc furnace dust using thermochemical FactSage software and caustic roasting-leaching experimental investigations were carried out to assess the suitability of this important hybrid process.

Nanostructured Materials

Systhesis Gold(Au) and Silver(Ag) nano particles by co-precipitation method. Immobilized AuNPs and AgNPs using the polydopamine as linker on the magnetic Graphene Oxide. Then I studied its rapid catalysis and recyclability for waste water treatment.

Publication

Books

Journals

3. S. Ahmad, W. R. Sajal, F. Gulshan, M. Hasanand M. A. Rhamdhani, "Thermodynamic analysis of caustic roasting of electric arc furnace dust," ***Heliyon*** , Elsevier, vol. 8, no.10, (2022) .

Conference