

EHSAN AHMED ASHRAFI

✉ ehsan.ashrafi@northsouth.edu

📍 Dhaka, Bangladesh

☎ +880 1554300969

🌐 [linkedin.com/in/asifashrafi](https://www.linkedin.com/in/asifashrafi)

SUMMARY

Highly motivated professional with a strong desire to teach and research in the areas of sustainability, life cycle assessment, industrial ecology, materials and metallurgy, or renewable energy. With 09 years of diverse industrial experience spanning multinational companies, local businesses, startups, and international institutes, I have gained valuable expertise in research and development, quality and environmental management, operations, health and safety, training, and project management.

EDUCATION & AWARDS

Master of Science in Sustainable and Innovative Natural Resource Management (SINReM) *Sep 2021 – Jul 2023*

Ghent University, Uppsala University, TU Bergakademie Freiberg; Major: Sustainable Processes

- Erasmus Mundus Scholarship and Magna Cum Laude award

Post Graduate Diploma in Logistics & Supply Chain Management (PGDLSCM) *Jun 2019 – Nov 2020*

EDUPRO UK, organized by Academy of Business Professionals (ABP)

Bachelor of Science in Materials & Metallurgical Engineering (MME) *Jan 2008 – Feb 2013*

Bangladesh University of Engineering and Technology (BUET), CGPA: 3.75/4.00

- HONOURS award, Dean's list and Merit scholarships

Higher Secondary School Certificate (H.S.C.) and Secondary School Certificate (S.S.C.) *May 2001 – Aug 2007*

Jhenaidah Cadet College (JCC), Science, CGPA: 5.00/5.00

- Board scholarships

RESEARCH & PUBLICATION

Master's Thesis at Institute of Nonferrous Metallurgy and Purest Materials, TU Freiberg *Oct 2022 – Jul 2023*

Topic: "Reduction of Cassiterite by Hydrogen", developing a sustainable process for reduction of tin concentrate.

- Journal article: **Ashrafi, E.A., Voigt, A.D., Felkl, L. et al. Hydrogen Reduction of Cassiterite Concentrate and Possibilities for Sustainable Tin Extraction. J. Sustain. Metall. (2025). <https://doi.org/10.1007/s40831-025-01096-1>**

Studying effect of graphite in leaching of black mass, Helmholtz Institute Freiberg *May 2023 – Jun 2023*

Conducted experiments and literature review on lithium-ion battery black mass dissolution in presence of graphite.

Research on Improving Welding Electrodes at Linde Bangladesh *Nov 2013 – Feb 2019*

Conducted research to improve the existing brands to improve the welding quality with cost minimization.

Undergraduate Thesis at MME, BUET *Sep 2011 – Feb 2013*

Topic: "Study of Effect of Composition on Mechanical Properties of As-cast and Homogenized Aluminium Alloys".

- Journal article: **Hossain M. M. A. Rashed, Ehsan A. Ashrafi, Ashique Hasan, Modelling Effects of Copper on Microstructure and Properties of Al-Si-Cu Alloys, MATERIALS TRANSACTIONS. (2023), <https://doi.org/10.2320/matertrans.MT-M2022070>**

PROJECTS & CASE STUDIES

- Sustainability Analysis for Welding Industry in Bangladesh through MFA and LCA *May 2025 – April 2026*
- Consultancy for implementation of Quality Management Systems *Sep 2023 – Oct 2023*
- Business idea from recovery of REEs from fly ash by flash joule heating and membrane *Nov 2022 – Dec 2022*
- Process analysis on leaching, solvent extraction, and electrowinning of Cu at Nikkelverk *Jan 2022 – Mar 2022*
- Sustainability practices at Intel, Nike, Pfizer and Glencore *Mar 2022 – June 2022*
- LCA comparison of biodiesel from waste cooking oil with other sources *Nov 2021 – Dec 2021*
- Consultancy for welding electrode quality and production process improvement *Jul 2021 – Aug 2021*
- Installation & commissioning of production line and metallurgical lab instruments *Jun 2019 – Jul 2020*
- Research on improving welding electrodes and developing new brands *Nov 2013 – Feb 2019*
- Reduction of dry scraps generated at electrode factory *Jan 2017 – Dec 2018*
- Upgradation projects of ISO 14001 and 9001 to 2015 version *Jun 2018 – Nov 2018*

EXPERIENCE

Lecturer

01/07/2024 – Continuing

Department of Environmental Science and Management, North South University, Dhaka, Bangladesh.

- Taking GED and Core courses offered by the department. Advising new students.
- Supervising undergraduate theses and internships.
- Leading university-funded research projects and organizing seminars and workshops.

Consultant – Certification (part-time)

14/01/2024 – 30/06/2024

B-ADVANCY Certification Ltd., Sector-9, Uttara, Dhaka, Bangladesh.

- Provided services for accreditation as per ISO 17021:2015 through document review and stakeholder coordination.
- Conducted quality management system awareness and internal auditor training for clients.

Research Assistant – HiWi (part-time)

01/03/2023 – 31/07/2023

Fraunhofer IKTS, Freiberg, Germany.

- Analyzed green battery recycling process and sourced CAPEX machinery for a large-scale project.

Production Manager

15/04/2021 – 31/05/2022

Watchers Innovations Ltd., Vatara, Dhaka, Bangladesh.

- Designed the production layout for generating unique and sustainable products using recycled plastics.
- Sourced and communicated with international solution providers for raw materials and machinery.

Operations Manager

01/03/2019 – 30/09/2020

Silmoon Electrodes Limited, Kazipara, Uttar Rupshi, Rupganj, Narayanganj, Bangladesh.

- Supervised operations, production, and quality. Recruited team members. Sourced raw materials and machinery.
- Coordinated installation and commissioning of production line machinery and metallurgical laboratory instruments.

Quality Officer - Hardgoods

15/04/2013 – 26/02/2019

Linde Bangladesh Limited, Electrode Plant, Mahona, Bhulta, Rupganj, Narayanganj, Bangladesh.

- Ensured that the quality of welding electrodes was as per specification through internal tests and external certification.
- Coordinated ISO 9001 and ISO 14001 activities at Rupganj site with different stakeholders and reported CSR status.
- Performed internal audits for QMS and EMS, and conducted tests (mechanical, chemical, welding) at the laboratory.

CERTIFICATES

- Lead Auditor ISO 9001:2015, 45001:2018, 50001:2018
- Radiation Control Officer (RCO), certified by Bangladesh Atomic Energy Commission

TRAININGS & COURSES

- Six Sigma Yellow Belt Training at Linde Bangladesh Ltd. Apr 2014
- Health and Occupational Hygiene (HOH) Training at Linde Bangladesh Ltd. Feb 2016
- Incident Investigation Training at Linde Bangladesh Ltd. Jul 2018
- Total Quality Management (TQM) by Intertek Oct 2020
- Raw Materials Manager Course by EIT RawMaterials Oct 2020 - Feb 2021
- Circular economy for Materials Processing (CircPro for Masters) by EIT RawMaterials Oct 2022 – Dec 2022
- Umberto LCA+ by the business faculty of TU Freiberg Nov 2022
- Career Essentials in Project Management by Microsoft and LinkedIn Feb 2023
- Renewable energy and cities by China University of Mining and Technology Jul 2023
- GRI certified training on sustainability reporting as per 2021 update by SusNex Ltd. Nov 2023
- Lead Auditor training on ISO 50001:2018 Energy Management System by BSI Jan 2024
- Sustainability Management by Bangladesh Institute of Management (BIM) and GIZ Mar 2024 - Jun 2024

SKILLS

Software: MS Office, Edupack, AutoCAD, JMatPro, Factsage, OpenLCA, Umberto LCA+, HSC Sim, One Click LCA, SimaPro

Laboratory: Mechanical Testing, Characterization of metals and powders (ICP-OES, XRF, AAS, SEM), Welding.

Project Management: Task management, Prioritization, Delegation, Task separation, Scheduling, Communication.