

Dr M. Hussein N. AL ASSADI | Résumé

Nationality: Australian (with work right in Japan, currently living in Tsukuba, Japan)

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[Google Scholar](#) • [ResearchGate](#)

Engineer, researcher and consultant in green energy and data science, with broad international experience

Specialised Fields

Renewable energies, Secondary ion batteries, Materials for energy and environmental applications; Catalysis for hydrogen production; Artificial intelligence, Data science, High-performance computing

Productivity Summary

Managed, collaborated and participated in numerous green energy and high-end materials science projects in governmental, academic and industrial settings. Outcomes include material discoveries related to catalytic hydrogen production, thermoelectric energy conversion, waste plastic management, and critical elements replacement—various projects currently at different stages of commercialisation.

Numerous peer-reviewed articles, in leading and highly critical *American Chemical Society*, *American Physical Society*, *Royal Society for Chemistry* and *Institute of Physics* journals. More than 20 invited and contributed talks at international trade conferences (details at [Publications](#)). These publications focus on our recent discoveries in novel solutions for green and renewable energy problems, often aided by data science and high-performance computing.

Schools Attended

- **The University of New South Wales** **Sydney, Australia**
PhD in Materials Science and Engineering
- **Australian School of Business** **Sydney, Australia**
Graduate Certificate in Research Management and Commercialisation
- **Edith Cowan University** **Perth, Australia**
Graduate Diploma in Data Science

Professional Experience

- **The University of New South Wales** **Sydney, Australia**
Visiting Research Fellow
2019–Now
Research manager working on green and renewable energy materials
- **National Institute for Materials Science** **Tsukuba, Ibaraki, Japan**
Research Associate
2016–2019
Independent researcher working on Na ion batteries
- **Osaka University** **Osaka, Japan**
Research Fellow
2013–2015
Independent researcher on thermo-materials
- **The University of New South Wales** **Sydney, Australia**
Research Associate
2011–2013
Research on recycling waste plastic materials

Competitive External Grants

- **Fellowship by The Japan Society for the Promotion of Science** for research on thermoelectric energy conversion: salary, relocation cost and ~ A\$ 25,000 research grant, Osaka University (2013–2015)
- **Several Rounds of High-Performance Computational Resource Allocation** for research on green and renewable energy materials ~ \$ 200,000 equivalent of units of service (2011–2021)

Awards

- **JSPS Fellowship**: Japan Society for Promotion of Science (2013)
- **Excellence in Tutoring and Teaching Award**: The University of New South Wales (2010)
- **Commercialisation Training Scheme (CTS) scholarship**: The University of New South Wales (2009)
- **Australian Research Council scholarships**: (2007)

Academic Teaching Experience

- **Scientific & Technical Communication**, Tsukuba University, Japan (2017–2018)
- **Nanotechnology**, The University of New South Wales, Australia (2012)
- **Materials Science**, The University of New South Wales, Australia (2008–2011)

Professional Society Membership

Member, Institute of Electrical and Electronics Engineers (IEEE), Application for Senior Membership submitted.

Languages

- **English** and **Arabic** (native)
- **Japanese** and **Turkish** (conversational)