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Qualifications	PhD Chemical Engineering (Renewable Energy/Fuel cells) MS Energy Engineering (Electrochemistry) BSc Chemical Engineering
Current Position	<ul style="list-style-type: none"> • Professor at Department of Sustainable & Renewable Energy Engineering • Coordinator of Energy storage and Energy Management Research Group • Coordinator of Nano-materials laboratory
Residency and Citizenship	UAE (Golden Visa-Persons Who Are Talented) Egyptian (Citizenship)
Profile Links	Google scholar ; Scopus, Department ; Researchgate ; TOP 2% Scientists ; Co-Ordinator of Energy Storage Research Group ; Co-Ordinator Functional Nanomaterials Lab

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1. Career Achievements

- ✓ More than **20 years** of teaching and research experience, especially in **Sustainable & Renewable Energy**.
- ✓ Winning **international Khalifa award** for education **2024**, Higher education field: **Distinguished university lecturer (Professor) category**.
- ✓ **State price in advanced Engineering Applications**, Egyptian government in **2014**.
- ✓ **First class ribbon of excellence by Egyptian president for research, 2017**.
- ✓ **A highly cited researcher** in 2023 (worldwide) according to **Clarivate (Web of science)** which is awarded for **only four scholars in all the universities in UAE in all categories**.
- ✓ **World's Top 2% Scientists in the Energy** category (162nd worldwide), according to the data released by Stanford University for 2024.
- ✓ I have secured several **national and international research projects** in my research career (around **2,000,000 USD**).
- ✓ Invented **three patent** on energy storage devices (supercapacitors) that used effectively in storing renewable energy technologies, electric vehicles, etc.
- ✓ Published more than **469+ research papers** (including **371+ journal articles, 78 books/book chapters, and 16+ conference papers**). The total **impact factor** is more than **2000**.
- ✓ **Three top cited** articles (out of eight) in **Energy Journal**
- ✓ **Four top cited** articles (out of eight) in **International Journal of Thermofluid**
- ✓ **One top cited** articles (out of eight) in **Energy storage Journal**
- ✓ **Two top cited** articles (out of eight) in **Renewable and sustainable energy reviews Journal**
- ✓ **One top cited** articles (out of eight) in **Energy Nexus Journal**
- ✓ **One top cited** articles (out of eight) in **Carbon Resources and Conversion Journal**
- ✓ More than **23500 citations** with **h-index of 81+** and an **i-10 index of 292+** (Google Scholar).
- ✓ **Research Award** at the University of Sharjah (**Distinguished Faculty Award-Scientific Research**) **2022/2023**
- ✓ **Research Award** at the University of Sharjah (**Distinguished Faculty Award-Scientific Research**) **2018/2019**
- ✓ **JSPS Postdoctoral fellowship** from April 2012 to Dec. 2012, Japan for the development of metal carbides and Nitrides for fuel cell applications.
- ✓ **Postdoctoral fellowship** for the development of cathode alternatives to the Pt catalyst. April 2011 to March, 2012.
- ✓ **Postdoctoral fellowship** for the development of DMFC based on novel electrode structure. From the advanced technology Center, Gunma university Japan. Feb., 2009 to March 2011.
- ✓ **National scholarship** for **PhD** study in **Japan**, Dec. 2004 to June 2008.
- ✓ **Best presented Paper** Second International Conference for Energy, ICEE2010, Aswan, Egypt 27-29 Dec., 2010. Title of the paper "Role of Air Cathode Filter on the Intermediate Products in a Vapor Feed Passive DMFC Operated with High Methanol Concentration".
- ✓ **Minia University** scientific award for scientific publishing, 2014 and 2015.
- ✓ Committee member of several international conferences
- ✓ Played a pivotal role in **launching new academic programs (MSc. In energy, BSc in water and chemical engineering)**.
- ✓ Taught many courses related to **Sustainable & Renewable Energy**.
- ✓ Professional **Diploma in Artificial Intelligence (AI) Programmer**, 2023.
- ✓ **Associate editor, editorial** member, and **guest editor** in various **Q1 journals**
- ✓ Successfully **designed numerous innovative courses** and **enhanced existing course contents**.

Curriculum Vitae

Mohammad Ali Abdelkareem

- ✓ Collaborated with international researchers in **Sustainable & Renewable Energy** from several countries. (Egypt, UK, South Korea, Saudi Arabia, USA, Australia, Malaysia, Bangladesh, India, Pakistan, Qatar, Oman, etc.)
- ✓ Several articles have been published in high-impact factor journals related to Sustainable & Renewable Energy as follows:

Journal Name	IF	No.	Journal Name	IF	No.
Progress in Energy and combustion science	32	02	Renewable and Sustainable Energy Review	16.3	10
Nano energy	16.8	01	Chemical Engineering Journal	13.3	05
ACS Energy Letters	19.3	01	Journal of Power Sources	8.1	13
Renewable Energy	9	08	Energy	09	30
Energy storage	8.9	11	Int. Journal of Hydrogen Energy	8.4	28
Energy Conversion And Management	9.9	07	Sustainable Energy Technologies and Assessments	7.1	08
Int. Journal of Energy Research	4.3	8	Energy & Fuels	5.2	02
Small	13	01	Journal of Cleaner Production	9.7	02
Energy nexus	8	02	Journal of Solar Energy	6	02
Thermal Science And Engineering Progress	5.1	16	International Journal of Thermofluids	Cite score 10.1	28
Applied Energy	10.1	02	Journal of Energy Chemistry	14	01
Journal of Environmental Management	8	02	Chemical Engineering And Technology	1.8	04
Fuel	6.7	04	Energies	3	21
Scientific Reports	3.8	05	Bioresource Technology	9.7	02
Journal Of The Taiwan Institute Of Chemical Engineers	5.5	06	Journal of Environmental Chemical Engineering	7.4	03
Science of Total Environment	8.2	21	Sustainable Horizons	Cite score 6.6	03
Ain Shams Engineering Journal	6	07	Batteries	4.6	02
Electrochimica Acta	5.5	03	Sustainability	3.3	13
Buildings	3.1	05	Chemosphere	8.1	03
Process Safety and Environmental Protection	6.9	03	Journal of The Electrochemical Society	3.1	03
Desalination	8.3	02	Chemelectrochem	3.5	02
Journal of Colloid And Interface Science	9.4	02	Critical Reviews In Environmental Science And Technology	14.3	02
Case Studies of Thermal Engineering	6.4	02	Journal of Water Process Engineering	6.3	02

And one paper in the following journals:

Sustainable Materials And Technologies (IF:8.6), ACS Omega (IF:3.7), Materials Chemistry And Physics (IF:4.3), Separation And Purification Technology (IF:8.1), Neural Computing And Applications (IF:4.7), Materials Letters (IF:2.7), Processes (IF:2.8), Waste and Biomass Valorization (IF:2.6), Journal of Advanced Research (IF:11.4), Journal of Alloys And Compounds (IF:5.8), Journal Of Marine Science And Engineering (IF:2.7), Journal of Science Advanced Materials and Devices (IF:6.7), Materials Today Sustainability (IF:7.1), Water (IF:3), Physica Scripta (IF:2.6), Resources (IF:3.6), Materials (IF:3.1), SN Applied Sciences (IF:2.8), Macromolecular Research (IF:2), Journal of Building Engineering (IF:6.7), International Journal of Low Carbon Technologies (IF:2.4), Fuel Cells (IF:2.6), Fractal And Fractional (IF:3.6), Engineering Analysis With Boundary Elements (IF:4.2), Powder Technology (IF:4.5), Membranes (IF:3.2), Fermentation (IF:3.3).

- ✓ Every year received an **excellent** grade for the annual faculty evaluation.
- ✓ Each semester **outstanding** outcomes of student course experience surveys were received.
- ✓ Proficiently **supervised undergraduate, master's, and PhD students and postdoctoral researchers**, fostering their academic and professional growth.

- ✓ Attended several professional development courses, trainings & workshops related to teaching & research.

2. Research Interest

- | | |
|----------------------------|--------------------------|
| ✓ Renewable energy systems | ✓ Energy storage systems |
| ✓ Fuel Cells | ✓ Supercapacitors |
| ✓ Batteries | ✓ Hydrogen production |
| ✓ Hydrogen storage | ✓ Hybrid energy systems |
| ✓ Material Science | ✓ Energy management |
| ✓ Waste heat recovery | ✓ Nanofluid |

3. Qualification

- **Doctorate of Philosophy in Chemical Engineering (PhD Eng)** (April 2005- June 2008)

Gunma University, Japan

Major Field: Renewable Energy; Fuel cells

Thesis Title: Novel Electrode Structure for the Reduction of Methanol Crossover in a Passive DMFC

- **Master Science in Chemical Engineering with Focus on electrochemistry (MSc Eng)** (1998-2002)

Minia University, Egypt

Major Field: Electrochemistry

Thesis Title: Evaluation of Pack Aluminizing of Steel in Various Corrosive Media.

- **Bachelor of Science in Chemical Engineering (BSc Eng)** (1993-1998)

Minia University, Egypt

- **Professional Diploma in Artificial Intelligence (AI) Programmer** (11th June 2023 to 24th December 2023)

University of Sharjah, Sharjah, UAE.

4. Academics/ Research/ Industrial Experience

- (i) **2021 to date: Professor** in the Department of Sustainable & Renewable Energy Engineering, University of Sharjah, Sharjah, United Arab Emirates
- (ii) **2022 to date: as Coordinator** of Energy Storage and energy management Research Group (**8 faculties, two post doctors, and 10 researchers**), Center for Sustainable Energy and Power Systems, Research Institute of Sciences and Engineering, University of Sharjah, United Arab Emirates.
- (iii) **2022 to date: as Coordinator** of Nanomaterials Laboratory, Research Institute of Sciences and Engineering, University of Sharjah, United Arab Emirates (**serve more than 30 researchers in the university**).
- (iv) **2015 to 2020: As Associate Professor** in the Department of Sustainable & Renewable Energy Engineering, University of Sharjah, Sharjah, United Arab Emirates
- (v) **2013 to 2015: As Associate Professor** in Chemical Engineering Department, Minia University, Minia, Egypt

- (vi) **2008 to 2013:** As *Assistant Professor* in Chemical Engineering Department, Minia University, Minia, Egypt
- (vii) **2008 to 2012 Post doctor** (three different fellowships including JSPS, Gunma University, Japan)
- (viii) **2002 to 2004** Teaching Assistant, El-Minia University, Faculty of Engineering, Chemical Engineering Department, Egypt
- (ix) **2000 to 2002** Demonstrator, El-Minia University, Faculty of Engineering, Chemical Engineering Department, Egypt
- (x) **1999 to 2000** Chemical Engineer, Egyptian Fertilizer Company

5. Courses Taught

Undergraduate Courses:

- Fuel Cells
- New and Renewable Energy
- Energy Storage
- Electrochemical Engineering and Corrosion
- Wind Energy System Lab.
- Fluid Mechanics
- Fluid Mechanics Lab
- Engineering Thermodynamics
- Principals of Chemical Engineering
- Intro. to Energy Science & Technology
- Heat Transfer
- Heat Transfer Lab
- Fundamentals of Biochemical Engineering
- White Cement Industry.
- Equipment design for industrial wastes recycling
- Organic Engineering Industries
- Engineering materials

Postgraduate Courses:

- Hydrogen production and storage
- Biological Processes for Pollution Removal
- Hybrid energy systems
- Energy polices and Economics
- Bioenergy technology
- Research methodology

6. Awards

1. A **highly cited researcher** in 2023 (worldwide) according to **Clarivate (Web of science)** which is awarded for **only four scholars in all the universities in UAE in all categories.**
2. **International Khalifa award** for education **2024**, Higher education field: **Distinguished university lecturer (professor) category.**
3. **World's Top 2% Scientists in the Energy** category (**162nd**), according to the data released by Stanford University, 2024.
4. **Research Award** at the University of Sharjah (**Distinguished Faculty Award-Scientific Research**) **2022/2023**
5. **Research Award** at the University of Sharjah (**Distinguished Faculty Award-Scientific Research**) **2018/2029**

6. **First class ribbon of excellence by Egyptian president for research, 2017.**
7. **State price in advanced Engineering Applications**, Egyptian government in 2014.
8. **Minia University** scientific research award for scientific publishing, 2014.
9. **Minia University** scientific research award for scientific publishing, 2015.
10. **JSPS Postdoctoral fellowship** from April 2012 to Dec. 2012, Japan for the development of metal carbides and Nitrides for fuel cell applications.
11. **Postdoctoral fellowship** for the development of cathode alternatives to the Pt catalyst. April 2011 to March, 2012.
12. **Postdoctoral fellowship** for the development of DMFC based on novel electrode structure. From the advanced technology Center, Gunma university Japan. Feb., 2009 to March 2011.
13. **National scholarship** for **PhD** study in **Japan**, Dec. 2004 to June 2008.
14. **Best presented Paper** Second International Conference for Energy, ICEE2010, Aswan, Egypt 27-29 Dec., 2010. Title of the paper “Role of Air Cathode Filter on the Intermediate Products in a Vapor Feed Passive DMFC Operated with High Methanol Concentration”.

7. Research Funds Awarded

Dr Mohammad is involved in different national and international projects for the developments of fuel cells, supercapacitors, Batteries, hydrogen production, etc., with around **2,000,000 USD** (PI, Co-PI, collaborative, Consultant, etc.):

2024

1. PI of Targeted grant “MXene Graphene cramped Ni-Fe layered double hydroxide nanostructure for actual operation of direct urea fuel cells” **2024, University of Sharjah, UAE, 53,000 USD, From April 2024 to March 2026.**

2023

2. Collaborative project between university of Sharjah and American University of Sharjah for the Development of hydrogen production and storage project, funded by **Sharjah National Company for Oil and Gas (SNOG) applied for a fund of 7 million AED (around 2 million USD)**. Project started with 0.5 Million AED (150k USD in the first stage, half of it to our group in university of Sharjah) from March 2023 to October 2025.
3. Co-PI of Targeted grant “Synthesis of iron nanoparticles and carbon nanosheets combined in situ to form a porous interconnected cathode with high performance for aluminum ion batteries” **2023, University of Sharjah, UAE, 35,000 USD, From May 2023 to April 2025.**

2022

4. Co-PI of Targeted grant “Thermally Chargeable Supercapacitors: A new Paradigm of Self-Powered Welfare Energy Storage Devices” **2022, University of Sharjah, UAE, 51,000 USD, From November 2022 to October 2024.**

5. PI of Targeted grant *Development of magnetically separable nanocomposite materials and their application as photocatalyst for the removal of organic pollutants from water*, 2022, **University of Sharjah, UAE, 33,000 USD, accepted Oct. 2022.**
6. Co-Investigator, ***Green hydrogen role in the development of the sustainable cities***, King Abdulaziz University, Duration: (10/2022-07/2023), Amount: **28000 Saudi Riyal.**
7. Co-Investigator, ***Evaluation for sustainability of renewable Energy systems based on risk analysis***, King Abdulaziz University, Duration: (10/2022-07/2023), Amount: **28000 Saudi Riyal.**
8. Co-Investigator, ***Role of fuel cells in sustainable cities***, King Abdulaziz University, Duration: (10/2022-07/2023), Amount: **28000 Saudi Riyal.**

2020

9. PI of Spotlight Project “Hydrogen gas production by a photo-electrochemical process”, **2020-2021, Colleague of Engineering, University of Sharjah, UAE, 12,000 USD.**
10. PI of Spotlight Project “Novel Graphitic Carbon Nitride electrodes for membrane capacitive deionization with energy recovery potential”, **2020-2021, Colleague of Engineering, University of Sharjah, UAE, 12,000 USD.**
11. PI of Spotlight Project “Improved Performance and Energy Recovery of Capacitive Deionization by utilizing Graphene Flow Electrodes”, **2020-2021, Colleague of Engineering, University of Sharjah, UAE, 12,000 USD.**
12. Co-Investigator, Innovative Hybrid Ventilation Technology to Compact Spread of Covid-19, **University of Sharjah, UAE, 57,000 USD, 2020-2021.**

2019

13. PI of Targeted grant *Standalone graphene modified MOF electrodes for real urea fuel cell applications*, 2022, **University of Sharjah, UAE, 53,000 USD, From Nov. 2022 to October 2024.**
14. PI of competitive grant “Photo-assisted urea fuel cell for simultaneous wastewater treatment and electricity generation” **2019-2021, University of Sharjah, UAE, 25,000 USD.**
15. PI of Collaborative grant “Synthesis of Photo-assisted electrodes coupled with 3D bio anode as non-precious electrodes for biohydrogen generation from industrial waste water using self sustainable voltage (Microbial electrolysis cell)”, **2019-2021, University of Sharjah, UAE, 106,000 USD.**

2016

16. PI of SEED grant “Development of urea fuel cell for simultaneous wastewater treatment and electricity generation” **2016-2017, University of Sharjah, UAE, 10,000 USD.**
17. Co-PI in a project of “Reduced Graphene Oxide-based Double Layer Capacitor for Alternating Current Line Filtering Application”, target research project, **University of Sharjah, UAE, 2016-2018, 49,000 USD.**
18. Co-PI in a project of “Development of Systematic Algorithm for the Production of Synthetic Natural Gas for Vehicles (SNGV) from Biomass”, competitive research project, **University of Sharjah, UAE, 2016-2018, 21,000 USD.**

2014

19. Consultant in KSA in the project entitled “Development and commercialization of fuel cells based on industrial and sewage waters using nanotechnological approach”, funded by The National Plan for

Sciences & Technology (NPST), King Saud University, **Saudi Arabia** (February 1, 2014 – January 31, 2016) (Project # 11ENE1917-02), **250,000USD**.

2013

20. Principal investigator (PI) in **national project** for electricity production from wastes using an integrated system from Biogas and Solid Oxide Fuel Cells funded by the **Academy of Scientific Research and Technology (ASRT), 2013-2014, around 140,000 USD**.
21. PI of an international project funded from the **European Union** for the development of the microbial fuel cell for the simultaneous electricity generation and wastewater treatment, **from 2013 to 2015, 450,000 EURO**.

2012

22. Consultant in KSA in the project entitled “Non-Precious Metallic Nanofibers As Novel, Cheap and Effective Electrodes For Scaling Up Fuel Cells Manufacturing Technology”, funded by The National Plan for Sciences & Technology (NPST), King Saud University, **Saudi Arabia** (February 1, 2012 – January 31, 2014) (Project # 11ENE1721-02), **250,000USD**.

8. Professional Role & Responsibilities

a. Management and Leadership Experience

- Professional Diploma in Artificial Intelligence (AI) Programmer (11th June 2023 to 24th December 2023), *University of Sharjah, Sharjah, UAE*.
- Coordinator of Energy Storage and energy management Research Group (8 faculties, two post doctors, and 10 researchers), Center for Sustainable Energy and Power Systems Research, Research Institute of Sciences and Engineering, University of Sharjah, United Arab Emirates. 2022 to date.
- Coordinator of Nanomaterials Laboratory, Research Institute of Sciences and Engineering, University of Sharjah, United Arab Emirates (serve more than 30 researchers in the university). 2022 to date.
- Chair of the KPI committee at the department level 2024
- Chair of the KPI committee, at the college level 2024.
- Chair of the department exams committee, Sep. 2021 to date
- Coordinator of Senior Design Project, Sep. 2021 to May 2022
- Coordinator of research & graduate studies committee of SREE department, Sep. 2015 to May 2016, and Sep. 2020 to May 2021.
- Chair of Risk assessment committee of SREE department, Sep 2018 to May 2020.
- Coordinator of Social affairs committee of SREE department, Sep. 2018 to May 2019
- Chair of CAA Accreditation Committee, Sep 2017 to May 2018
- Chair of the energy conversion systems (specialty group) of SREE department since 2018
- Chair session in various international conferences.

b. Development of New Programs

- PhD in Sustainable and Renewable Energy Engineering, ongoing.
- MSc in Sustainable and Renewable Energy Engineering, done.

- BSc Chemical and Water Desalination Engineering, done.
- BSc Food Process Engineering, ongoing.

c. Development of New Courses/Modules

- | | |
|--|--|
| ➤ Fuel Cells | ➤ Hybrid energy systems |
| ➤ Hydrogen production and storage | ➤ Energy policies and Economics |
| ➤ Biological Processes for Pollution Removal | ➤ Bioenergy technology |
| ➤ New and Renewable Energy course | ➤ District heating and space cooling systems |
| ➤ Chemical Thermodynamics of energy systems | ➤ Thermal Devices |
| ➤ Integration of renewables with electric grid | ➤ Advanced Water Treatment Lab |
| ➤ Fundamental of water treatment | ➤ Heat and mass Transfer Lab |
| ➤ Mass transfer | ➤ Membrane Desalination |
| | ➤ Water desalination lab |
| | ➤ Process control |

d. Professional Role as Team Member

- Member of the university committee for the student success, Sep 2023 to May 2024
- Member of Teaching and Learning Committee for sustainable and renewable energy engineering department, Sep. 2022 to May 2023, and Sep 2023 to May 2024.
- Member of research center “Renewable Energy Technologies Research Center”, Research Institute of Sciences and Engineering, University of Sharjah, United Arab Emirates. 2016 to date.
- Member of research center “Advanced Materials Research Center”, Research Institute of Sciences and Engineering, University of Sharjah, United Arab Emirates. 2019 to date.
- Member PhD Accreditation Committee for sustainable and renewable energy engineering department, from 2018 to date.
- Member of ABET accreditation of for sustainable and renewable energy engineering department
- Member of MOHESR accreditation of for sustainable and renewable energy engineering department.
- Member of Ad-Hoc committee for new program “Food Process Engineering”, from Sep 2018 to date.
- Judge of engineering design exhibitions
- Examiner for the senior design projects
- Member of Department promotion committee for sustainable and renewable energy engineering department, since 2016 to date.
- Member of the College committee for Senior design projects, Sep. 2021 to May 2022.
- Member of Committee for the Preparation of New Lab syllabus “Introduction to energy science”, Sep 2021 to May 2022.
- Member of the department committee for updating the undergraduate courses, 2022.
- Member of the College committee for graduate study, Sep. 2020 to May 2021.
- Member of the department research committee, Sep. 2020 to May 2021
- Member Ad-hoc College Committee for New Undergraduate Program of BSc in Chemical and Desalination Engineering, from 2018 to 2021.

- Member MSc Accreditation Committee for sustainable and renewable energy engineering department, Sep. 2018 to May 2020.
- Member of department executive community for sustainable and renewable energy engineering department, from Sep., 2018 to May 2019
- Member Departmental Strategic Planning Committee for sustainable and renewable energy engineering department, Sep. 2017 to May 2018.
- Member Department Graduate Program Development Committee for sustainable and renewable energy engineering department, Sep. 2017 to May 2018.
- Member of department community services committee for sustainable and renewable energy engineering department, from Sep., 2015 to May 2016, and Sep. 2016 to May 2017.
- Member Departmental Teaching and Learning Committee for sustainable and renewable energy engineering department

9. Supervision

a. Post-Doctorates

- Dr. Najrul Hussain, advanced material center 2018-2024
- Dr. Qaisar Abbas, Energy storage and management Research Group 2021- 2022
- Dr. Pragati Shinde, Energy storage and management Research Group 2021- 2022
- Dr. Montaser Mahmoud, Energy storage and management Research Group 2022- 2024
- Dr. Tamer Abdellatif , Energy storage and management Research Group 2023- 2024
- Dr Shamima Begum, Research Group 2022- 2024
- Dr Khalid Obaideen, Research Group 2020- 2022

b. Post-Graduate

PhD

- Halima Ali Alnaqbi "development of MOF based anode for direct ethanol fuel cells", American university of Sharjah, in progress.
- Ashraf Kamal Abdelaziz "New methods for preparing Aluminum oxide doped with zinc oxide for advanced applications" Minia university, ongoing.
- Hager Mohamad Mostafa " Development of Novel electrodes for capacitive water desalination electrodes" Minia University, Finished on 2019.

MSc

- Ohood Adhari "development of effective bio-based electrodes for hydrogen production through water electrolysis", university of Sharjah, ongoing
- Hamad Al Ali "Hydrogen production from waste Aluminum", University of Sharjah, ongoing.
- Mohamed Allam "development of efficient redox flow battery electrodes" University of Sharjah, finished 2023.
- Halima Ali Alnaqbi "Metal sulfide as an effective electrode for high energy density supercapacitor", American university of Sharjah, Finished 2021.
- Samar Ibrahim, "Silver doped TiO₂ for Simultaneous wastewater treatment and hydrogen production" Finished 2019

Curriculum Vitae

Mohammad Ali Abdelkareem

- Enas Fathi, “Novel nano-materials for catalytic hydrogen production” Minia University Finished 2017.
- Hager Mohamad Mostafa “ Design of electrochemical reactor based on nano-materials for wastewater treatment” Minia University, Finished on 2015.

c. International Internship Students

- Emma Keel, university of west Scotland, University of the West of Scotland, Glasgow, UK (2024)
- Abdelhakim Merdjani, Warsaw University of Technology, Poland, (2023)
- Domenico Monopoli , Polytechnic University of Bari, Bari, Italy (2022)

d. Researchers

Researchers (holder of MSc) under my supervision at university of Sharjah:

- | | |
|------------------------------|--------------------|
| ➤ Ayman Mdallal | ➤ Haya Aljaghoub |
| ➤ Siren Khury | ➤ Ahmad Yasin |
| ➤ Mohammad Ayoub | ➤ Mohamed A. Allam |
| ➤ Deepa Dileep | ➤ Aasim Ali |
| ➤ Halima Ali Alnaqbi | ➤ Rashid Al Rashid |
| ➤ Mohamad Al Murisi | ➤ Muaz AlRadi |
| ➤ Malek Kamal Hussien Rabaia | ➤ Shimama Begun |
| ➤ Maryam Almalahi | ➤ Amer Al-Dawoud |
| ➤ Mohamed Adil | ➤ Ahmad Bahaa |
| ➤ Tasnim Eisa | ➤ Shamma Alasad |

e. Undergraduate Projects

- Development of fiber based hydrogen storage tanks.
- Hydrogen Fuel Cell in Transportation
- Application of fuel cells in aviation
- Enhancement of the performance of microbial fuel cell
- Production of Effective Electrodes for Microbial Electrolysis Cells
- A direct Urea Fuel Cell - Power from waste
- Fuel Cell for Generating Energy from Renewable Resources
- Batteries developments for storing renewable energy
- Recent progress in battery recycling
- Photo-electrochemical hydrogen production
- Modeling of third generation solar cells
- Synthesis and Characterization of 2D Materials using Bipolar Electrochemistry for Energy Applications
- The design and testing of a solar-powered mini robot with a Ti-foam photoanode
- Bio-based photo catalysts

- Enhancement of the Performance of Microbial Fuel Cells Using Different Materials at the Anode
- Photo-assisted Fuels Cell
- Economic and Technological Aspects Of PV Recycling
- Solar Thermal AC Unit With Thermal Energy Storage
- Development of low cost electrodes for Dye-sensitized solar cell
- Non-Precious materials as counter electrode in DSSCs
- Capacitive deionization as effective tool for water desalination
- Water desalination using plasmonic membrane
- Bio-electrochemical system using nitrogen doped graphene oxide sponge
- Carbon fiber-based nanostructure for energy conversion and/or storage devices
- Solar Thermal AC Unit With Thermal Energy Storage
- Economic and Technological Aspects Of PV Recycling
- Carbon nanofiber as effective cathode in fuel cells
- Doped Graphene catalyst as effective ORR catalyst in fuel cells
-

10. Professional Services

a. Membership

- Institution of Chemical Engineers (IChemE), UK (Membership No: 200119963)
[IChemE](#)
- The Electrochemical Society (ECS ID: 405878)
[ECS membership](#)
- Midwest Renewable Energy Association (MREA), USA.
- World Society of Sustainable Energy Technologies, UK
- Association of Energy Engineers (AEE ID: 175023)
- Energy Institute (Membership No: 0085778)
- Emirati Society of GIS and Remote Sensing
- International Association of Carbon Capture
- Egyptian syndicate for Engineering

b. Editorial

- **Associate editor in Sustainable Horizons, Elsevier**
<https://www.sciencedirect.com/journal/sustainable-horizons/about/editorial-board>
- **Editor in Carbon Resources Conversion.**
<https://www.keaipublishing.com/en/journals/carbon-resources-conversion/editorial-board/>
- **Editor of one section in encyclopedia entitled: Comprehensive green materials (green chemicals and advanced materials), Elsevier**
<https://shop.elsevier.com/books/comprehensive-green-materials/olabi/978-0-443-15738-7>

- **Guest editor in sustainability**, Renewable and Sustainable Energy: Modeling, Control, Modern Optimization and Multi Criteria Decision Making.
https://www.mdpi.com/journal/sustainability/special_issues/renewable_energy_and_sustainable_energy
- **Guest editor in sustainability**, Advances in Zero Energy Buildings
https://www.mdpi.com/journal/sustainability/special_issues/5H5P2829U6
- **Guest editor in membranes**, Development of Novel Materials for Proton Exchange Membrane Fuel Cell
https://www.mdpi.com/journal/membranes/special_issues/materials_PEMFC
- **Guest editor in Discover sustainability, Springer**: Novel and Facile Material Synthesis Techniques for Sustainable Energy Applications
<https://link.springer.com/collections/jgacceeffb>
- **Guest Editor in International Journal of Energy research, Wiley**: Energy Management, Optimization, and Control of Smart Grids for a Sustainable Future
<https://onlinelibrary.wiley.com/doi/toc/10.1155/ijer.si.852205>

c. Invited Speaker

- Performing a workshop for the potential applicants in Khalifa Education Research Award, 21st September, Ajman training center, Sep 2024, UAE.
- Invited speaker “Role of sustainable energy and engineering in society” May 29th 2024, AL MADAM Area Municipality, Sharjah, UAE.
- Participate as a trainer “Renewable Energy & Energy Economy” in the Ministry of the education national ambassador program ESTEDAD, UAE, 2024.
- Keynote speaker, green hydrogen and fuel cells, sustainable energy and Power systems conference (SEPS 2023), Sharjah, UAE, Feb. 2023.
- Invited speaker, THE 6th INTERNATIONAL CONFERENCE ON ALTERNATIVE FUEL, ENERGY & ENVIRONMENT (ICAFEE 2023), Cobalt Nitride Nano-grass as an Effective Standalone Electrode for Urea Assisted Sea Water Electrolysis, 6-8 October 2023 in the Faculty of Engineering, Erciyes University, Kayseri, Türkiye.
- Keynote speaker, “Progress in green hydrogen production” 14th International Conference on Sustainable Energy & Environmental Protection SEEP2022 12th – 15th of September 2022 Brunel University London, UK.
- Keynote speaker, Advanced Materials for Energy Storage Applications, 7th International Conference on Materials Science & Smart Materials, 4-6 August 2021, Brunel University London, UK.
- Invited speaker in the innovation solar Park (DEWA) introducing two lectures (one in each) to connect the courses with the working environment, 2022, and 2023.
- Participate as trainer in the Ministry of the education national ambassador program ESTEDAD 2022.
- Present a lecture about Fuel cells in the Renewable energy Event held in Sharjah Science Museum UAE community, 2018.

d. External Examiner

- Adnan AlAshkar (PhD)-“ Advancements and Modification of 3rd Generation Solar Cells for Hydrogen Production” American University of Sharjah, UAE.
- Saeed Ali Sultan Abayed Al-Ali (PhD_Proposal)- “ECONOMIC STUDY OF LARGE-SCALE SOLAR PARK IN THE CONTEXT OF UAE: OPTIMIZATION OF ECONOMIC FACTORS OF UTILITY SCALE PV PROJECTS”. University of Sharjah, UAE.
- Shaima Ahmed (PhD_Proposal)- “Pre-feasibility study of a pumped hydro energy storage (PHS) for Khorfakkan city”. University of Sharjah, UAE.
- Anum Iqbal (PhD_Proposal)- “Advancements of MXene Based Nanocomposites as an Efficient Electrode Materials”. American University of Sharjah, UAE.
- Ranya Rashid Mohamed Jabir Al Salami (PhD_Proposal)-“ Study of Multi-criteria decision-making approaches for evaluating large scale energy storage systems for grid applications in the UAE and contributions toward United Nation Sustainable Development Goals”. University of Sharjah, UAE.
- Mohamed Alzarooni (PhD_Proposal)-“ IMPROVING THE ENERGY EFFICIENCY OF BUILDING UTILIZATION OF DAYLIGHT THROUGH SOLAR FILM SHEETS”. University of Sharjah, UAE.
- Sara M Asaad (MSc)-“Optimization of Biodiesel production from Waste Cooking Oil using Green catalyst”. University of Sharjah, UAE
- Mohamad Ayoub (MSc)-“ The Development of Bio-Based Oxygen Reduction Reaction Catalysts with Heteroatoms Doping and Transition Metal Loading”. University of Sharjah, UAE
- Yaser Suhail Yaser Al Swailmeen (MSc)- “Economic and Environmental Evaluation of Green Hydrogen Production with Transportation and Storage Methods” University of Sharjah, UAE
- Haya Rami Al Jaghoub (MSc)-“Predicting and Optimizing Energy Supply of Compressed Air Energy Storage Systems using Machine Learning”. University of Sharjah, UAE
- Mohamad Ghaith Mohd Tarik Alabsy (MSc)-“Component Selection and Economic Assessment of Compressed Air Energy Storage for Enhanced Energy Solutions. University of Sharjah, UAE.
- Fakhariya Hamid Ibrahim (MSc_Proposal)-“Evaluating Grid-Scale Energy Storage Systems Using Rough Weighted Aggregated Sum Product Assessment: A Life-Cycle Approach”. University of Sharjah, UAE.
- Said Abdelmonaam, Master of Science, Minia University, ElMinia, Egypt.
- Ahmad Maher AbdelBasir, PhD, Minia University, ElMinia, Egypt.
- Amira Mostaf Mohammad Amin, PhD, Minia University, ElMinia, Egypt.

e. Conference Organization

- International advisory committee of 16th International Conference on Sustainable Energy & Environmental Protection SEEP2024, September 9th to 12th 2024, BOKU university, Vienna
- Round table moderator in the Symposium and SEPS Industrial Meeting: Toward Serving the Community University of Sharjah, January 25, 2024
- Organizing and scientific committee of International Conference on Sustainable Energy & Power Systems (ICSEPS 2023), 13-16 March 2023, Sharjah, UAE

- Session Chair at International Conference on Sustainable Energy & Power Systems (ICSEPS 2023). 13-16 March 2023, Sharjah, UAE.
- Co-Chair of the Global Conference on Global Warming-2022 (GCGW-2022), University of Sharjah, Sharjah, United Arab Emirates, November 7-10, 2022.
- Session Technical chair at the Global Conference on Global Warming-2022 (GCGW-2022), University of Sharjah, Sharjah, United Arab Emirates, November 7-10, 2022.
- Organizing committee of Sharjah International Conference for Water, Energy and Climate Change 25-28 October 2021, Sharjah, UAE.
- Session Technical chair at 13th International Conference on Sustainable Energy & Environmental Protection SEEP2021, September 13th to 16th 2021, university of Natural Resources and life Sciences, Vienna.
- International advisory committee of 7th International Conference on Material Science & Smart Materials “MSSM 2021”, August 2021, London UK.
- Organizing committee of Sharjah international conference for sustainable energy for environmental protection (SEEP 12), 18-21 Nov. 2019, Sharjah, UAE.

11. Professional Development

a. Courses/Trainings/Workshops (Teaching)

- Workshop on “Student Advising at UoS: Status and Facts”. September 13th, 2023, University of Sharjah, Sharjah
- Workshop on “Why Open Educational Resources (OER) are Essential for Hybrid Learning”. 26 Aug, 2022, Online
- Workshop on “Designing Grading Rubrics Fair, Consistent, and Efficient”. 1 March 2022, University of Sharjah, Sharjah
- Workshop on “Hybrid Learning: Hands-on Training”. 31 Aug 2021, University of Sharjah, Sharjah
- Attended Training on “Create Interactive PowerPoint Presentation using NEARPOD”. 06 April 2021, University of Sharjah, Sharjah
- Workshop on “Addressing Student Anxiety in Academic Advising & Resilience During Times of Crisis”. 29 March 2021, University of Sharjah, Sharjah
- Workshop on “Use Technology to Advance a Teaching and Learning Approach for Advising”. 22 March 2021, University of Sharjah, Sharjah
- Workshop on “Using Zoom and MS Teams as a Second Camera for Invigilating Online Exams” 06 March 2021, University of Sharjah, Sharjah
- Workshop on “Holistic Advising & Why Should Academic Advisors Care About Students’ Sense of Belonging and inclusion”. 15 Feb 2021, University of Sharjah, Sharjah
- Workshop on “Strategies to Increase Student Engagement and Retention by Personalizing the Education Experience”. 15 March 2021, University of Sharjah, Sharjah
- Workshop on “Promoting Excellence in Academic Advising”. 23 Feb 2021, University of Sharjah, Sharjah
- Workshop on “Explore Respondus 4.0 Exam Generator”. 06 March 2021, University of Sharjah, Sharjah

- Workshop on “Administering and Troubleshooting Online Exams”. 30 Nov 2020, University of Sharjah, Sharjah
- Workshop on “Grade Centre and Online Class Attendance” July 2020, University of Sharjah, Sharjah
- Training on “Chemical Storage in Laboratories and Research Facilities” 28 May 2020, University of Sharjah, Sharjah
- Training workshop “How to prepare for program reaccreditation”. 20 Sep 2019, Sharjah, United Arab Emirates
- Training Workshop on Research-Based Course Design-Putting it all Together”. 18 Jan 2018, Sharjah, United Arab Emirates
- Training Workshop on “Course Design”. 02 February 2017, Sharjah, United Arab Emirates
- Training Workshop on “Designing an Instructional Plan Incorporating Research-Based Instructional Strategies”. 01 February 2017, Sharjah, United Arab Emirates
- Attending workshop “The credit hour system” (2017) Center of Human Resources Development, Beni-Suef University, Egypt.
- Attending workshop “Student evaluation and examination techniques” (2017) Center of Human Resources Development, Beni-Suef University, Egypt.
- Attending workshop “Designing an Instructional Plan Incorporating Research-Based Instructional Strategies”. (2016) Institute of Leadership in Higher Education, University of Sharjah.
- Attending workshop “Writing Effective Course Learning Outcomes”. (2016) Institute of Leadership in Higher Education, University of Sharjah.
- Attending workshop “Developing a Course Assessment Plan”. (2016) Institute of Leadership in Higher Education, University of Sharjah.
- Attending workshop “Course Design”. (2016) Institute of Leadership in Higher Education, University of Sharjah.

b. Courses/Trainings/Workshops (Research)

- Attended Workshop “Executive instructions and regulations related to the postgraduate: Master”, Sep., 14th 2024, University of Sharjah, Sharjah
- Attending Workshop “Patents and Technology Transfer”. March 7th, 2024, University of Sharjah, Sharjah
- Attended Workshop “Post-Award: Research Funding Opportunities-Grants and Guidelines”. 19th Feb., 2024, University of Sharjah, Sharjah.
- Attending Workshop “The Journey of Research between Efforts of the University and Community Partnerships”. Nov., 23rd, 2023, University of Sharjah, Sharjah
- Attended Workshop titled “Your guide to Scopus journals” April 25th 2022, at University of Sharjah, Sharjah.
- Attending Research Fair Talk: Link Your Thesis to Community Challenges, March 15, 2022, University of Sharjah, UAE.
- Attended Research café talk “ Work-Life Balance in Academia: Fact of Fiction” February, 21st, 2022, University of Sharjah, Sharjah

- Attending round table meeting “UoS Moving Forward in Graduate Studies Research with Impact on Community” December 22nd 2021, University of Sharjah, Sharjah
- Attended Workshop “Pre-Award: Research Funding Opportunities-Grants and Guidelines”. October 28th, 2021, University of Sharjah, Sharjah
- Attended Research café talk “ Leadership for the Greater Good” October, 17st, 2021, University of Sharjah, Sharjah
- Attending international workshop on Sustainable energy and power systems, October 10th., 2021, University of Sharjah, Sharjah
- Attended Workshop titled “Introduction to Open Access workshop at University of Sharjah”. 13 Jul 2021, University of Sharjah, Sharjah
- Attended Research café talk “ The Triple Helix Model for Innovation” 06 June, 2021, University of Sharjah, Sharjah
- Attended Workshop “Roadmap to impactful research”. 30 May 2021, University of Sharjah, Sharjah
- Attended workshop “How to Get Published in Impact Factor Journals” 26 April 2021, organized by Ministry of Education, UAE
- Attended workshop on “From University Research to Real World Impactful and Patentable Research”. 14 March 2021, University of Sharjah, Sharjah
- Attended workshop titled “Step-by-step Guide on How to Prepare a Successful Paper-United Arab Emirates.”. 22 Feb 2021, University of Sharjah, Sharjah
- Attend Workshop “Circular Economy”. 21 Feb 2021, University of Sharjah, Sharjah
- Attended workshop on “Academic Publishing & Enhancing Research Effectiveness” 24 Nov 2020, University of Sharjah, Sharjah
- Attended Workshop “Research at UoS: Opportunities, Grants, and Expectations”. 08 Nov., 2020, University of Sharjah, Sharjah.

c. Consultancy/ Expert Services

- Judge for European Projects, FWO-FRP-2024_Sci-Tech, 2024.
- Judge for Research projects, Qatar University, 2024.
- Judging - 11th Undergraduate Research & Innovation Competition - May 23, 2024, at Abu Dhabi University, Abu Dhabi, UAE.
- Evaluator of promotion file of associate professor in one of the Jordan universities, 2023.
- Judge for research proposal of Sultan Qabous University, Aug., 2019 and 2022.
- Evaluator of promotion file of associate professor in national university of science and technology (NUST) Pakistan, 2020.
- Judge of Emirates Young Scientific School held in Zayed educational zone in Sharjah Students in the schools Nov. 16, 2019.
- Judge for research proposal of King Fahd university of petroleum and minerals. King Fahd University of petroleum and minerals. Dec., 2019.
- Judge for KSA projects, King Fahd, university.
- Reviewer in large number of Q1 journals such as:

✓ Advanced Functional Materials	✓ Renewable and Sustainable Energy Reviews
✓ Desalination	✓ Journal of Cleaner production
✓ Power sources	✓ International Journal of hydrogen energy

Curriculum Vitae

Mohammad Ali Abdelkareem

- ✓ Materials chemistry A
- ✓ Applied Catalysis A
- ✓ Industrial and Engineering Chemistry
- ✓ Journal of electro-analytical Chemistry
- ✓ Chemical Physics Letters
- ✓ International Journal of Thermofluid
- ✓ Taiwan institute of chemical engineering
- ✓ Chemical Engineering Journal
- ✓ Material letters
- ✓ Energy Technology
- ✓ Energy Conversion and Management
- ✓ Energy
- ✓ Carbon resources and conversion
- ✓ Thermal Science and Engineering Progress

d. Professional Tools for Teaching

- Blackboard
- Kahoot
- Turnitin
- LabView
- Taskstream
- Safe Assign
- iThenticate
- Respondus

12. Patents

1. Integrated thermal management system with a symmetrical supercapacitor cell, Abdul Ghani Olabi, Mohammad Ali Abdelkareem, Qaisar Abbas, Ahmed Al Makky, **US11978590**, 2024.
2. Nitridation-induced in situ coupling of Ni-CON particles in nitrogen-doped carbon nanosheets for hybrid supercapacitors, Abdul Ghani Olabi, Mohammad Ali Abdelkareem, Pragati Ankush Shinde, Nilesh R. Chodanka, **US11996238**, 2024.
3. All transition metal selenide composed high-energy solid-state hybrid supercapacitor, Abdul Ghani Olabi, Mohammad Ali Abdelkareem, Pragati Ankush Shinde, Nilesh R. Chodanka, **US11600453**, 2023.

13. Research

Please check:

Google scholar

https://scholar.google.com/citations?hl=en&user=ofm3-WoAAAAJ&view_op=list_works&sortby=pubdate

And Scopus:

<https://www.scopus.com/authid/detail.uri?authorId=13404514900>