Ali Ghezi

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SUMMARY

A results-oriented Business Development Specialist at IPEK Group and R&D Specialist at TARAVAFA Company with a Master's in Chemical Engineering and MBA. Experienced in leading complex projects, conducting innovative research in energy storage systems, membrane processes, and simulation modeling. Skilled in project management, process optimization and cross-functional team leadership with a strong technical foundation in chemical engineering and a strategic approach to business management. Committed to applying my academic and professional experience to drive impactful, sustainable solutions in the energy and technology sectors.

RESEARCH INTERESTS

- Lithium-Ion Batteries and Fuel Cells
- Project Management
- Membrane and Membrane Processes
- Modeling and Simulation

EDUCATION

MBA In University of Tehran (UT) — **Iran**
Master of Business Administration (MBA) — **Feb 2024 – Present**
- Project Management

M.Sc. In University of Tehran (UT) — **Iran**
Chemical Engineering – Separation Process — **Sep 2022 – Sep 2024**
- Thesis: Investigating the Effect of Operating Parameters on the Performance and Durability of Proton Exchange Polymer Membranes in Fuel Cells (PEMFC) using Molecular Dynamics Simulation
- Cumulative GPA: 17.37/20

B.Sc. In Shahid Chamran University of Ahvaz (SCU) — **Iran**
Chemical Engineering — **Sep 2018 – Sep 2022**
- Thesis: Innovative Conductive Ink Development using Graphene Foam (3D)
- Cumulative GPA: 16.50/20

WORK EXPERIENCE

Business Development Specialist — **Iran**
IPEK Group — **March 2025 – Present**
- Business Development Department
- Project Management of Flare Gas Recovery Projects

Assistant Project Manager — **Iran**
MAPNA Group - MAPNA Thermal Power Plants Development Company (MD2) — **March 2024 – Feb 2025**
- Business Development Department
- Research and Development (R&D) of Water Industry

Research and Development (R&D) Specialist — **Iran**
Tarava Farayand Afraz (TARAVAFA) Company — **Jun 2023 – Present**
- Manufacturer of Membrane Filters and Laboratory Filtration Equipment

Project Manager **Iran**
National Elite Foundation **Sep 2022 – Present**
- Led industrial projects by elite students at National Elite Foundation competitions

Teacher Assistant **Iran**
University of Tehran **Sep 2022 – Oct 2024**
- Kinetic and Reactor Design, Unit Operations and Thermodynamics Courses

Intern **Iran**
National Iranian South Oil Company (NISOC) **Jun 2022 – Sep 2022**
- Marun Oil and Gas Producing Company (M.O.G.P.C)

Teacher Assistant **Iran**
Shahid Chamran University of Ahvaz **Sep 2020 – Sep 2022**
- First Course Name: “Thermodynamics 1 & 2”
- Secretary of Scientific Associations of the Faculty of Engineering at SCU

Office Manager **Iran**
Students Competencies Development (SCD) **Sep 2019 – Sep 2021**
- Skills Empowerment of Students and University Graduates with Employment Approach.

Academic Adviser **Iran**
Kanoon Farhangi Amoozesh Ghalamchi **Mar 2018 – Mar 2019**
- Teaching Courses, Planning and Preparing Students for the Bachelor's Entrance Exam of the Country's Universities.

PUBLICATION

- Ghahramani, M., Gorji, P., **Ghezi, A.**, Karimi, M., Maghsoudi, R., & Jamalpour, S.. Conducting Polymer Nanocomposites for Lithium-Ion Batteries: Fabrication, Characterizations, and Electrochemical Performance. Nanostructured Materials for Energy Storage, 2, 675-722. **2024**

- Maghsoudi, R., **Ghezi, A.**, Jamalpour, S., Tamsilian, Y., Tohidian, M., & Shahebrahimi, Y. Advantages, Limitations, and Industrial Applications of Lithium-Ion Batteries. Nanostructured Materials for Energy Storage, 2, 793-820. **2024**

- Razani, M., Ghahramani, M., Karimi, M., & **Ghezi, A**. Hexagonal boron nitride in catalytic and photocatalytic applications. In Hexagonal Boron Nitride (pp. 431-455). Elsevier. **2024**

- **Ali Ghezi**, Jamalpour S, Exploring the Potential of Metal-Organic Frameworks for High-Performance Lithium-Ion Batteries, **2023**

- **Ali Ghezi**, Maghsoudi R, Keynejad K, Azizpour H, Nasrollahi Z, Recent Advances in Metal-based Nanomaterials for Battery Applications **2023**

- **Ali Ghezi**, Maghsoudi R, Ghahremani M, Investigation the Role of Conductive Polymers in Progress of Lithium-Ion Battery Technology **2023**

- Mahdi Tohidian, Kashani H, Tamsilian Y, Jamalpour S, Abbasi Ghareh Tapeh E and **Ghezi A**, Understanding Polymer Electrolytes in: James C. Taylor (Editor), Advances in Chemistry Research. Volume 70, Nova (2021). **2021**

PROJECTS

- **Feasibility Study** and Design of a one-watt **Hydrogen Fuel Cell**
- Investigating the Effect of Operating Parameters on the Performance and Durability of Proton Exchanger Polymer Membranes (**PEMs**) in **Fuel Cells** (FCs) Using **Molecular Dynamics** (MDs) Simulation
- Design and Fabrication of Primary **Lithium-Air** Coin Cell **Battery**
- Evaluation of the Behavior of **Thermal Interface Materials** (TIM's) in the Design and Manufacture of **Lithium-ion Batter**y (LIB) Packs
- Identifying and determining the amount of heavy metals in the water balance of commercial ships in Bandar Imam and providing up-to-date management solutions and reducing emission risks in the Musa estuary, **National Elite Foundation**.
- Simulation of **Crude Tower**, **Natural Gas Sweetening** and **Dehydration** in **Aspen Hysys**.
- Modeling of Shell and Tube Heat Exchanger in **Aspen EDR** (Exchanger Design and Rating).
- Simulation of **Batteries** and **Fuel Cells** in **Comsol Multiphysics** software.
- Modelinng Heat Transfer in **Porous Media** with **COMSOL Multiphysics** software.
- Modeling **Electrochemical systems** using **COMSOL Multiphysics** software**.**
- Programming a series of continuous stirred tank reactors (CSTR) in non-isothermal mode using **MATLAB** Software.
- Calculation of thermal efficiency and mass flow inlet to turbine for water vapor power cycle with two power supplies using **EES** and **CyclePad** Softwares.
- Calculating the Effect of changes in the amount of air on the adiabatic flame temperature of fuels with **EES** software.
- Execution **Flash Calculations in Excel Software**,Thermodynamics, Dr. Y. Tamsilian.
- Execution **Flash Calculations in MATLAB Software**, Unit Operations, Dr. M. Moradi.
- Specify The Number of Steps Required for Separation in The **Distillation Tower (MCCABE** and **PANCHON SAVARIT Method**) Using **Excel** and **MATLAB** Software, Unit Operations, Dr. M. Moradi.
- Calculate The **Head Drop in The Pipeline** Between Two Different Levels Using Excel Software, Fluid Mechanics, Dr. M. M. Rabieh.

HONORS & AWARDS

- **First Place** in the Feasibility Study and Design of One-Watt Hydrogen **Fuel Cell** Project by the **National Elite Foundation**
- **Third Place** in the Design of Primary **Lithium-Air** Coin Cell **Battery** Project by the **National Elite Foundation**
- **3rd Place** in the Design category of the **National Elite Foundation** competition for the Primary **Lithium-Air** Coin Cell **Battery** project.
- **Second Place** in the Evaluation of the Behavior of **Thermal Interface Materials** (TIM's) in the Design and Manufacture of **Lithium-ion Batter**y (LIB) Packs Project by the **National Elite Foundation**
- **Awarded Full Scholarship** to Study at the University of Tehran for the Master Program.
- **Awarded Full Scholarship** to Study at the Shahid Chamran University of Ahvaz for the Undergraduate Program.
- **TOP Ranking** among all students of chemical engineering, BSc. Program, Shahid Chamran University of Ahvaz, GPA: 16.50/20.
- Passed the **1**st step of **Chemical Engineering Scientific Olympiad**.

- **Ranked 2th** in the National Competition of 3D Nanostructures.
- **Ranked 2th** in the National Competition of scanning probe microscopes (SPM).
- **Ranked 29th** among more than 3000 participants in the **National Nanotechnology Competition**.
- **1st** Rank among High-school Students of Mathematics & Physics Group (GPA: 17.23 out of 20).

SKILLS

Programming language

- MATLAB
- Python

Chemical Engineering Software's

- Aspen Hysys
- Aspen EDR
- COMSOl Multiphysics
- AutoCAD
- AutoCAD P&ID
- Polymath
- Engineering Equation Solver (EES)
- CyclePad
- CATT3
- ChemDraw

Documentation Software:

- Microsoft Office (Word, Excel, Power Point, Visio)
- Microsoft Project (MSP) and Primavera (P6)
- EndNote

LANGUAGE SKILLS

- Persian (mother tongue)
- English (Professional working proficiency)
- Arabic (Native)
- Germany (Studied up to the Level A1)

LEADERSHIP EXPERIENCE

- **Project Manager** of **National Elite Foundation**: Strategic Leadership and Project Execution.
- Secretary of the Second National **Engineer Festival**
- Secretary of Scientific **Associations of Faculty of Engineering** in SCU
- Secretary of Scientific **Association of Chemical Engineering** in SCU

Courses

- Practical Application of **Generative AI** for **Project Managers** Course
- **Generative AI** Overview for **Project Managers** Course
- **Professional Project Management (PMP)** Course
- **Professional Project Planning and Control Management** Course
- **Project Cost Management** Course
- **Aspen Hysys, Aspen Plus** and **COMSOl Multiphysics** Course
- Simulation Course of **Batteries** and **Fuel Cells** in **COMSOL Multiphysics** software
- **Python** and **MATLAB** Course
- Training of designing **Chemical Reactors** with **MATLAB**
- **PFD and P&ID** Course
- **AutoCAD 2D and 3D** and **AutoCAD P&ID** Course
- Familiarity with different types of **industrial Valves** Course
- Introduction to Applied Concepts of **HSE**

- **EES Software** project-oriented training and how to call **EES** software from **MATLAB**
- Teaching numerical calculations in chemical engineering with **Polymath software**
- **Lithium-ion battery** training
- Multi-dimensional drawing of chemical structure with **ChemOffice**
- **ICDL** Course

References

Hedayat Azizpour, Assistant Professor
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