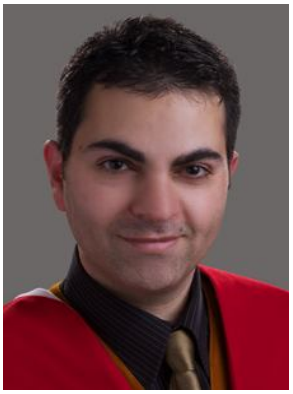
CURRICULUM VITAE

HATEM M. ALSYOURI, PH.D.

ASSISTANT PROFESSOR
CHEMICAL ENGINEERING DEPARTMENT
UNIVERSITY OF JORDAN
AMMAN 11942, JORDAN

DOB: MARCH 1, 1975
WORK: 962-6-535 5000- EXT. 22884
MOBILE: 962-79-989 9199
EMAIL: alsyouri@ju.edu.jo
WEBSITE: www.hatem-alsyouri.com



QUALIFICATION HIGHLIGHTS

- **Background:** Ph.D. in Chemical Engineering and MBA in Quality Management.
- **Objective:** interested in exploiting the academic chemical engineering experience and MBA knowledge jointly to create value adding activities.
- **Results-oriented** professional skilled in R&D, designing experiments, delivering solutions to problems efficiently. Strong aptitude for numbers and details.
- **Experienced** in nanoporous materials, inorganic membranes, gas separation/diffusion, and interested in coatings, H_2 energy production and utilization, desalination, and drug delivery in nano-particles
- **Leadership**, problem solving, administrative, organizational, interpersonal, multi-tasking, strategic planning, needs assessment, staff training, supervision and mentoring and oral/written communication skills.
- **Proactive,** highly ambitious, motivated and critical thinker with a superior work ethics.
- **Characterization instruments** experience: BET, TGA, FTIR, SEM, XRD, XRF, PLM and gas permeation.
- **Bilingual** in Arabic and English.
- **Proficient** in MS Office Suite, PowerPoint, statistical analysis, computer applications.

EDUCATION

1. **B.Sc., Chemical Engineering** 1998
   University of Jordan, Amman, Jordan, (GPA: 3.72).

2. **Ph.D., Chemical Engineering** 2004
   University of Cincinnati, Cincinnati, Ohio, USA, (GPA: 3.82).
   Thesis: "Synthesis of ordered mesoporous silica and alumina with controlled macroscopic morphologies", Supervisor: *Prof. Jerry Y.S. Lin*.

3. **Master of Business Administration (MBA), Quality Management** 2010
   Talal Abu Ghazaleh College of Business, German Jordanian University, Amman, Jordan, (GPA: 89.5%)

EMPLOYMENT

Sep 2008- Present	**Assistant Professor,** Chemical Engineering Department, University of Jordan, Amman, Jordan. Responsibilities include: 1. Teaching undergraduate-level chemical engineering courses. 2. Teaching masters level courses. 3. Supervising undergraduate design projects. 4. Supervising M.Sc. students and theses. 5. Conducting research activities and supervise undergraduate and M.Sc. graduate research projects. 6. Examining M.Sc. theses. 7. Writing proposals to acquire research funds. 8. Participating in committees for academic and community services. 9. Accreditation of new programs. 10. Reviewing manuscripts (J. of Membrane Science) and reports 11. Provide external training courses and consultations.
2006 – Sep 2008 **(~ 2.5 years)**	**Researcher and Deputy Director**, Industrial Chemistry Center, Royal Scientific Society, Amman, Jordan. Responsibilities: 1. Managed operations, logistics, staffing, work scheduling, resource capacity and accreditation of service laboratories. 2. Service costing, planning, and monitoring budgets. 3. Strategic and business planning 4. Marketing activities and new developments; established new communication channels with local and international organizations and industries. 5. Provided specialized technical training courses, e.g., X-Ray techniques; XRD and XRF. 6. Developed new tests (Identification of Asbestos in sample using XRD) that generated new line of revenue. 7. Supervised R&D projects: development of nano-paints, solar coatings, natural clays and pharmaceutical products. 8. Acquired funding through writing research proposals. 9. Published finding and participate in conferences.
2005 – 2006 **(1 year)**	**Postdoctoral Fellow,** Chemical Biomelcular Engineering, Georgia Institute of Technology, Atlanta, Georgia, USA. Supervisor: ***Prof. Ronald W. Rousseau***. Project: Separation of aqueous complex sodium salt mixtures from complex low/medium curie waste by fractional crystallization.

ACADEMICS

A. MASTER THESES SUPERVISED

1. *Nahil Khouri*, "Comparing the Membrane Distillation Desalination Performance of the Novel Hydrophobic / Hydrophilic Membranes to the Commercial Membranes" Co-supervised with Dr. Mohammad R. Qtaishat (Chem Eng, UJ) April *2012*

2. *Suhaib Dweiri,* "Studying the Galvanic Corrosion Behaviour of Pd-Cu in diluted hydrochloric acid at Various Operating Conditions", Co-supervised with Dr. Farqad Saeed (Chem. Eng., RSS) Expected: Oct. *2013*

3. *Baraa Matalqa*, "Evaluation of Controlled Drug Delivery of Highly Water Soluble Drugs in Ordered Mesoporous Silica Fibers", Co-supervised with Dr. Hatim Al-Khatib (Pharmacy, UJ) Expected: Oct. *2013*

B. COURSES TAUGHT

B.Sc.-Level	M.Sc.-Level
1. Mass Transfer Operations	1. Transport Phenomena
2. Heat and Mass Transfer Operations	2. Advanced Mass Transfer
3. Modeling by Statistics for engineering	
4. Fluid Mechanics	
5. Local Industries	
6. Principles of Safety	
7. Unit Operations Lab	
8. Engineering Economy	
9. Risk Assessment and Management	
10. Research Methodology	

C. UNDERGRADUATE PROJECTS SUPERVISED

1. Production of Aspirin
2. Ethanol production from municipal waste
3. Separation of air using cryogenic process
4. Extraction of Ag from spent X-Ray sheets
5. Production of bio-diesel from spent edible oil
6. Extraction of precious metals from electronic waste
7. Electrochemical production of hydrogen from water
8. Recycling of spent engine oils

D. MBA COURSES TAKEN

Business Statistics	Operations Management	Financial Accounting
Strategic Management	Supply Chain Management	Managerial& Cost Accounting
Organizational Behavior	Quality Assurance	Managerial Economics
Communication Skills	Quality Tools & Techniques	Marketing Management
Corporate Finance	Total Quality Management	

RESEARCH VISITS AND TRAINING

A. RESEARCH VISITS

1. DFG fellowship, Technical University of Munich (TUM), Munich, Germany "Diffusion in ordered mesoporous silica" Johannes A. Lercher Group, **June – Sep. 2009.**
2. SRTD EU, Technical University of Munich (TUM), Munich, Germany, "Synthesis of mineral- based membranes" Johannes A. Lercher Group, **Sep. 2010**.
3. DFG fellowship, Technical University of Munich (TUM), Munich, Germany, "Magnetic preparation of ordered mesoporous materials" Johannes A. Lercher Group, **June – Sep.2011.**
4. IMACS - Erasmus Mundus scholarship, Technical University of Crete (Greece) and University of Aveiro (Potrugal), "Zeolite and Kaolin based geopolymers for membrane coating and water desalination", **June - September, 2013**.

B. TAINTING RECEIVED

1. **Drafting Patent Claims**, WIPO – Jordan Innovation Center, Jordan, 2008.
2. **Project Management using MS Project**, RSS, Jordan, 2008.
3. **Innovate or Die: Systematic Innovation for Business,** Queen Rania Center for Entrepreneurship, Amman, Jordan, 2007.
4. **Integrity of Industrial Materials**, Pakistan Material Research Society, Islamabad, Pakistan, 2007.
5. **OHSASA Appreciation and Interpretation**, Lloyd's Register Quality Assurance, Amman, Jordan, 2006.
6. **Leadership**, RSS, Jordan, 2006
7. **Technologies of Water Treatment**, Jordanian Engineers Association, Amman, Jordan, 2008.

C. TRAINING PROVIDED

1. **XRD and XRF Instrumental Analysis,** 3-day training course for RSS clients, Jordan on analysis of samples using X-Ray diffraction and Fluorescence techniques, 2008.
2. **Physical and Chemical Properties of Petroleum Hydrocarbon Compounds,** a 5-day training course on the main constituents of crude oil and major petroleum products including the physical, chemical and equilibrium properties as well as safe storage practices, March 2012.

RESEARCH EXPERIENCE & INTERESTS

- **Inorganic Membranes**
  Synthesis and testing and multi-types of inorganic membranes including: ceramic, metallic and zeolitic membranes using different methods: sol-gel, dip coating, sputtering deposition, CVD, self assembly, and geo-ploymer based membranes

- **Hydrogen Production, Separation and Storage**
  Electrochemical production, purification of H2 by metallic membranes as a source of energy in fuel cells (see www.future-hydrogen.com)

- **Preparation and Diffusion in Mesoporous Materials**
  Morphology, functionalization, diffusion mechanisms, drug delivery

- **Water Desalination**
  Development of microporous zeolite membranes from synthetic and natural resources as a supporting technique for water desalination

- **Fuel Cells (interest)**
  Developing fuel cells for generation of electricity from H_2 gas.

INSTRUMENTAL SKILLS

- Sorption porosimetry
- TGA
- FTIR
- SEM
- TEM
- XRD
- XRF
- Polarized light microscopy
- Gas diffusion and permeation
- Permporometry (pore size distribution analysis)
- Water desalination

GRANTED RESEARCH PROJECTS

1. European program for supporting research in Jordan (SRTD), Jordan, "Synthesis of Advanced Microporous and Mesoporous Inorganic Membranes". Role: Principal Investigator. Budget: JD 15,000, Duration: 2009-2010 (Completed).

2. Scientific Research Fund, Ministry of Higher Education, Jordan, "Using electrochemical reaction engineering, biotechnology and solar cell technology to produce Hydrogen and desalinate sea water". Role: Co-investigator. Principal investigator: Dr. Farqad Said (Royal Scientific Society). Budget: JD 100,000. Duration: 2009 – July 2011 ***(Completed)***.

3. King Abdullah II fund for Development (KAFD) and King Abdullah II Design & Development Bureau (KADDB), Jordan, *"Recycling of Jordanian Electronic Waste for Recovery of Precious Metals- Phase I"*. Undergraduate project.

   Role: Principal Investigator. Budget: JD 12,000. Duration: 2010- 2011. ***(Completed)***

4. Scientific Research Fund, Ministry of Higher Education, Jordan, "Sol-Gel Synthesis of Water Desalination Inorganic Membranes from Natural Clays".

   JD 72,000, May 2011 – May 2013. Role: Co-investigator. Principal investigator: Dr. Malyuba Abu Daabes (Chemical & Pharmaceutical Eng., German Jordanian University). Budget: JD 75,000, Duration: 6/2010-6/2012 ***(Ongoing)***.

5. USAid, "Storing Hydrogen as a Source of Energy Using Nanograde Materials" Role: Co-investigator. Principal investigator: Dr. Farqad Said (Royal Scientific Society). Budget: JD 115,000. Duration: 6/2011 – 6/ 2013 ***(Ongoing)***.

6. King Abdullah II fund for Development (KAFD) and King Abdullah II Design & Development Bureau (KADDB), Jordan, *"Recycling of Jordanian Electronic Waste for Recovery of Precious Metals- Phase II"*. Undergraduate project.

   Role: Principal Investigator. Budget: JD 5,000. Duration: Jan – Oct 2012 ***(Completed)***.

7. King Abdullah II fund for Development (KAFD) and King Abdullah II Design & Development Bureau (KADDB), Jordan, *"*Fabrication and permeation characterization of ceramic membrane supports" Undergraduate project. Role: Principal Investigator. Budget: JD 5,000. Duration: Jan – Oct 2012 ***(Completed)***.

8. King Abdullah II fund for Development (KAFD) and King Abdullah II Design & Development Bureau (KADDB), Jordan, *"*Restoration and automation of an obsolete distillation system" Undergraduate project. Role: Principal Investigator. Budget: JD 7,200. Duration: March 2013 – March 2014 ***(ongoing)***.

PUBLICATIONS

1. Y.S. Lin, I. Kumakiri, B. N. Nair, H. Alsyouri, "Microporous Inorganic Membranes", ***Separation and Purification Methods***, 31 pp. 229-379, **2002**.
2. Z. Ye, H. Alsyouri, S. Zhu, and Y.S. Lin, "Catalyst Impregnation and Ethylene Polymerization with Mesoporous Particle Supported Ni-Dimine Catalysts", ***Polymer***, 44, pp. 969-980, **2003**.
3. H. Alsyouri and Y.S. Lin, "Effects of Synthesis Conditions on Macroscopic Microscopic Properties of Ordered Mesoporous Silica Fibers", ***Chemistry of Materials***, 15 (10), pp 2033-2039, **2003**.
4. H. Alsyouri, C. Langheinrich, Y.S. Lin, S. Zhu, and Z. Ye "Cyclic CVD Modification of Straight Pore Alumina Membranes," ***Langmuir***, 19 (18), pp. 7307-7314, **2003**.
5. Z. Ye, S. Zhu, W.J. Wang, H. Alsyouri, and Y.S. Lin, "Morphological and Mechanical Properties of Nascent Polyethylene Fibers Produced via Ethylene Extrusion Polymerization with a Metallocene Catalyst Supported on MCM-41 Particles," ***J. Polymer Science Part B: Polymer Physics***, 41 (20), pp. 2433-2443, **2003**.
6. H. Alsyouri, Y.S. Lin, "Diffusion and Microstructural Properties of Ordered Mesoporous Silica Fibers," ***J. Physical Chemistry B.***, 109, pp. 13623-13629, **2005**.
7. H. Alsyouri, D. Li, Y.S. Lin, Z. Ye, S. Zhu, "Counter Diffusion Self Assembly Synthesis of Nanostructured Silica Membranes," ***J. Membrane Science***. 282, pp. 266-275, **2006**.
8. A.M. Awwad, H. Alsyouri, K. A. Jbara, "Viscosities and Densities of (N-Acetylmorpholine + Alkanols) at 293.15–323.15 K", ***J. Chem. Eng. Data***, 53 (7), pp. 1655-1659. **2008**.
9. A.M. Awwad, H. Alsyouri, M. Abu Daabes, K. A. Jbara, "Densities and Volumetric Properties of (N-(2-hydroxyethyl)morpholine + Ethanol, + 1-Propanol, +2-Propanol, +1-butanol, and +2-butanol) at 293,15 – 323.15) K", ***J. Chem. Thermodynamics***., 40, pp. 592-598, **2008**.
10. G. Dumont, L. Nassif, H. Alsyouri, R.W. Rousseau, "Pretreatment of Hanford Medium-Curie Wastes by Fractional Crystallization", ***Environmental Science & Technology***, 42 (13) pp. 4940-49445, **2008**.
11. S.K. Seshadri, H. Alsyouri, Y.S. Lin, "Counter diffusion self assembly synthesis of ordered mesoporous silica membranes in straight pore supports", ***Microporous and Mesoporous Materials***, 129 (1-2) pp. 228-237, **2010**.
12. H. Alsyouri, O.C. Gobin, Andreas Jentys, J.A. Lercher, "Diffusion in circularly ordered mesoporous silica fibers", ***J. Phys. Chemistry C***, 115 (17) pp. 8602-8612, **2011**.
13. M. A. Abu Daabes, H. Abu Qdais, H. Alsyouri, "Assessment of heavy metals and organicsin municipal solid waste leachates from landfills with different ages in Jordan", ***J. Env. Protection***, 4 (4) 344-352, **2013**.
14. F. Saeed, H. Alsyouri, A. Al-Ghandoor, Y. Al-Husban, A. Abdelhadi, Sarah Al- Weissi, "Developing an Integrated Solar Powered System to Generate Hydrogen from Sea Water", ***Int. J. Electrochem. Sci.***, 8, 6311 – 6320, **2013**.
15. S.K. Seshadri, H. Alsyouri, Y.S. Lin, "Ordered Mesoporous Silica Fibers: Effects of Synthesis Conditions on Fiber Morphology and Length", ***J. Mater. Sci.,*** accepted, **2013.**
16. H. Alsyouri, M. Abu Daabes, A. Alassali, Y. S. Lin, "Ordered Mesoporous Silica Prepared by Quiescent Interfacial Growth Method – Effects of Reaction Chemistry", to be submitted to ***Phys. Chem. Chem. Phys.***

PATENTS

1. M. Awwad, H. Alsyouri, R. Ahmad, "A process for production of red iron oxide pigment", Jordan Ministry of Industry and Trade patent, Acceptance No. 2484, **2008**.

PRESENTATIONS

1. H. Alsyouri & Y.S. Lin, "Study of Synthesis Factors Affecting Macroscopic Properties of Mesoporous Silica Fibers," presentation at the **12th annual Graduate Symposium** at the University of Cincinnati, Cincinnati, USA, September, **2001**.

2. H. Alsyouri, C. Langheinrich, and Y.S. Lin, "Microstructural Properties of CVD-Modified Anopore Membranes," poster presentation at the **12th annual Graduate Symposium**, September, **2001**.

3. H. Alsyouri, C. Langheinrich, and Y.S. Lin, "Cyclic CVD Modification of Straight Pore Alumina Membranes," presentation to the 12th annual North American Membrane Society (**NAMS-12**), Lexington, KY, May, **2001**.

4. H. Alsyouri & Y.S. Lin, "Mesoporous Silica Fibers: Synthesis, Microscopic & Macroscopic Properties, and Mechanism of Formation," presentation at the **AIChE** 2002 annual meeting, Indianapolis, IN, November, **2002**.

5. H. Alsyouri and Y.S. Lin, "Preparation of Supported Ordered Silica Films by Counter Diffusion of Precursors through Alumina Supports," presentation to the 13th annual North American Membrane Society (**NAMS-13**), Long Beach, CA, May, **2002**.

6. H. Alsyouri & Y.S. Lin, "Gas Diffusion Kinetics and Microstructural Properties of Ordered Mesoporous Silica Fibers," presentation at the AIChE 2003 annual meeting, San Francisco, CA, November, **2003**.

7. H. Alsyouri and Y.S. Lin, "Counter Diffusion Self Assembly of Nanostructured Silica Membranes," presentation at the 8th International Conference on Inorganic Membranes (**ICIM-8**), Cincinnati, OH, July **2004**.

8. G. Dumont, L. Nassif, H. Alsyouri, and R.W. Rousseau, "Fractional Crystallization of Sodium Salts from Low- and Medium-Curie Wastes," presented at the **AIChE** 2006 annual meeting, San Francisco, CA, USA, November, **2006**.

9. S. Sishadri**,** H. Alsyouri and Y.S. Lin, "Counter Diffusion Self Assembly of Mesoporous Silica Membranes," presentation at the 15th International Zeolite Conference, (**IZC-15**), Beijing, China, August **2007**.

10. H. Alsyouri, "Nanotechnology: Concepts and Selected application", An invited presentation to Jordanian Engineers Association, Jordan, April 2010.

11. H. Alsyouri, O.C. Gobin, Andreas Jentys, J.A. Lercher, Diffusion in circularly ordered mesoporous silica fibers, Submitted for presentation at the Membranes: Materials and Processes Gordon Research Conference, USA, June **2010**.

12. H. Alsyouri, "Mesoporous silica membranes with porous structures", 2nd International Chemical Engineering Conference, Jordan, October **2010**.

13. H. Alsyouri, Ayoup Ghrair, Malyuba Abu Daabes, "Preparation of Economic and Robust Macroporous Membranes From Natural Kaolin Clays", to be presented at the **AIChE** annual meeting, San Francisco, CA, USA, November, **2013**.

AWARDS

1. First Place in Student Paper Contest, 8th International Conference on Inorganic Membranes (ICIM-8), Cincinnati, OH, USA, **2004**.
2. Outstanding Graduate Research Award, University of Cincinnati, USA, **2004**.
3. Research Summer Fellowship, University of Cincinnati, USA, **2004**.
4. Distinguished undergraduate project supervisor, King Abdullah II fund for Development (KAFD), Amman-Jordan, **2013.**

SKILLS

- Fluent in Arabic and English.
- Excellent communication skills
- Statistical analysis, graphic presentations and tabulations
- Strategic planning, project development/implementation, design of experiments, needs assessment, staff training, supervision and mentoring, leadership, and technical skills.
- MS Office Word, Excel, Power points, Project Management, and Mathematica softwares

PROFESSIONAL MEMBERSHIP

- Jordan Engineers Association, Jordan
- American Institute for Chemical Engineers (AIChE), USA

REFERENCES

- **JERRY Y. S. LIN,** PROFESSOR OF CHEMICAL ENGINEERING
  - ARIZONA STATE UNIVERSITY, TEMPE, ARIZONA, USA
  - PHONE: 001-480-965-7769 EMAIL: jerry.lin@asu.edu
  - WEBPAGE: http://www.public.asu.edu/~jylin1/index.html

- **RONALD W. ROUSSEAU,** PROFESSOR OF CHEMICAL ENGINEERING
  - GEORGIA INSTITUTE OF TECHNOLOGY, ATLANTA, GEORGIA, USA
  - PHONE: 001-404-894-2867 EMAIL: rwr@chbe.gatech.edu

- **RAFAT AHMAD,** Ph.D. CHEMISTRY
  - ROYAL SCIENTIFIC SOCIETY, AMMAN, JORDAN
  - PHONE: 00962-6-534 4701 EMAIL: rafata@rss.gov.jo

UPDATED JUNE, 2013