

CURRICULUM VITAE

HATEM M. ALSYOURI, PH.D.

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

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

QUALIFICATION HIGHLIGHTS

- **Background:** Ph.D. in Chemical Engineering and MBA in Quality Management.
- **Results-oriented** research professional skilled in nanoporous materials, inorganic membranes, gas separation, and coatings with experience on multiple characterization instruments.
- **Interested** in the emerging benefits from engineering and MBA to generate innovative and differentiated business opportunities.
- **Proactive**, highly ambitious, motivated and critical thinker with a superior work ethic. Skilled in delivering solutions to common problems using low-cost, state-of-the-art techniques. Strong aptitude for numbers and detail.
- **Exceptional** leadership, problem solving, administrative, organizational, interpersonal, multi-tasking, and oral/written communication skills.
- **Bilingual** in Arabic and English.
- **Proficient** in Microsoft Windows, MS Office Suite, Powerpoint, and Mathematica computer applications.

EDUCATION

1. **MBA** in Quality Management (GPA: 90.8%) June 2009
College of Business, German Jordanian University, Amman, Jordan
2. **Ph.D.** in Chemical Engineering (GPA: 3.82) 2004
University of Cincinnati, Cincinnati, Ohio, USA.
Thesis: "Synthesis of ordered mesoporous silica and alumina with controlled macroscopic morphologies", Supervisor: Prof. Jerry Y.S. Lin.
3. **B.Sc.** in Chemical Engineering (GPA: 3.72) 1998
University of Jordan, Amman, Jordan.

RESEARCH EXPERIENCE & INTERESTS

1. Inorganic Membranes and Thin Films

Variety of pore size and pore structured composite membranes for gas separation / purification and water desalination applications employing sol-gel, solution growth, dip coating, compaction, self assembly, sputtering deposition, and chemical vapor deposition (CVD).

2. Nanostructured Materials

Synthesis of ordered mesoporous products and study of their morphologies, surface functionalization and diffusion characteristics.

3. Paints and Coatings

Evaluation of nano-particles, chemical additives, and natural alternatives to enhance the physical properties, optical performance, and biological resistance of paints and surface coating products.

4. Instrumental Skills

Sorption porosimetry, TGA, FTIR, SEM, XRD, XRF, Polarized light microscopy, Gas permeation & Permporometry.

PROFESSIONAL EXPERIENCE

Sep 2008- Present	Assistant Professor, Faculty member at the Chemical Engineering Department, University of Jordan, Amman, Jordan
Feb 2008 – Sep 2008	Deputy Director, Industrial Chemistry Center, Royal Scientific Society, Amman, Jordan. <u>Responsibilities include:</u> <ul style="list-style-type: none">• Manage operations, logistics, staffing, work scheduling, resource capacity and accreditation of service laboratories.• Service costing, planning, and monitoring budgets.• Strategic and business planning• Marketing activities and new developments.• Establish new communication channels with local and international organizations and industries.
2007 – Sep 2008	Lecturer in Instrumental Analysis, Chemical and Pharmaceutical Engineering, German Jordanian University, Amman, Jordan.
2006 – Sep 2008	Researcher, Industrial Chemistry Center, Royal Scientific Society, Amman, Jordan. <u>Responsibilities include:</u> <ul style="list-style-type: none">• Establish new tests• Provide specialized technical training courses, e.g., X-Ray techniques.• Supervise R&D projects: development of nano-paints, solar coatings, natural clays and pharmaceutical products.• Acquire funding through writing research proposals.• Publish finding and participate in conferences.

2005 – 2006	Postdoctoral Fellow, Chemical Biomolecular Engineering, Georgia Institute of Technology, Atlanta, Georgia, USA. <u>Supervisor:</u> Prof. Ronald W. Rousseau. <u>Project:</u> Separation of aqueous complex sodium salt mixtures by fractional crystallization.
1999 – 2004	Graduate Student / Teaching assistant / Lab manager, Chemical Engineering Department, University of Cincinnati, Cincinnati, Ohio, USA. <u>Responsibilities:</u> <ul style="list-style-type: none"> • Installed, configured, calibrated and maintained research laboratory equipment including ovens, furnaces, softwares and controllers. Manage logistics for six laboratories, waste disposal and safety compliance. • Taught an undergraduate unit operations laboratory course, and tutored students in mass transfer, heat transfer, chemical engineering reactions and other coursework. Taught classes of up to 25 students.
12/1998 – 7/1999	Sales & Maintenance Engineer (Water treatment units), Aljubail Water Engineering, Amman, Jordan.
6/1998 – 12/1998	Research Assistant (development of demulsifier for separation of water and salts from crude oil), Nur Chemicals & Engineering Industries, Amman, Jordan.
6/1997 – 9/1997	Visiting Student / Research assistant (Effect of re-dox status of glass melts on structure and workability), Department of Chemical Engineering, Bergakademie-Freiberg University-, Freiberg – Germany.

TRAINING

Nov 2008	Drafting Patent Claims , WIPO – Jordan Innovation Center, Royal Scientific Society, Amman. Jordan.
July 2008	Project Management using MS Project 2007 , Information Technology Center, Royal Scientific Society, Amman. Jordan.
June 2007	Innovate or Die: Systematic Innovation for Business , Queen Rania Center for Entrepreneurship, Amman, Jordan.
May 2007	Integrity of Industrial Materials , Pakistan Material Research Society, Islamabad, Pakistan.
June 2006	Innovation: from Conception to Commercialization , Talal Abu-Ghazaleh Group, Amman, Jordan.
May 2006	OHSASA Appreciation and Interpretation , Lloyd's Register Quality Assurance, Amman, Jordan.
March 2006	Leadership , Royal Scientific Society, Amman, Jordan.
August 1998	Technologies of Water Treatment , Jordanian Engineers Association, Amman, Jordan.

AWARDS

- 2004** First Place in Student Paper Contest, 8th International Conference on Inorganic Membranes (ICIM-8), Cincinnati, OH, USA.
- 2004** Outstanding Graduate Research Award, University of Cincinnati, USA.
- 2004** Research Summer Fellowship, University of Cincinnati, USA.

PROFESSIONAL MEMBERSHIP & PERSONAL SKILLS

American Institute for Chemical Engineers (AIChE), USA

North American Membrane Society (NAMS), USA

Jordan Engineers Association, Jordan

Fluent in Arabic and English.

Computer Applications: MS Office Suite, Minitab, SPC & Mathematica.

RESEARCH PROJECTS & PROPOSALS

1. US-Aid SABEQ Program, Amman–Jordan, "**Development of Low-Cost Selective Nano-Coatings for Solar Collector**", Principal Investigator, JD34,000 (approved).
2. German Jordanian University, Amman–Jordan, "**Radioactivity intake through smoking**", Co-Investigator, JD15,000 (approved).
3. Higher Council for Science & Technology, Amman–Jordan, "**Cost-Effective Emulsion Nano-Paints with Enhanced Properties**", Principal Investigator, 2008-2009, JD15,000 (funded).
4. Royal Scientific Society, Amman–Jordan, "**Structural and Chemical Properties of Jordanian Natural Kaolin**", Principal Investigator, 2007-2008, JD5,000 (funded).
5. Higher Council for Science & Technology, "**Sol-Gel Synthesis of Low-Cost Water Desalination Inorganic Membranes from Natural Clays**", Principal Investigator, JD60,000 (pending).
6. German Jordanian University, Amman–Jordan, "**Synthesis of Novel Enantioselective Chiral Biocatalytic Nanoreactors**", Co-Investigator, JD20,000 (pending).
7. Ministry of Higher Education, Amman–Jordan, "**Embedding and Filling of Nano Magnetic Particles into Nano-Structured Mesoporous Silica and Study of their Magnetic, Electric and Magneto-Optical Properties**", Co-Investigator, JD139,000 (pending).

PATENTS

A. 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**.

PUBLICATIONS

1. G. Dumont, L. Nassif, **H. Alsyouri**, R.W. Rousseau, "Pretreatment of Hanford Medium-Curie Wastes by Fractional Crystallization", *Environ. Sci. Technol.*, **2008**, 42 (13) pp. 4940-49445.
2. 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**.
3. 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**,
4. **H. Alsyouri**, D. Li, Y.S. Lin, Z. Ye, S. Zhu, "Counter Diffusion Self Assembly Synthesis of Nanostructured Silica Membranes," *J. Membr. Sci.*, 282, pp. 266-275, **2006**.
5. **H. Alsyouri**, Y.S. Lin, "Diffusion and Microstructural Properties of Ordered Mesoporous Silica Fibers," *J. Phys. Chem. B.*, 109, pp. 13623-13629, **2005**.
6. 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 Sci. Part B: Polymer Physics*, 41 (20), pp. 2433-2443, **2003**.
7. **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**.
8. **H. Alsyouri** and Y.S. Lin, "Effects of Synthesis Conditions on Macroscopic Microscopic Properties of Ordered Mesoporous Silica Fibers," *Chem. Mater.*, 15 (10), pp 2033-2039, **2003**.
9. 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**.
10. Y.S. Lin, I. Kumakiri, B. N. Nair, **H. Alsyouri**, "Microporous Inorganic Membranes", *Separation and Purification Methods*, 31 pp. 229-379, **2002**.

PRESENTATIONS

1. 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**.

2. 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**.
3. **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**.
4. **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**.
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, "Mesoporous Silica Fibers: Synthesis, Microscopic & Macroscopic Properties, and Mechanism of Formation," presentation at the **AICHE** 2002 annual meeting, Indianapolis, IN, November, **2002**.
7. **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**.
8. **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**.
9. **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**.

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
- ◆ **AKL M. AWWAD**, PROFESSOR OF CHEMISTRY
ROYAL SCIENTIFIC SOCIETY, AMMAN, JORDAN
PHONE: 00962-6-534 4701- Ext. 2511 EMAIL: aklm@rss.gov.jo

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