

## Personal Information

**Name:** Behruz  
**Family Name:** Bayati  
**Birth Date:** September 23, 1979  
**Status:** Iranian Citizen  
**Address:** Sahand University of Technology  
  
**Tel:** +98 9183409766, 08425225781  
**Fax:** +98 412 3224950  
**Email:** [b\\_bayati@sut.ac.ir](mailto:b_bayati@sut.ac.ir), [behruz5878@gmail.com](mailto:behruz5878@gmail.com)  
**Languages:** Persian and English



## Education

### 2008-present Ph.D. Student

**Faculty of Chemical Engineering, Sahand University of Technology (SUT) ,Tabriz, IRAN**

**Ph.D thesis:** "*Preparation, Characterization and Performance Evaluation of Membrane Reactors in Normal Pentane Isomerization Using Nanostructure Catalytic MFI Zeolite Membrane*"

### 2004-2007 M.Sc. Student

**Faculty of Chemical Engineering, Sahand University of Technology (SUT) ,Tabriz, IRAN**

#### M.Sc. thesis:

*"Nonlinear Hydrocarbons Separation Using Novel Nanofiltration Membrane Technology for Improvement of Gasoline Octane Number"*

This research was run under the supervision of Dr. A. A. Babaluo in the faculty of chemical engineering at Sahand University of Technology in Tabriz, IRAN.

### 2000-2003 B.Sc, Chemical Engineering Department, Azad University, Arak, Iran.

#### B.Sc.project:

*"Simulation of Ethanol Amines Unite using HYSYS Process Simulation "*

## Skills

**Language** Persian (mother tongue)  
English (good)

**Computer skills** Windows/DOS  
Process simulation (HYSYS)  
Calculation (EXCEL, MATLAB, BASIC)  
Image Analysis Software

**Lab equipment skills** UV-vis spectroscopy  
GC, GC-Mass

**Experimental works** -Manufacturing of Nanostructure NaA ,CaA,sodalite and Silicalite-1 zeolite Membranes and Investigating of Their Applications in gas separation.  
-Evaluation Performance of the Membrane Nanofiltration Technology in Separation of

n-C5 and iso-C5 and Purification of Hydrogen Related to the Ordinary Separation Methods.

- Manufacturing of tublar and disk type  $\alpha$ -Alumina supports via gel-casting.
- Manufacturing and characteriation palladium nanocomposite membranes.
- Synthesis of A-type, Silicalite-1 and ZSM-5 zeolite seeds.

## Research experience

Collaborated with Tabriz refinery project on: Study on manufacture of nanostructure inorganic membranes and their application in nanofiltration processes.

## Publication

### Journal papers

1. H. Mohammad Nezami, A. A. Babaluo, **B. Bayati**, "Modified Solution Approach in Modeling of Separation of Gaseous Hydrocarbons using Nanostructure MFI Zeolite Membranes with M-S Formulation and DSL and IAST, *Chemical Product and Process Modeling Assumptions*, **Volume 6, Issue 1, 2011**
2. **B. Bayati**, A.A. Babaluo, P. Ahmadian Namini, "Synthesis of Sodalite Membranes and Seeding Time Effect on Their Inter-crystalline Structures", *Iranian Journal of Chemistry and Chemical Engineering*, **Volume 28, Number 4, 2009.**
3. **B. Bayati**, A.A. Babaluo, R. Karimi, "Hydrothermal synthesis of nanostructure NaA zeolite: synthesis parameters effects on zeolite seeds size and crystallinity", *Journal of the European ceramic society*, **Volume 28, Issue 14, October 2008, Pages 2653-2657.**
4. **B. Bayati**, A.A. Babaluo, P. Ahmadian Namini, "Synthesis and seeding time effect on the performance of nanostructure sodalite membrane", *Iranian Journal of Chemical Engineering*, **Volume 4, Number 1, Winter 2007.**
5. P. Ahmadian Namini, A.A. Babaluo, **B. Bayati**, "Palladium nanoparticles synthesis using polymeric matrix: poly(ethyleneglycol) molecular weight and palladium concentration effects", *International Journal of Nanoscience and Nanotechnology*, December 2007.
6. A. Razmjoo, A.A. Babaluo, **B. Bayati**, Asymptotic Analysis of Binary Gas Mixture Separation by Nanometric Tubular Ceramic Membranes: Cocurrent and Countercurrent Flow Patterns, *Iranian Journal of Chemical Engineering*, **Volume 3, Number 3, 2006.**

### Conference papers

1. **B. Bayati**, A.A. Babaluo, R. Karimi, "Effective parameters investigation on crystallinity and seeds size of nanostructure NaA zeolite", British Zeolite Association, FIRST CIRCULAR, 30th Annual Meeting, 26th – 28th March 2007, University of York, United King.
2. **B. Bayati**, A.A. Babaluo, P. Ahmadian Namini, "Seeding time effect on the performance of nanostructure sodalite membranes synthesized via secondary growth method" 4th International Zeolite Membrane meeting, July 22nd – 27th 2007, University of Zaragoza, Spanish, Accepted.
3. **B. Bayati**, A. A. Babaluo, "Manufacturing Porous Supports of Ceramic Membranes and debinding behavior in Gel-Casting Method", 11th National Iranian Chemical Engineering Congress, November 28-30, 2006, Chemical Engineering Department, Tarbiatmodares University, Tehran, Iran.
4. **B. Bayati**, A.A. Babaluo, R. Karimi, "Synthesis and Performance Evaluation of Nanostructure Sodalite Membranes", The first International congress of Nanotechnology and its application in Petroleum, Gas and petrochemical Industries, PUT& RIPI, March 2007.

5. R. Karimi, A.A. Babaluo, **B. Bayati**, "Synthesis of nanostructure ZSM-5 zeolite for gas separation membrane processes", The first International congress of Nanotechnology and its application in Petroleum, Gas and petrochemical Industries, PUT& RIPI, March 2007.
6. A. Razmjoo, A.A. Babaluo, **B. Bayati**, "A Simple Method for Analyzing of Binary Gas Mixture Separation by Nanometric Tubular Ceramic Membranes", 10th National Iranian Chemical Engineering Congress, November 15-17, 2005, Chemical Engineering Department, Sistan and Balochestan University, Zahedan, Iran.
7. **B. Bayati**, A.A. Babaluo, U. Jafarzadeh, F. Moghadam, "Nanostructure Zeolite Membrane performance in Linear and Nonlinear Hydrocarbons Separation Using Adsorption and Diffusion Theoretic models", 6th National chemical Engineering student congress, 30 August- 1 September 2006, Esfahan University, Iran.
8. P. Ahmadian Namini, A. A. Babaluo, **B. Bayati**, "Surface modification of alumina porous support systems via dip-coating of alumina submicron and nano powders", International conference on Nano Science and Technology (ICN+T2007), July, 2-6, 2007, Stockholm, Sweden, Accepted.
9. P. Ahmadian Namini, A.A. Babaluo and **B. Bayati**, Preparation of nano-structured membrane support system by multi-coating, Nano Network young members, September 20th, 2007, Greece (Presented).
10. **B. Bayati**, A. A. Babaluo, R. Karimi, M. Tahmasebpour, "Synthesis and Performance of Tubular NaA zeolite-Composite membrane", The 5th International Chemical Engineering Congress, ICHEC 2008 (Presented).
11. M. Tahmasebpour, A. A. Babaluo, P. Ahmadian Namini, **B. Bayati**, "Synthesis of Metal Oxide Nanopowder via Polyacrylamide Gel Method: Influence of Precursors", The 5th International Chemical Engineering Congress, ICHEC 2008 (Presented).
12. R. Karimi, A. A. Babaluo, M. Peyravi, **B. Bayati**, "Studies on the ZSM-5 Zeolite Synthesis Using Chelating Agent: Influence of Crystallization Temperature and Time", The 5th International Chemical Engineering Congress, ICHEC 2008 (Presented).
13. **B. Bayati**, A. A. Babaluo, N. Kalantari, A. Kazemzadeh, "Synthesis and Performance of Tubular MFI membrane, first Iranian International Zeolite Conference 2008, (Presented)
14. N. Kalantari, A. A. Babaluo, A. Kazemzadeh, **B. Bayati**, A. Aghaenejad, Study on the synthesis methods of sodalite membranes and their performance on the gas separation processes, first Iranian International Zeolite Conference 2008, (Presented)
15. A. Kazemzadeh, A. A. Babaluo, N. Kalantari, **B. Bayati**, M. Maleki, Performance evaluation of MFI zeolite membranes for hydrocarbons separation, first Iranian International Zeolite Conference 2008, (Presented)
16. N. Kalantari, A. A. Babaluo, **B. Bayati**, A. Kazemzadeh, "Synthesis and evaluated performance of sodalite membrane in hydrogen purification", The 12<sup>th</sup> Iranian Chemical Engineering Congress, 20-23 October 2008-Tabriz-Iran.
17. N. Kalantari, A. A. Babaluo, A. Kazemzadeh, **B. Bayati**, "Hydrothermal synthesis of sodalite powder and membrane", The 12<sup>th</sup> Iranian Chemical Engineering Congress, 20-23 October 2008-Tabriz-Iran.
18. A. Kazemzadeh, A. A. Babaluo, N. Kalantari, **B. Bayati**, "Synthesis of MFI zeolite powders", The 12<sup>th</sup> Iranian Chemical Engineering Congress, 20-23

October 2008-Tabriz-Iran.

## PATENT

1. A.A. Babaluo, **B. Bayati**, M. Payravi "Manufacture of Nanostructure Ceramic Membrane Supports by Using Nanocomposite", PATENT No. 41201, 2007, (*with Scientific Certificate*).
2. **A. A. Babaluo**, B. Bayati, M. Maleki Kaklar, "Design and Manufacturing of Single Tube Membrane Module for Ceramic Membranes", PATENT No. 58787, 2009.
3. A.A. Babaluo, A. Kazemzade, **B. Bayati**, N. Kalantari, "Synthesis of MFI Zeolite Membranes with TPAOH template for Separation of Linear from Nonlinear Hydrocarbons", PATENT, No. 59358, 2009.
4. A.A. Babaluo, A. Kazemzade, **B. Bayati**, N. Kalantari, "Synthesis of MFI Zeolite Membranes with TPABr template for Separation of Nonlinear from Linear Hydrocarbons", PATENT, No. 59356, 2009.
5. A.A. Babaluo, N. Kalantari, **B. Bayati**, A. Kazemzade, "Manufacturing of sodalite zeolite membrane for Hydrogen purification", PATENT, No. 59357, 2009.

## Book

Engineering Mathematical

## ARIMI

- Unit Operation II (B.Sc.)
- Mass Transfer (B.Sc.)
- Fluid Mechanic I (B.Sc.)
- Engineering Mathematical (B.Sc.)
- Application of Mathematic in Chemical Engineering (B.Sc.)
- Chemistry (B.Sc.)
- Introduce to Chemical Engineering (B.Sc.)
- Petrochemical Process

## References

Dr. Ali Akbar Babaluo  
associate Professor of Chemical Engineering  
Sahand University of Technology  
Email: a.babaluo@sut.ac.ir

Dr. Mohammad Haghighi  
Assistance Professor of Chemical Engineering Faculty  
Sahand University of Technology  
Email: haghighi@sut.ac.ir