

## Personal

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Faculty of Petroleum and Petrochemical engineering

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## Academic qualifications

**Ph.D.** Chemical Engineering, Babol Noshirvani University of Technology, Babol, Iran (2014).

**M.Sc.** Chemical Engineering, Mazandaran University, Babol, Iran (2009).

**B.Sc.** Chemical Engineering, Semnan University, Semnan, Iran (2006).

## Other qualifications

The certificate of attending the training **workshop** under the titles of:

- Clean energy workshop 2011. Towards a zero emission and carbon free future. Biotechnology Research Center of Babol noshirvani University of technology.
- Membrane technology workshop 2010. Advance membrane technology and application. International Affairs and scientific cooperation of Babol noshirvani University of technology.
- Industrial enzyme technology workshop 2011. International Affairs and scientific cooperation of Babol noshirvani University of technology.
- Heavy oil upgrading technology workshop 2011. International Affairs and scientific cooperation of Babol noshirvani University of technology.

## Professional Experiences

- Membership of Editorial Board of Journal of Forest product and Industries since August 2012.

## Honors

- Membership in the Organization of Guiding the Brilliant Intellects at Babol Noshirvani University of Technology, Babol, Iran.
- Recognized as a top Ph.D student (Thesis mark 20/20)

## Publications

### Book

G.D. Najafpour, H.D. Heydarzadeh, Heat Transfer (in Persian).

Publishers: Babol Noshirvani University of Technology, Babol, Iran .2012, 270 pages, ISBN: 978-600-5795-43-1, hard Cover.

## Patents

- **H.D. Heydarzadeh**, G.D. Najafpour, S.L. Gilani and H. Zare, “synthesis of soluble carboxymethyl cellulose powder from waste cotton fibers” (2011). Invention registration No. : 004651.
- H. Zare, G.D. Najafpour and **H.D. Heydarzadeh**, “Fabrication of bio-filter by Pseudomonas putida immobilized on walnut shell to removal of volatile organic compound” (2011). Invention registration No. :004650.

## Research plan

- Production of carboxymethyl cellulose from waste cotton fibers at mild condition. Basij organization of science, research and technology (2011).
- Design and construction of Methane-capture anaerobic stirred tank bioreactor of livestock manure, Hakim Sabzevari University, (2020).

## International Papers

- 1- M. H.Jannat Abadi, S.M.M.Nouri, R.Zhiani, **H.D.Heydarzadeh**, A.Motavalizadehkakhky. "Removal of tetracycline from aqueous solution using Fe-doped zeolite. International Journal of Industrial Chemistry. 10:291–300 (2019)
- 2- **H.D. Heydarzadeh**, S. Gilani, M. Farrokhi, S. M. M. Nouri, G. Karimi. "Textural and Structural Characterizations of Mesoporous Chitosan Beads for Immobilization of Alpha-Amylase: Diffusivity and Sustainability of Biocatalyst. International Journal of Engineering. 32(2): 207-216 (2019).
- 3- S.L. Gilani, **H.D. Heydarzadeh**, G.D. Najafpour, A. Moghadamnia, "Enantioselective Synthesis of (S)-Naproxen using Immobilized Lipase on Chitosan Beads. Chirality, 29: 304–314 (2017).
- 4- M. Farrokhi, **H.D. Heydarzadeh**, S.M.M. Nouri, "CO<sub>2</sub> Removal by Ca-Based Sorbents in a Packed Bed Reactor: Kinetic Study and Aspen Plus Simulation; Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. 9 (39): 867–873(2017).
- 5- **H.D. Heydarzadeh**, G.D. Najafpour, A.A. Ghoreishi, H. Younesi; "Bioremediation of Hydrogen Sulfide from Gas Stream in Continuous Culture with Cell Recycle; Romanian Biotechnological Letters, 22( 2): 12391-12399 (2017).
- 6- H. Zare, **H.D. Heydarzadeh**, M. Rahimnejad, M. Seyfi, S. M. Peyghambarzadeh, A. Tardast, Dried activated sludge as an appropriate biosorbent for removal of copper (II) ions. Arabian Journal of Chemistry 8 (6): 858-864 (2015).
- 7- **H.D. Heydarzadeh**, G.D. Najafpour, A.A. Ghoreishi, H. Younesi; " Elimination of Hydrogen Sulfide from Sour Gas in CSTR Bioreactor using Native Isolated Strain of Sulfur Oxidizing Bacteria; Pakistan Journal of Biotechnology 11(2):65-77 (2015).
- 8- **H.D. Heydarzadeh**, G.D. Najafpour, A.A. Ghoreishi, H. Younesi; "Biodesulfurization of Sour Gas by Isolated Mixotrophic Anaerobic Bacteria in Batch Culture; Advances in Environmental Biology 8(13) 765-773 (2014).
- 9- **H.D. Heydarzadeh**, S.L. Gilani, G.D. Najafpour, Synthesis, Characterization and Physical Properties of a Novel Xanthan Gum/Polypyrrole Nanocomposite. Synthetic metals, 162, 171– 175 (2012).
- 10- **H.D. Heydarzadeh**, S.L. Gilani, G.D. Najafpour, Fabrication and characterization of Polyaniline/Xanthan gum composite: conductivity and thermal properties. Synthetic metals, 162 236– 239 (2012).
- 11- **H.D. Heydarzadeh**, S.L. Gilani, N. Mokhtarian , M. Kolaei And M.L. Gilani, Removal of Cadmium from Aqueous Solution with Carboxymethyl Cellulose Hydro-gel: Adsorption Conditions and Affecting Factor, Asian Journal of Chemistry, 24, 2721-2723 ( 2012) .
- 12- **H.D. Heydarzadeh**, S.L. Gilani, N. Mokhtarian, A. Alemian, Production and characterization of Xanthan Gum with *Xanthomonas Campestris* from Palm Syrup, Asian Journal of Chemistry, 24, 3181-3183(2012).
- 13- H. Zare, G.D. Najafpour, **H.D. Heydarzadeh**, M. Rahimnejad, A. Tardast, Performance and kinetic evaluation of ethyl acetate biodegradation in a biofilter using *Pseudomonas putida*. Iranica Journal of Energy & Environment, (3)14-18 (2012).
- 14- A. Alemian , G.D. Najafpour, M. Khavarpour, A. A. Ghoreyshi, **H.D. Heydarzadeh**, Anaerobic Oxidation of Hydrogen Sulfide in Batch Bioreactor Using Micro Organism Isolated from Ramsar Hot Spring. Iranica Journal of Energy & Environment 3 (2): 118-122 (2012).

- 15- S.L. Gilani, G.D. Najafpour, **H.D. Heydarzadeh**, H. Zare ,Kinetic Models For Xanthan Gum Production Using Xanthomonas Campestris From Molasses, Chemical Industry And Chemical Engineering Quarterly (CI&CEQ) 2, 523-540 (2011).
- 16- A.A. Nazarimoghadam, G.D. Najafpour, M. Mohammadi and **H.D. Heydarzadeh**, Removal of Methylen Blue from Waste Stream by Fly Ash-clay-sand Adsorbent, World Applied Sciences Journal 6, 1073-1077 (2009).
- 17- **H.D. Heydarzadeh**, G. D. Najafpour and A.A. Nazarimoghadam, Catalyst-Free Conversion of Alkali Cellulose to Fine Carboxymethyl Cellulose at Mild Conditions, World Applied Sciences Journal 6 564-569 (2009).
- 18- H. zare, G.D. Najafpour, A.A Ghoreyshi, M. Rahimnejad, and **H.D. Heydarzadeh**, Removal of ethyl acetate from the contaminated air stream in a biofilter with the active biofilm of *Pseudomonas putida*, World Applied Sciences Journal 7, 132-139 (2009).

### International conferences

- 19- **H.D. Heydarzadeh**, G.D. Najafpour, A.A. Ghoreishi, H. Younesi; Hydrogen Sulfide Elimination From Natural Gas By Native Isolated Bacteria From Hot-Spring, 9<sup>th</sup> International conference Eco-Tech 2014.
- 20- **H. D. Heydarzadeh**, G. D. Najafpour, S. L. Gilani, H. Zare. Removal of lead from waste water by using produced Carboxymethyl Cellulose hydrogel: Effect of pH and degree of substitution of carboxyl group. International Conference on Environment, Green technology 2010.
- 21- S. L. Gilani, G. D. Najafpour, **H. D. Heydarzadeh**, H. Zare. Studying the effect of various types of sugars as the carbon sources on xanthan gum production by Xanthomonas campestris. International Conference on Environment, Green technology 2010.
- 22- M. Rahimnejad, G. D. Najafpour, A.A Ghoreyshi, M. Gafari, F. Haghparast, H. Zare, **H. D. Heydarzadeh**, Activated sludge as biocatalyst in microbial fuel cell. 19<sup>th</sup> international congress of chemical and process engineering, Prague, caech republic 2010.
- 23- **H. D. Heydarzadeh** , G. D. Najafpour , S. L. Gilani , A. Tardast, H. Zare, Removal Of Lead From Wastewater Using Synthesized Xanthan Gum Hydrogel: Effect Of pH And Temperature, International Conference On Water And Wastewater 2011.
- 24- H. Zare, R. Katal, G. D. Najafpour, S. L. Gilani, **H. D. Heydarzadeh**, M. Rahimnejad, Removal Of Zinc From Wastewater Using Dried Activated Sludge. International Conference On Water And Wastewater 2011.

### National conferences

- 25- S. L. Gilani, **H. D. Heydarzadeh** , G. D. Najafpour, , H. Zare, A. Tardast. Investigation the effect of temperature and detention time in removal of arsenic from wastewater using coated straw by carboxymethyl cellulose. The 5<sup>th</sup> National conference on world environment day (2011).

۲۶- حسین زارع، قاسم نجف پور، **حمید حیدرزاده درزی**، مصطفی رحیم نژاد، اسماعیل کریمی نژاد. حذف بیولوژیکی اتیل استات از فاضلاب توسط باکتری سودوموناس پوتیدا در شرایط ناپیوسته و ارائه مدل بیوسینتتیک، چهارمین کنفرانس ملی روز جهانی محیط زیست (۱۳۸۹).

۲۷- حشمت قلی نیا آهنگر، **حمید حیدرزاده درزی**، مرتضی حسینی، حسن امینی راد. بررسی تاثیر ولتاژ و دما بر جداسازی تولون از پساب حاوی آن توسط میدان الکتریکی غیر یکنواخت. پنجمین کنفرانس ملی روز جهانی محیط زیست (۱۳۹۰).

### Teaching experiences

- **Biomaterials** (M.Sc.), Hakim Sabzevari University, Sabzevar, Iran.
- **Tissue Engineering** (M.Sc.), Hakim Sabzevari University, Sabzevar, Iran.
- **Transport phenomena** (M.Sc.), Mazandaran University of science and technology, Behshahr. Iran.
- **Advanced Bioreactor Design** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran.
- **Advanced Thermodynamic** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran.
- **Industrial Microbiology** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran
- **Bioseparation** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran.

- **Biochemistry & Biotechnology** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran
- **Enzyme technology** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran.
- **Technical Research** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran.
- **Fluids mechanic** (B.Sc.), Mazandaran University, Babolsar, Iran.
- **Multi component separation** (B.Sc.), Mazandaran University, Babolsar, Iran
- **Petrochemical processes design**
  - \* (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
  - \* (B.Sc.), Hakim Sabzevari University, Sabzevar, Iran.
- **Chemical engineering Software, MATLAB** (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
- **Process control** (B.Sc), Hakim Sabzevari University, Sabzevar, Iran.
- **Engineering mathematics** (B.Sc.), Hakim Sabzevari University, Sabzevar, Iran.
- **Chemical reactor designs** (B.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran