Personal

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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, A.Motavalizadehkakhky, **H.D.Heydarzadeh**. "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, "CO2 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, 9th 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. 19th international congress of chemical and process engineering, progue, 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 5th 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 بیوسینتیکی، 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 تولوئن 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