



Mehdi Khatamifar (MSc.)

Position

- Officer in charge- Biomass Office- Renewable Energy Organization of Iran (SUNA)
- Leader- Bio/reactor Group- Biofuel Research Team (BRT), Agricultural Biotechnology Research Institute of Iran (ABRII). Karaj, Iran

Address

No. 30- 2nd Floor- Block No. 4- Alhadi Alley- Soltan Mohammadi St.- Azizi Blvd. Azadi Sq.- Tehran, Iran
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Date of Birth

20.09.1981 in Mianeh, Iran

Research Interests

- Combustion and Internal combustion engines
- mechanical design of machine elements and machines solutions
- Biodiesel production technologies
- Biodiesel applications and diesel engines
- Bio-ethanol production and dehydration
- Bio-ethanol applications and engine
- Advanced reactor technologies

Education

Profession:

- **M.Sc.** Mechanics of Agricultural Machinery Engineering
Department: Agricultural Engineering
Tarbiat Modarres University (TMU), Tehran, Iran
Fall 2003 - 2006
Thesis title: Design, manufacture and evaluation of a biodiesel processor
GPA: 17.3/20
- **B.Sc.** Agricultural Machinery Engineering
Department: Agricultural Engineering
Urmia University, Urmia, Iran
Fall 2000 - fall 2003
GPA: 16.3/20



Language:

- **English:** Fluent
- **Turkish:** Native
- **Farsi:** Native

Related Backgrounds

- Theoretical acquaintance with Neural Networks and Genetic Algorithms.
- Extensive Experience in project management with application packages such as:
 - Mathematics Softwares: Matlab.
 - Mechanical engineering: ANSYS, Solidworks, CATIA.
 - Programming: Visual Studio (Visual Basic).

Specific Qualifications

- Experienced in computer design of machine parts
- Experienced in conducting standard engine tests.
- Experienced in conducting standard tests (ASTM) of fuels, grease and glue.
- Experienced in conducting standard tests (ASTM) of rubber, plastics and painted metals.
- Experienced in designing and fabricating advanced reactors.
- Experience in municipal waste management.
- Experienced in GC and working in chemical labs.
- Familiar with biomass digestion reactors and technologies.
- Familiar with GC and working in chemical labs.
- Familiar with waste water treatment technology.

Awards

- Member of Iran's National Foundation of Elites- **Registered Inventor**
- **Two Golden Medals at INPEX 2012**, Pittsburgh, Pa, USA (INPEX, the Invention & New Product Exposition, is America's largest invention trade show).
- **Ranked 2nd**, Graduates of Urmiah University, 2002.
- **Ranked 4th** in the Nationwide MSc. Entrance Exam for State Universities, 2003.
- **Outstanding Invention.** Meisam Tabatabaei, **Mehdi Khatamifar**. 2009. Pro Spinning Tube In Tube Reactor (Pro-STT) Equipped with High Voltage System For The Production Of Biodiesel and Glycerin (Iranian Patent Grant Number: 62533). Invited to the 90 Outstanding Inventions Exhibition exclusively held by the National Foundation of Elites for the President of Islamic Republic of Iran and the cabinet.

Research Experiences

2009- To date: Researcher, Biodiesel Research Team (BRT), Agricultural Biotechnology Research Institute of Iran (ABRII), Karaj, Iran

- Working on biodiesel production methods.
- Developing biodiesel production reactors.
- Working on purification of glycerin (by product of biodiesel production process) and new applications.

2005-To date: Officer in charge, Biomass Office, Renewable Energy Organization of Iran (SUNA). Tehran, Iran

- Preparing research road map and standards in the field of biofuels.
- Developing and optimizing biogas reactors.
- Investigation on new raw materials as a source of renewable energy.
- Working on municipal waste treatment technologies.

**2004-2005: Research, Research & Development center, Mega Motor Co. Tehran, Iran**

- Researcher on the Combustion indices of Green Car Project

Work Experiences**2009-To date: Researcher and consultant of Biodiesel Research Team (BRT) of ABRII, Karaj, Iran****Job description:**

My main duties here are cooperating and supervising biofuel projects.

2005-To date: Officer in charge, Biomass Office, Renewable Energy Organization of Iran (SUNA), Tehran, Iran**Job description:**

My main duties here are conducting research in the field of biofuel as well as collaboration in preparing research road-maps and standards. I have also worked in the field of biogas for example reactors design and various digestion methods.

2004-2005: Research, Research & Development center, Mega Motor Co. Tehran, Iran**Job description:**

Mega Motor is an engine production factory, and there I worked on different fuel tests including engine performance and emissions experiments.

Teaching Experiences

Lab; MSc.- Finite Element course for Msc. Students, 2010, Tarbiat Modares University (TMU), Tehran, Iran

Publications**International Accepted Papers:**

- 1.P. Mohammadi, Ali M. Nikbakht, M. Tabatabaei, K. Farhadi, A. Mohebbi and **M. Khatamifar**. Experimental investigation of performance and emission characteristics of DI diesel engine fueled with polymer waste dissolved in biodiesel-blended diesel fuel (2012). Energy - In press (5-Year Impact Factor: 3.858).
- 2.Meisam Hashemi Nejad, Meisam Tabatabaei, Yaghoob Mansourpanah, **Mehdi Khatamifar** and Azita Javani (2010). Upstream and Downstream Strategies to economize Biodiesel Production. Bioresource Technology– (ISI-Scopus cited). (5-Year Impact Factor: 4.901).
- 3.Rahimi, H., Ghobadian, B., Yusaf, T., Najafi, G. and **Khatamifar, M.** (2009). Diesterol: An Environmen Friendly IC Engine Fuel. Renewable Energy. (ISI- Scopus cited). (Impact Factor: 2.79).
- 4.Ghobadian, B., Tavakoli Hashjin, T., Rahimi, H. and **M. Khatamifar** (2008). Production of Bioethanol and Sunflower Methyl Ester and Investigation of Fuel Blend Properties. Journal of Agricultural Science and Technology. Volume 10, pp 225-232. – (ISI-Scopus cited). (5-Year Impact Factor: 0.225).

**National conference proceeding and oral presentations:**

1. Ghobadian, B. and **Khatamifar, M.** (2005). Biodiesel Fuel Production using Transesterification of Waste Vegetable Oils. Proceedings of the 4th International Conference on Internal Combustion Engines. Nov. 16-18, Tehran. Iran.
2. Ghobadian, B., Rahimi, H. and **Khatamifar, M.** (2005). Evaluation of Engine Performance Using Net Diesel Fuel and Biofuel Blends. (The 1st combustion conference of Iran (CC11). Feb. 15-16, 2006. Tarbiat Modares University, Tehran, Iran)
3. Ghobadian, B., Rahimi, H., **Khatamifar, M.** and Najafi, G. (2007). Diesterol: An Environment – Friendly IC Engine Fuel. (The 5th Conference on Internal Combustion Engines. November 20- 22, 2007. Tehran, Iran)
4. A. M. Nikbakht, B. Ghobadian and **M. Khatamifar**, (2007) “A Comprehensive Review of Biodiesel Fuel in Iran,” (The 3rd Student Conference on Agricultural Machinery Engineering and Mechanization, Shiraz, 29-30 April 2007, p. 62.)
5. B. Ghobadian and **M. Khatamifar**, “Producing Biodiesel from Waste Edible Oils, (2005)” Proceedings of the 2nd National Conference on Agricultural Products Losses, Tarbiat Modares University, Tehran, 24 August 2005.
6. B. Ghobadian, A. M. Nikbakht and **M. Khatamifar**, (2007) “The Capacity of Using Biodiesel as a Clean Fuel for Sustainable Development Environment,” Tehran University, Tehran, 21 March 2007.

International conference proceeding and oral presentations:

1. A. Javani, M. Tabatabaei, M. Hasheminejad, K. Tahvildari, Y. Mansourpanah, **M. Khatamifar** and A. M. Nikbakht (2012). Simultaneous high quality potassium phosphate production and glycerol purification derived from waste cooking oil through step-by-step acidification process. (4th International Conference on Engineering for Waste and Biomass Valorisation, September 10-13, 2012 – Porto, Portugal)
2. P. Mohammadi, A. M. Nikbakht, M. Tabatabaei, Kh. Farhadi, **M. Khatamifar**, H. Ghorbani and M. Hosseini (2012). Waste Plastic-WVO Biodiesel as an Additive to Boost Diesel Fuel Properties. (4th International Conference on Engineering for Waste and Biomass Valorisation, September 10-13, 2012 – Porto, Portugal)
3. Meisam Tabatabaei, Meisam Hashemi Nejad, **Mehdi Khatamifar**, Yaghoub Mansourpanah (2010). Glycerin Ultra-Purification; A key to economize Biodiesel Production. (Third International Symposium on Energy From Biomass and Waste. November 8 - 11 , 2010, Venice, Italy)
4. Ghobadian, B., Najafi, G., Rahimi, H. and **Khatamifar, M.** (2007). Comprehensive Evaluation of Engine Performance with Diesel and Biodiesel Fuel Blends. (The 3rd International Bioenergy Conference and Exhibition. Sep. 3-6, 2007. Finland)
5. Ghobadian, B., Rahimi, H. and **Khatamifar, M.** (2007). Experimental Evaluation of Engine Performance Using Typical Diesterol. (The International Congress on Biodiesel: The Science and the Technology. November, 5-8, 2007. Vienna, Austria)
6. Ghobadian, B., **Khatamifar, M.** and Rahimi, H. (2007). Design, Fabrication and Evaluation of a Patent Biodiesel Processor. (The International Congress on Biodiesel: The Science and the Technology. November, 5-8, 2007. Vienna, Austria)



Patents

1. Meisam Tabatabaei, **Mahdi Khatamifar**. (2009). Pro Spinning Tube In Tube Reactor (Pro-STT) Equipped with High Voltage System For The Production Of Biodiesel and Glycerin (*Iranian Patent Grant Number: 62533*). 🏆 Gold Medal at INPEX 2012(USA) (*Malaysian Patent Pending Number: PI2011000175*)
2. **Mehdi Khatamifar**, Barat Ghobadian. (2005). Biodiesel Production Machine BDI-80 (*Iranian Patent Grant Number: 36781*).
3. **Mehdi Khatamifar**, Hadi Rahimi, Barat Ghobadian. (2005). Biodiesel Production Machine for Rural Areas. (*Iranian Patent Grant Number: 38714*).
4. a. Zenouzi, B. Ghobadian and **M. Khatamifar**, "Full Automatic Research Apparatus and Multi-Function," (Iranian Patent No. 39373, 2006)
5. Hadi Rahimi, Barat Ghobadian, **Mehdi Khatamifar**. (2005). Diestrol Fuel. (*Iranian Patent Grant Number: 39407*).
6. **Mehdi Khatamifar**, Ali Akbar Hossein Reza. (2007). Biodiesel Production System Equipped with An Electrostatic AC Separator. (*Iranian Patent Grant Number: 47255*).
7. **Mahdi Khatamifar**, Meisam Tabatabaei. (2009). Pro Spinning Tube In Tube Reactor (Pro-STT) Equipped with Centrifuge System For The Production Of Biodiesel and Glycerin (*Iranian Patent Grant Number: 62531*).
8. **Mahdi Khatamifar**, Meisam Tabatabaei. (2009). Miniature Spinning Tube In Tube Reactor With Application In Diesel Engine Fueling System (*Iranian Patent Grant Number: 62528*).
9. Behrooz B. Dashti, **Mahdi Khatamifar**, Meisam Tabatabaei, Ali G. Soloot, Ali M. Nikbakht. A novel System for Biogas Production and Anaerobic Digestion of Organic Wastes. (*Iranian Patent Grant Number: 65077*).
10. Meisam Tabatabaei, Ali M. Nikbakht, Khalil Farhadi, Pouya Mohammadi, **Mehdi Khatamifar**, Mojtaba Khyam Nekouei. Fuel Additive "Diesel 5+"(Filed). 🏆 Gold Medal at INPEX 2012(USA)

Scientific-Social Activities

- **2009- To date:** Leader- Bio/reactor Group- Biofuel Research Team (BRT), Agricultural Biotechnology Research Institute of Iran (ABRII). Karaj, Iran
- **2012-To date:** Secretary of ISO TC 238 - Solid Biofuels, Iran.
- **February 2011:** Collaborator- Workshop on Advanced Technologies for Biofuels Production from Wastes – (February 4-8, 2011). Agricultural Biotechnology Research Institute of Iran (ABRII), Iran.

Related Links

To find more about my work environment, projects, colleagues and teachers please refer to these links:

- **The Biofuel Research Team (BRT)**, Agricultural Biotechnology Research Institute of Iran (ABRII): www.brteam.ir/
- **Google scholar**, <http://scholar.google.com/citations?user=v3VMKnkAAAAJ&hl=en>

Personal Information

- **D.O.B:** 20.09.1981
- **Place of Birth:** Mianeh
- **Marital Status:** Single
- **Nationality:** Iranian