

Dr. Amin Kazemi-Beydokhti (PhD)



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Assistant Professor of chemical engineering

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Educational background

- **Ph.D.** Chemical Engineering,
Sep. 2010 – Jan. 2015
Ferdowsi University of Mashhad, Mashhad, Iran

- **M.Sc.** Chemical Engineering,
Sep. 2006 – To Mar. 2009
University of Tehran, Tehran, Iran

- **B.Sc.** Chemical Engineering-Petrochemical and polymer,
Sep. 2000 – To Sep. 2005
Isfahan University of Technology, Isfahan, Iran

All publications

Book

Plant Design with PDMS Software, A. Kazemi-Beydokhti, S. Rajabi, Kian rayane publications, 2009

ISI Journals

- 2019** Seyed Hasan Hajiabadi, Hamed Aghaei, Mina Kalateh-Aghamohammadi, Ali Sanati, **Amin Kazemi-Beydokhti**, Feridun Esmaeilzadeh, "A comprehensive empirical, analytical and tomographic investigation on rheology and formation damage behavior of a novel nano-modified invert emulsion drilling fluid" *Journal of Petroleum Science and Engineering*, 181(106257).
- 2019** Akhtari, J., R. Faridnia, H. Kalani, R. Bastani, M. Fakhar, H. Rezvan and **A. K. Beydokhti** "Potent in vitro antileishmanial activity of a nanof ormulation of cisplatin with carbon nanotubes against *Leishmania major*." *Journal of Global Antimicrobial Resistance* 16: 11-16.
- 2018** **Amin Kazemi-Beydokhti**, "Surface modification of carbon nanotube nanofluids for higher thermal efficacy of plate and shell and tube heat exchangers", *Nashrieh Shimi va Mohandesi Shimi Iran (NSMSI)*, Articles in Press.
- 2018** **Amin Kazemi-Beydokhti**, Seyed Hasan Hajiabadi, "Rheological investigation of smart polymer/carbon nanotube complex on properties of water-based drilling fluids" *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 556, 23-29.
- 2018** **Amin Kazemi-Beydokhti**, Seyed Hasan Hajiabadi; Ali Sanati, "surface modification of carbon nanotubes as a key factor on rheological characteristics of water based drilling muds" *Iranian Journal of Chemistry and Chemical Engineering*, 27(4).
- 2016** **Amin Kazemi-Beydokhti**, Saeed Zeinali Heris, Mahmoud Reza Jaafari, "Investigation of different methods for cisplatin loading using single-walled carbon nanotube" *Chemical Engineering Research and Design*, 112(2), 56-63.
- 2016** A. Kazemi Beydokhti, S. Zeinali Heris, and M.R. Jaafari, "Thermal investigation and comparison of two medical nanofluid containing anticancer drug cisplatin." *NANOSCALE* 3(1) p. 39-45.
- 2016** **Amin Kazemi-beydokhti**, Hamed Azizi Namaghi, Mohammad Ali Haj Asgarkhani, Saeed Zeinali Heris, "Modeling and Optimization of Stability and Thermal Conductivity of Tin Dioxide Nanofluid. A Comparison Between Statistical Method and an Artificial Neural Network", *Brazilian Journal of Chemical Engineering*, 32 (4), 903-17.

- 2015** **Amin Kazemi-Beydokhti**, Saeed Zeinali Heris, Mahmoud Reza Jaafari, “Experimental investigation of thermal conductivity of medical nanofluids based on functionalised single-wall carbon nanotube and conjugated cisplatin” *Micro & Nano Letters*, 5(10) , 241-247.
- 2014** **Amin Kazemi-Beydokhti**, Saeed Zinali heris, Mohsen Tafaghodi, Mahmood Reza jaafari. “Microwave functionalized single-walled carbon nanotube as nanocarrier for the delivery of anticancer drug cisplatin: in vitro and in vivo evaluation” *Journal of Drug Delivery Science and Technology*, 24 (6), 572-578.
- 2014** **A. KAZEMI-BEYDOKHTI**, S. ZEINALI HERIS, M. SHARIATY-NIASSAR, A. A. HAMIDI, N. MOGHADAM “Experimental Investigation of Parameters Affecting Nanofluids Effective Thermal Conductivity” *Chemical Engineering Communications*, 1(201), 593–611.
- 2013** **Amin Kazemi-beydokhti**, Hamed Azizi namaghi, Saeed Zinali heris. “Identification of the Key Variables on Thermal Conductivity of CuO Nanofluid by a Fractional Factorial Design Approach” *Numerical Heat Transfer: B*, 64: 480–495.
- 2012** **Amin kazemi-beydokhti** , Saeed Zeinali Heris. “Thermal optimization of combined heat and power (CHP) systems using nanofluids” *Energy* 44: 241-2.
- 2012** S. Zeinali Heris, **A. Kazemi-Beydokhti**, S.H. Noie, S. Rezvan, “A numerical study on convective heat transfer of different nanofluids through square cross-section duct in laminar flow” *Engineering Applications of Computational Fluid Mechanics*, 6(1): 1–14.
- 2010** Sajjad Habibzadeh, **Amin Kazemi-Beydokhti**, Abbas Ali Khodadadi, Yadollah Mortazavi, Sasha Omanovic, Mojtaba Shariat-Niassar, “Stability and thermal conductivity of nanofluids of tin dioxide synthesized via microwave-induced combustion route” *Chemical Engineering Journal*, (2) 471-478.

Conferences

- 2017** **Amin Kazemi-Beydokhti**, Seyed Hasan Hajiabadi, Ali Mashhadi” Thermo and rheological importance of oily nanofluids in improving the energy efficiency of transformers”, 12th International Energy conference (IEC) , Tehran, Iran.
- 2016** Seyed Hasan Hajiabadi, **Amin Kazemi-Beydokhti**,” Performance of silver nanoparticles in the management of energy required to recycle the waste of drilling operation”, 12th International Energy conference (IEC) , Tehran, Iran.
- 2017** **Amin Kazemi-Beydokhti**, Ali Khoshsima” The importance of surface modification of carbon nanotubes in the separation and thermal conductivity of nanofluid” 4th National Conference on Separation Science and Engineering, Babol, Iran.

2017 Amin Kazemi-Beydokhti, Mohammad Mahdey Khosravi” Evaluation of various nanocatalysts of refinery catalytic reforming unit to improve separation and octane number of reformate” 4th National Conference on Separation Science and Engineering, Babol, Iran.

2017 Ali Khoshshima Amin Kazemi-Beydokhti, “Thermodynamic Modeling of Micro-Emulsions Based on Nuclear Alkaline Alkanol Surfactants Using the PC-SAFT Equation” 4th National Conference on Separation Science and Engineering, Babol, Iran.

2017 Amin Kazemi-Beydokhti,” The importance of using stimuli-responsive polymers in the targeted drug delivery of cancer drugs” 3th International Nastaran symposium 2017, Mashhad, Iran.

2016 Amin Kazemi-Beydokhti,”Application of nanofluids in thermal optimization of CHP systems”, 11th International Energy conference (IEC) , Tehran, Iran.

2016 Amin Kazemi-Beydokhti, Ali Khoshsiam,”Thermal investigation of medical nanofluid containing anticancer drug cisplatin”, 2nd International Conference & 3rd National Conference on New Technologies Application in Engineering , Mashhah, Iran.

2016 Ali Khoshsiam, Amin Kazemi-Beydokhti, ”Investigation of nanostructure microemulsion of biofuel systems”, 2nd International Conference & 3rd National Conference on New Technologies Application in Engineering , Mashhah, Iran.

2015 Seyed Hasan Hajiabadi; Ali Sanati, Amin Kazemi-Beydokhti, “Investigation and comparision of different methods on biodiesel gas” 8th national conference on Environmental Engineering, Tehran, Iran.

2014 Amin Kazemi-Beydokhti, Saeed Zeinali Heris, Mahmoud Reza Jaafari,”Comparision of three different protocols for synthesis of one formulation based on functionalized single-wall carbon nanotube and conjugated cisplatin”, 5th International Congress on Nanoscience & Nanotechnology (ICNN2014) , Tehran, Iran.

2009 Kazemi-Beydokhty. A, Shariaty-Niassar, M, Hamidi, A.,”Investigation of effective Parameters on thermal conductivity of nanofluid”, 5th Nanotechnology students Conference, Tehran, Iran

2009 Kazemi-Beydokhty, A., Shariati-Niyassar, M., Hamidi, A. A., “A Comparative Thermal Survey on TiO₂ and SnO₂ Nanofluids' properties”, the 6th international chemical engineering congress and exhibition, Kish, Iran

2009 Habibzadeh, S., Khodadadi, A.A., Kazami-Beydokhty, A., Hosseinpour, N., Mortazavi, Y., “Colloidal Stability of Nanofluids of Tin Dioxide Synthesized via Microwave-Induced Combustion Route”, 8th World Congress of Chemical Engineering, Canada

Research Courses

- University of Padova (Prof. Enzo Menna), Italy, 2014.
- University of Hamburg (Prof. Patrick Theato), Germany, 2017.
- Mashhad University of Medical Sciences, Faculty of Pharmacy (Prof. Mahmood Reza Jafari), 2018 and 2019.

Industrial Research Plans

- Design and optimization of heat exchangers with nanofluid technology, with corporation of Tehran University and National Iranian Oil Refining & Distribution Company, 2009-2012.
- Targeted drug delivery of cisplatin using functionalized carbon nanotubes for cancer therapy, in cooperation with Ferdowsi University of Mashhad and Ministry of Health and Medical Education, Iran, 2012-2015.
- Design and construction of thermal simulator of electricity transmission and distribution oil transformers, Hakim Sabzevari University, Iran, 2016-2017.

Industrial Experiences (Design, Consultation and Specialized training courses)

- Jondishapour, Petrosadian, Parsspand (EPC company)
- Sarvarman Aria (PC company)
- Isfahan, Ilam, Jam, Shazand arak, Kermanshah and ... (Gas and oil Refinery)
- Ariasasol, Jam, Bojnord, Arak, Isfahan, and ... (Petrochemical)
- RANI (Aujan Food industry)
- Setareh Khorasan petrochemical and refinery complex

Specific qualifications

- Experience in Nanofluid
- Experience in Drug delivery
- Experience in thermal design equipments
- Experience in polymer engineering
- Experience in process control design
- Experience in Industrial water treatment
- Experience in process simulation
- Experience in international engineering standards (API .ASTM .ASME .IPS)

Relevant courses

- Mass & heat transfer
- Fluid mechanics
- Polymer
- Reactor and catalytic reactor design
- Gas and petrochemicals processes design
- Industrial management

Computer skills

Engineering Software:

- PDMS
- HYSYS
- ASPEN
- PVElite
- Autocade

Programming:

- MATLAB
- C++

Languages

- Persian (mother tongue)
- English (fluent)