

# Mohsen Ashjari

Date and Place of Birth: 1981, Iran  
Marital status: Married with two children  
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## EDUCATIONS

- **Ph.D.**, Polymer Engineering, **Iran Polymer and Petrochemical Institute, Tehran, Iran, 2011**
- **M.Sc.**, Polymer Engineering, **Iran Polymer and Petrochemical Institute, Tehran, Iran, 2006**
- **B.Sc.**, Applied Chemistry, **University of Kashan, Iran, 2004**

## BOOKS

1. **M. Ashjari**, *Delivery of Molecules and Genes/Small Interfering RNA into Stem Cells by Nanoengineering Stem Cell Nanoengineering*, 223, 2015. Book chapter, John Wiley & Sons, Inc.
2. Mahsa Mohammadzadeh, **M. Ashjari**, *Update on gold nanoparticles from cathedral windows to nanomedicine*, Author: Valerio Voliani, Translate from English to Persian, 2018; Beid Press; in 157 pages, ISBN 978-622-6592-02-4
3. M. Nourmohammadi, A. Khaksar-Kalateh, **M. Ashjari**, M. Mohammadi, M. Zare, M. Neghabi, *"An Introduction to Dry Nanotechnology"*, 2005; Arasteh Press: Kashan; Iran; in 121 pages, ISBN 964-8798-10-9, (In Persian).
4. A. R. Mahdavian, M. Abdollahi, **M. Ashjari**, *"From Emulsion Polymerization to Nanoemulsions (Concepts and Applications)"*, 2008; Iran Polymer and Petrochemical Institute Publisher Press: Tehran; Iran; in 312 pages; 2008, ISBN 978-600-90570-0-9, (In Persian).

## PUBLICATIONS

### H-Index = 10

2019

23. M. Zendezhaban, **M. Ashjari**, S. Sharifnia, *Preparation of floatable TiO<sub>2</sub>/PVA-alginate nanocomposite for the photodegradation of ammonia wastewater*, **International Journal of energy Research**, 2019, 1-14.
22. **M. Ashjari** M. Kandoumal, *The effect of plastic waste and elemental sulfur additives on chemical and physical properties of bitumen*, **BULG CHEM COMMUN**, 2019, 0324-1130.
21. M. Mohammadzadeh, **M. Ashjari**, *Synthesis, detection, and modification of the surface of gold nanorods and their optical sensitivity for low concentrations of iron (III) ions*, **Adv. Nat. Sci: Nanosci. Nanotechnol.** 10, 2019, 015002.

20. M.Mohammadzadeh, **M.Ashjari**, D.Zare, Investigation of thermal conductivity property of plasmonic nanofluids based on gold nanorods prepared by Seed-mediated growth method, **Technical Sciences**, 22(2), 2019, 119–133.

19. M. Mohammadzadeh, **M. Ashjari**, Investigation of the Effect of Chemical and Physical Parameters on Preparation, Production Efficiency and Aspect Ratio of Gold Nanorods in Seed-Mediated Growth Method, **International Journal of Modern Science and Technology**, 4(2) 2019, 37-47.

18. M. Mohammadzadeh, **M. Ashjari**, Design of Plasmonic Nanofluids Based on Gold Nanoparticles For Efficient Using Solar Energy, **World of Nano (Persian Journal)**, Vol 14, issue 52, 2018, 18-26.

## 2018

17. Z. Heidariyan, M.H. Ghanian, **M. Ashjari**, Z. Farzaneh, M. Najarasl, M. Rezaei-Larjani, A. Piryaee, M. Vosough, H. Baharvand, Efficient and cost-effective generation of hepatocyte-like cells through microparticle-mediated delivery of growth factors in a 3D culture of human pluripotent stem cells, **Biomaterials** 159, 2018, 174-188. (IF= 10.54)

16. R. Shabani, **M. Ashjari**, K. Ashtari, F. Izadyar, B. Behnam, S. Khoei, M. Asghari-Jafarabadi, M. Koruji, Elimination of mouse tumor cells from neonate spermatogonial cells utilizing cisplatin-entrapped folic acid-conjugated poly(lactic-co-glycolic acid) nanoparticles in vitro, **International journal of nanomedicine** 13, 2018, 2943.

## 2017

15. M. Ashjari, H. Karimi-Maleh, F. Ahmadpour, M. Shabani-Nooshabadi, A. Sadrnia, MA Khalilzadeh, Voltammetric analysis of mycophenolate mofetil in pharmaceutical samples via electrochemical nanostructure based sensor modified with ionic liquid and MgO/SWCNTs, **Journal of the Taiwan Institute of Chemical Engineers** 80, 2017, 989-996.

## 2016

14. MM Abolhasani, **M Ashjari**, S Azimi, H Fashandi, Investigation of an abnormal  $\alpha$  polymorph formation in miscible PVDF nanocomposite blend using kinetics of crystallization, **Macromolecular Chemistry and Physics** 217 (4), 543-553, 2016.

## 2015

13. R Shabani, K Ashtari, B Behnam, F Izadyar, H Asgari, M Asghari Jafarabadi, **M Ashjari**, E Asadi, M Koruji, In vitro toxicity assay of cisplatin on mouse acute lymphoblastic leukaemia and spermatogonial stem cells, **Andrologia**, 48, 584–594, 2015.

12. **M Ashjari**, S Dehfuly, D Fatehi, R Shabani, M Koruji, Efficient functionalization of gold nanoparticles using cysteine conjugated protoporphyrin IX for singlet oxygen production in vitro, **RSC Advances** 5 (127), 104621-104628, 2015.

## 2014

11. ET Davoudi, MI Noordin, HA Javar, A Kadivar, **M Ashjari**, SH Chermahini, Stability study of the gastric floating dosage form of capecitabine, **Journal of Thermal Analysis and Calorimetry** 115 (3), 2495-2499, 2014

10. Y Mosleh, NG Ebrahimi, A Mahdavian, **M Ashjari**, TPU/PCL/nanomagnetite ternary shape memory composites: studies on their thermal, dynamic-mechanical, rheological and electrical properties, **Iranian Polymer Journal** 23 (2), 137-145, 2014

## 2012

9. **M Ashjari**, S Khoei, AR Mahdavian, "A multiple emulsion method for loading of 5-fluorouracil into magnetite-loaded nanocapsule. A physico-chemical investigation" **Polymer International** 61 (2012) 850–859.
8. **M Ashjari**, S Khoei, AR Mahdavian, R Rahmatollahzadeh, "Self-assembled nanomicelles using PLGA–PEG amphiphilic block copolymer for insulin delivery: a physicochemical investigation and determination of CMC values" **Journal of Material Science: Materials in Medicine** (2012) 23: 943–953.
7. **M Ashjari**, S Khoei, AR Mahdavian, "Controlling the morphology and surface property of magnetic/cisplatin-loaded nanocapsules via W/O/W double emulsion method" **Colloids and Surface A** 408 (2012) 87-96.
6. M Sabet, M Salavati-Niasari, **M Ashjari**, D Ghanbari, M Dadkhah, "CuInS<sub>2</sub>/CuS nanocomposite: synthesis via simple microwave approach and investigation its behavior in solar cell" **Journal of Inorganic and Organometallic Polymers and Materials** 22 (2012), 1139-1145.

## 2010

5. **M Ashjari**, AR Mahdavian, N Golshan-Ebrahimi, Y Mosleh "Efficient dispersion of magnetite nanoparticles in the polyurethane matrix through solution mixing and investigating of the nanocomposite properties" **Journal of Inorganic & Organometallic Polymer** 20 (2010) 213-219.

## 2009

4. S Khoei, AR Mahdavian, W Bairamy, **M Ashjari** "An investigation into the improvement of adhesive strength of polyimides by incorporation of elastomeric nanoparticles" **Journal of Colloid and Interface Science** 336 (2009) 872.
3. Z Ahmadi, **M Ashjari**, R Hosseini, J Rahman-Nia "Synthesis and Morphological Study of Nanoparticles AgTiO<sub>2</sub> Ceramic and Bactericidal Investigation of Polypropylene-AgTiO<sub>2</sub> Composite" **Journal of Inorganic & Organometallic Polymer** 19 (2009) 322.

## 2008

2. AR Mahdavian, **M Ashjari**, H Salehi "Nanocomposite particles with core-shell morphology I. Preparation and characterization of Fe<sub>3</sub>O<sub>4</sub>- Poly(butyl acrylate-styrene) particles via miniemulsion polymerization", **Journal of Applied Polymer Science** 110 (2008) 1242-1249.

## 2007

1. AR Mahdavian, **M Ashjari**, A Bayat-Makoo "Preparation of poly (styrene- methylmethacrylate)/ SiO<sub>2</sub> composite nano particles via emulsion polymerization. An investigation into the compatibilization", **European Polymer Journal**, 43 (2007) 336–344.

## TEACHING COURSES

	COURSES	FIELD
GRADUATE	Polymerization Reactors & Kinetics Engineering of Polymerization Process Advanced Polymers Characterization & Analysis Advanced Physical Chemistry of Polymers Properties of Nanomaterials Principles of Nanotechnology Fabrication & Application of Nanomaterials Nanobiotechnology	Polymer Engineering Chemical Engineering Nanochemistry

<b>UNDERGRADUATE</b>	General Chemistry for Engineers Organic Chemistry for Chemical Engineers Analytical Chemistry for Chemical Engineers Introduction to Polymers Glaze & Paints Instrumental Analysis for Engineer	Chemical Engineering Materials Engineering
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## PATENTS

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1. Ali Reza [Mahdavian](#), **Mohsen Ashjari** "Preparation of Polymeric Nanocomposite Films with Magnetic Properties Based on Poly (Styrene-co- butyl acrylate) via Miniemulsion Polymerization" *Iranian Patent Office, 45513, Sep. 2006.*
2. Ali Reza Mahdavian, Iraj Hasanzadeh, **Mohsen Ashjari** "Functionalization, Petrification and Separation of Carbon Nanotube in Pilot Scale" *Iranian Patent Office, 59641, June 2009.*

## ACTIVITIES

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- Supervisor of **16** postgraduate students (MSc) in various fields: Chemical Engineering (Polymer) – Nanochemistry – Nanochemical Engineering
- Head of Chemical Engineering Department (2015 - 2017)

## AWARDS and HONOR

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- Elected Teacher of Education - 2018
- A fifth rank was obtained in final stage of the 9<sup>th</sup> International Scientific Olympiad on Chemistry July, 2004, Shahid Beheshti University, Tehran, Iran

## INVITED REVIEWER FOR JOURNALS

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- Iranian Polymer Journal, Springer, IF: 1.75

## MAJOR RESEARCH INTERESTS

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Emulsions (Pickering, Double, W/W, Mini & Nano) - Polymeric Micelles - Stimuli-responsive nanodevices - Targeted Drug Delivery – Smart polymer – Magnetism – Nanocapsules– Core/Shell Nanoparticle & Nanocomposites – encapsulation - Living (or Controlled) radical polymerization (RAFT)