Curriculum Vitae

Marziyeh Fathi, PhD
Assistant Professor of Organic Chemistry
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Biography and career summary

I earned Bachelor 's of Science degree in pure chemistry from the University of Tabriz in 2007. I continued my master of science and PhD in organic chemistry at the University of Tabriz under supervision of Prof. Entezami. My thesis focused on the developing of novel intelligent drug delivery systems based on synthetic and natural polymers. For this purpose, thermosensitive nanohydrogels based on the PVA, PEG, starch and also magnetic nanoparticles were developed as potentially effective anti-cancer DDSs. During my research opportunity as MSc and PhD student, I got enough skills in different polymerization methods (such as free radical polymerization, controlled radical polymerization (ATRP), ring opening polymerization, anionic & cationic polymerization methods) as well as various nanoparticle synthesis and characterization techniques. I completed my Ph.D in 2014. Upon graduation, I joined the Research Center for Pharmaceutical Nanotechnology (RCPN), Tabriz University of Medical Science in 2015 up to February of 2019 as postdoctoral fellow under mentorship of Prof. Omidi and Prof. Barar. The experiences at RCPN was beneficial to develop my skills in the nano-biomaterial synthesis toward target DDS and earning new experience in cell culture techniques.
In February of 2019, I was appointed as assistant professor at RCPN and currently, my research area is focused on cancer drug delivery systems with emphasis on novel target drug delivery systems as well as tissue engineering and regeneration medicine.

Education

February 2013	PhD, Organic chemistry, Faculty of chemistry, University of Tabriz, Tabriz, Iran
September 2009	MSc, Organic chemistry, Faculty of chemistry, University of Tabriz, Tabriz, Iran
September 2007	BSc, Pure chemistry, Faculty of chemistry, University of Tabriz, Tabriz, Iran

Thesis

PhD Thermosensitive nanohydrogels based on biodegradable polymers; **Supervisor:** Prof. Ali Akbar Entezami

MSc Naltrexone sustained release from thermosensitive and self-crosslinked (N-isoproylacryl amide-Acrylamide-Vinylpyrrolidone) prepared by hydrogen peroxide; **Supervisor:** Prof. Ali Akbar Entezami

Advised theses

1. Chitosan based thermosensitive hydrogel for ocular delivery of Vancomycin and Prednisolone

Role: Advisor
Student: Minoo Ganavi, PharmD thesis
Status: 2019-2020

2. Preparation of polymeric injectable hydrogel scaffold for cartilage-articular tissue engineering

Role: Advisor
Student: Nazanin Amir-Yaghoobi, Ph.D thesis
Status: 2017-2022

3. Formulation and in-vitro characterization of pH and thermo-sensitive chitosan based nanohydrogels for doxorobicin delivery

Role: Advisor
Student: Mohaddeseh Nagavi, PharmD thesis
Status: 2019-2020

4. Extraction of the main antioxidants of the microalgae from the North West of Iran and evaluation their nanoparticle formulation in vitro

Role: Advisor
Student: Hamieh Goshtasbi, Ph.D thesis
Status: 2017-2022

5. Biocompatibility evaluation of MTA mixed with planet mediated Nano silver using MTT assay

Role: Advisor
Student: Sanaz Amiri, DT thesis
Status: 2018-2019

6. Isolation and study the effect of the secretory glycosides of some native probiotics in apoptosis and ferroptosis pathways in colon cancer cell lines

Role: Advisor
Student: Yalda Rahbar-Sadat, Ph.D thesis
Status: 2017-2020

7- Preparation and characterization of poloxamer407/gellan gum based ocular in situ hydrogels for co-delivery of antibiotics and corticosteroid

Role: Supervisor
Student: Mojtaba Fatollahzadeh, PharmD thesis
Status: 2020-2021

7- Chitosan/copper sulfide nanoparticles conjugated with Paclitaxel for combinational therapy of breast cancer
Role: Supervisor
Student: Shadi Bazzazzadegan, PharmD thesis
Status: 2020-2022

8- Study of the effect of simultaneous treatment of breast cancer cells with paclitaxel and sodium oxamate in niosom
Role: Supervisor
Student: Massoumeh Kaveh, MSc thesis

Status: 2021-2022

9- In-situ forming poloxamer-based hydrogel containing thiolated chitosan nanoparticles as intranasal Galantamine delivery system

Role: Supervisor
Student: Melika Lotfi, PharmD thesis
Status: 2021-2023

10- Preparation and evaluation of gellan gum-based hydrogels containing thiolated chitosan nanoparticles for efficient ocular delivery of timolol maleate

Role: Supervisor
Student: Mehdi Bayrami, PharmD thesis
Status: 2021-2022

11- Design of chitosan/gelatin based hydrogel system, sensitive to extracellular matrix enzymes in the treatment of rheumatic diseases

Role: Supervisor
Student: Amin Shafaei, PharmD thesis

Status: 2021-2022

Grants

1. **Synthesis, characterization and evaluation of ocular intelligent hydrogels for tissue engineering/ drug delivery**

Role: Co-PI (2019)
Funder: National Institute for Medical Research Development, Tehran, Iran
Status: Ongoing

2. **Shikonin/erlotinib loaded HER2/antibody or aptamer armed multi-functional nanocariers for the targeted therapy of ovarian cancer: In-Vitro investigation to In-Vivo application**

Role: Executer, Postdoctoral Project (2015-2017)
Funder: Iran National Science Foundation
Status: Finished

3. **Smart injectable hydrogels based on modified chitosan as novel drug delivery systems for breast cancer therapy**

Role: Executer, Postdoctoral Project (2017-2018)
Funder: Iran National Science Foundation
Status: Finished

4. **Synthesis and characterization of injectable chitosan/gelatin/gold nanoparticles hybrid thermosensitive hydrogels for breast cancer treatment**

Role: Executer, (2019)
Funder: Tabriz University of Medical Sicences
Status: Ongoing

5. **Doxorubicin loaded chitosan/gelatin nanogel containing gold nanoparticles as an enzyme responsive drug delivery system for breast cancer treatment**

Role: Executer, (2021)
Funder: Tabriz University of Medical Sicences
Status: Ongoing

6. **Chitosan-based hybrid nanogel for the combination therapy of breast cancer**

Role: Co-PI (2020)
Funder: National Institute for Medical Research Development, Tehran, Iran
Status: Ongoing

7. **Fabrication and evaluation of chitosan based smart nanogel containing gold nanoparticles/collagen/ methylcellulose for wound healing application**

Role: Co-PI (2020)
Funder: National Institute for Medical Research Development, Tehran, Iran
Status: Ongoing

Projects:

1. **The effect of chitosan-based injectable hydrogel on the survival and resistance to oxidative stress of the human bone marrow mesenchymal stem cells**

Role: Co-PI
Student: Zahra Olfat-Nobari; MSc thesis
Status: Finished

2. **Evaluation of proliferation and differentiation of dental pulp stem cells on hydrogelgel scaffolds based on biodegradable polymer**

Role: Co-PI
Student: Mohammad Samiei, Ph.D thesis
Status: Ongoing

3. **Synthesis of chitosan hybrid nanogels containing gold nanoparticles and Paclitaxel and evaluation of their anti-tumor activity in three-dimensional culture model of breast cancer cell**

Role: Co-PI
Postdoctoral fellow: Dr. Elaheh Dalir Abdollahinia
Status: Ongoing

4. **Co-entraption of Risperidone and Curcumin in Bovine Serum Albumin for the Treatment of Schizophreni**

Role: Co-PI
Student: Ramin Mohammadzadeh, PhD thesis
Status: (2021) Ongoing

5. **Fabrication and characterization of chitosan/gelatin/polyvinyl alcohol loaded with curcumin in order to wound healing applications: An in-vitro study**

Role: Co-PI

Student: Jamileh Kadkhoda, Research Project at RCPN

Status: (2021) Ongoing

Appointments

2020-2022	Vice president for research, Research Center for Pharmaceutical Nanotechnology Tabriz University of Medical Sciences, Tabriz, Iran
2019- Present	Assistant Professor, Research Center for Pharmaceutical Nanotechnology Tabriz University of Medical Sciences, Tabriz, Iran
2014- 2019	Postdoctoral Fellow, Research Center for Pharmaceutical Nanotechnology Tabriz University of Medical Sciences, Tabriz, Iran

Published articles (peer reviewed)

1. R Mohammadzadeh, M Fathi, MM Pourseif, Y Omidi, S Farhang, M Barzegar Jalali, H Valizadeh, A Nakhlband, K Adibkia. Curcumin and nano-curcumin applications in psychiatric disorders. Phytotherapy Research, (2024).

2. Elaheh Dalir Abdolahinia, Nazanin Amiryaghoubi, Marziyeh Fathi, Jaleh Barar, Yadollah Omidi. Recent advances in injectable nanocomposite hydrogels. Nano-Structures & Nano-Objects, (2024) 39, 101254.
3. Masoumeh Sharifi-Azad, Masoumeh Kaveh Zenjanab, Mohammad Shahpouri, Mohammad Amin Adili-Aghdam, Marziyeh Fathi, Rana Jahanban-Esfahlan. Codelivery of methotrexate and silibinin by niosome nanoparticles for enhanced chemotherapy of CT26 colon cancer cells. Biomedical Materials, (2024), 19 (5), 055015.

4. Nazanin Amiryaghoubi, Parinaz Abdollahiyan, Marziyeh Fathi, Hamid Erfan-Niya. Injectable chitosan copolymer/gold nanoparticles/gelatin hybrid hydrogels for delivery of doxorubicin for breast cancer treatment. Polymer Bulletin, (2024) 1-18.

5. Golnaz Shajari, Marziyeh Fathi, Hamid Erfan-Niya. In situ gelling hydrogels based on biodegradable polymers for effective ocular drug delivery: A review. Iranian Journal of Polymer Science and Technology (2024).

6. Masuomeh Kaveh Zenjanab, Parvin Samadi Pakchin, Marziyeh Fathi, Elaheh Dalir Abdolahinia, Khosro Adibkia. Niosomes containing paclitaxel and gold nanoparticles with different coating agents for efficient chemo/photothermal therapy of breast cancer. Biomedical Materials (2024), 19 (3) 035015.

7. Masoumeh Kaveh Zenjanab, Elaheh Dalir Abdolahinia, Effat Alizadeh, Hamed Hamishehkar, Rasoul Shahbazi, Zahra Ranjbar-Navazi, Rana Jahanban-Esfahlan, Marziyeh Fathi, Seyed Abolghasem Mohammadi. Hyaluronic acid-targeted niosomes for effective breast cancer chemostarvation therapy. ACS omega. (2024) 9 (9), 10875-10885.

8. Hamieh Goshtasbi, Elaheh Dalir Abdolahinia, Marziyeh Fathi, Ali Movafeghi, Hossein Omidian, Jaleh Barar, Yadollah Omidi. Astaxanthin-loaded alginate-chitosan gel beads activate Nrf2 and pro-apoptotic signalling pathways against oxidative stress. Journal of Microencapsulation, (2024), 41(2), 140-156.

9. Nazanin Amiryaghoubi, **Marziyeh Fathi**, Yousef Javadzadeh. Recent advances in polymer-based scaffolds for cardiac tissue engineering. International Journal of Polymeric Materials and Polymeric Biomaterials. (2024) 1-25.
10. Nazanin Amiryaghoubi, **Marziyeh Fathi**, Azam Safary, Yousef Javadzadeh, Yadollah Omidi. In situ forming alginate/gelatin hydrogel scaffold through Schiff base reaction embedded with curcumin-loaded chitosan microspheres for bone tissue regeneration. International Journal of Biological Macromolecules, (2024) 256, 128335.

11. Nazanin Amiryaghoubi, **Marziyeh Fathi.** Bioscaffolds of graphene based-polymeric hybrid materials for myocardial tissue engineering. BioImpacts (2024) 14 (3) 25288-29981.

12. Nazanin Amiryaghoubi, Marziyeh Fathi, Nader Norozi Pesyan, Yadollah Omidi. Synthesis of poly (propylene fumarate)-polyurethane urea composite with kartogenin-modified chitosan for cartilage tissue engineering. European Polymer Journal, (2023) 201, 112555.

13. Abolfazl Doustmihan, **Marziyeh Fathi**, MirAhmad Mazloomi, Aysan Salemi, Michael R Hamblin, Rana Jahanban-Esfahlan. Molecular targets, therapeutic agents and multitasking nanoparticles to deal with cancer stem cells: A narrative review. Journal of Controlled Release (2023) 363, 57-83.

14. Anahita Alioghli Ziaei, Hamid Erfan-Niya, **Marziyeh Fathi**, Nazanin Amiryaghoubi. In situ forming alginate/gelatin hybrid hydrogels containing doxorubicin loaded chitosan/AuNPs nanogels for the local therapy of breast cancer. International journal of biological macromolecules, (2023) 246, 125640.

15. Nazanin Amiryaghoubi, **Marziyeh Fathi**, Jaleh Barar, Hossein Omidian, Yadollah Omidi. Advanced nanoscale drug delivery systems for bone cancer therapy. Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease, (2023) 1869 (6) 166739.

16. Nazanin Amiryaghoubi, **Marziyeh Fathi**, Jaleh Barar, Hossein Omidian, Yadollah Omidi. Hybrid polymer-grafted graphene scaffolds for microvascular tissue engineering and regeneration. European Polymer Journal, (2023), 193, 112095.

17. Nazanin Amiryaghoubi, **Marziyeh Fathi**, Jaleh Barar, Nader Noroozi-Pesyan, Hossein Omidian, Yadollah Omidi. Application of graphene in articular cartilage tissue engineering and chondrogenic differentiation. Journal of Drug Delivery Science and Technology, (2023), 83, 104437.

18. Minoo Ghanavi, Ali Khoshandam, Shaghayegh Aslzad, **Marziyeh Fathi**, Abolfazl Barzegari, Elaheh Dalir Abdolahinia, Khosro Adibkia, Jaleh Barar, Yadollah Omidi. Injectable thermosensitive PEG-g-chitosan hydrogel for ocular delivery of vancomycin and prednisolone. Journal of Drug Delivery Science and Technology (2023), 83, 104385.

19. Shaghayegh Aslzad, Parisa Heydari, Elaheh Dalir Abdolahinia, Nazanin Amiryaghoubi,·Azam Safary, **Marziyeh Fathi,** Hamid Erfan-Niya. Chitosan/gelatin hybrid nanogel containing doxorubicin as

enzyme-responsive drug delivery system for breast cancer treatment. Colloid and Polymer Science, (2023), 301, 273–281

20. Mohammad Samiei, Elaheh Dalir Abdollahinia, Nazanin Amiryaghoubi, **Marziyeh Fathi**, Jaleh Barar, Yadollah Omidi. Injectable thermosensitive chitosan/gelatin hydrogel for dental pulp stem cells proliferation and differentiation. BioImpacts, 2023, 13(1), 63-72

21. Shaghayegh Aslzad, Pouria Savadi, Elaheh Dalir Abdolahinia, Yadollah Omidi, **Marziyeh Fathi**, Jaleh Barar. Chitosan/dialdehyde starch hybrid in situ forming hydrogel for ocular delivery of betamethasone. Materials Today Communications 33 (2022) 104873.

22. Nazanin Amiryaghoubi, Elaheh Dalir Abdolahinia, Ailar Nakhlband, Shaghayegh Aslzad, **Marziyeh Fathi**, Jaleh Barar, Yadollah Omidi. Smart chitosan–folate hybrid magnetic nanoparticles for targeted delivery of doxorubicin to osteosarcoma cells. Colloids and Surfaces B: Biointerfaces 220 (2022) 112911.

23. Elaheh Dalir Abdolahinia, **Marziyeh Fathi**, Zahra Pirdel, Samira Jafari, Mohammad Samiei, Khosro Adibkia, Farshid Sefat, Solmaz Maleki Dizaj, Simin Sharifi. Strategies to improve drug penetration into tumor microenvironment by nanoparticles: Focus on nanozymes. OpenNano 8 (2022) 100100.

24. Solmaz Zakhireh, Jaleh Barar, Khosro Adibkia, Younes Beygi-Khosrowshahi, **Marziyeh Fathi**, Hossein Omidain, Yadollah Omidi. Bioactive Chitosan-Based Organometallic Scaffolds for Tissue Engineering and Regeneration. Topics in Current Chemistry (2022) 380:13

25. Nazanin Amiryaghoubi, **Marziyeh Fathi,** Jaleh Barar, Yadollah Omidi. Hydrogel-based scaffolds for bone and cartilage tissue engineering and regeneration. Reactive and Functional Polymers 177 (2022) 105313.

26. Mohammad Samiei, Elaheh Dalir Abdolahinia, **Marziyeh Fathi**, Jaleh Barar, Yadollah Omidi. Chitosan-based bioactive hydrogels for osteogenic differentiation of dental pulp stem cells. Journal of Drug Delivery Science and Technology 73 (2022) 103478.

27. Nazanin Amiryaghoubi, **Marziyeh Fathi**, Jaleh Barar, Hossein Omidian, Yadollah Omidi. Recent advances in graphene-based polymer composite scaffolds for bone/cartilage tissue engineering. Journal of Drug Delivery Science and Technology 72 (2022) 103360 Hamieh Goshtasbi, Ehsan Atazadeh, Marziyeh Fathi, Ali Movafeghi. Using physicochemical and biological parameters for the evaluation of water quality and environmental conditions in international wetlands on the southern part of Lake Urmia, Iran. Environmental Science and Pollution Research (2022) 29:18805–18819.

28. Nazanin Amiryaghoubi, Nader Noroozi Pesyan, Marziyeh Fathi, Yadollah Omidi. The design of polycaprolactone-polyurethane/chitosan composite for bone tissue engineering. Colloids and Surfaces A: Physicochemical and Engineering Aspects 634 (2022) 127895.

29. Mohammad Samiei, Marziyeh Fathi, Jaleh Barar, Nazanin Fathi, Nazanin Amiryaghoubi, Yadollah Omidi, Bioactive hydrogel-based scaffolds for the regeneration of dental pulp tissue. Journal of Drug Delivery Science and Technology. 64 (2021) 102600

30. Nazanin Amiryaghoubi, Marziyeh Fathi, Abolfazl Barzegari, Jaleh Barar, Hossein Omidian, Yadollah Omidi. Recent advances in polymeric scaffolds containing carbon nanotube and graphene oxide for cartilage and bone regeneration. Materials Today Communications 26 (2021) 102097

31. Marziyeh Fathi, Elaheh Dalir Abdolahinia, Jaleh Barar, Yadollah Omidi. Smart stimuli-responsive biopolymeric nanomedicines for targeted therapy of solid tumors. Nanomedicine, Volume 118, January 2021, 111469.

32. Zahra Ranjbar-Navazi, Marziyeh Fathi, Elaheh Dalir Abdolahinia, Yadollah Omidi, Soodabeh Davaran. MUC-1 aptamer conjugated InP/ZnS quantum dots/nanohydrogel fluorescent composite for mitochondria-mediated apoptosis in MCF-7 cells. Materials Science Engineering C. 2020. 10.1016/j.msec.2020.111469

33. Nazanin Amiryaghoubi, Marziyeh Fathi, Nader Noroozi Pesyan, Mohammad Samiei, Jaleh Barar, Yadollah Omidi. Bioactive polymeric scaffolds for osteogenic repair and bone regenerative medicine. Med Res Rev. 2020;1–38.

34. Nazanin Amiryaghoubi, Nader Noroozi Pesyan, Marziyeh Fathi, Yadollah Omidi. Injectable thermosensitive hybrid hydrogel containing graphene oxide and chitosan as dental pulp stem cells scaffold for bone tissue engineering. International Journal of Biological Macromolecules 162 (2020) 1338–1357.

35. Yousef Pakzad, Marziyeh Fathi, Yadollah Omidi, Masoud Mozafari, Ali Zamanian. Synthesis and characterization of timolol maleate-loaded quaternizedchitosan-based thermosensitive hydrogel: A transparent topical ocular delivery system for the treatment of glaucoma. International Journal of Biological Macromolecules 159 (2020) 117-128.

36. Parvin Samadi Pakchin, Marziyeh Fathi, Hossein Ghanbari, Reza Saber, Yadollah Omidi. A novel electrochemical immunosensor for ultrasensitive detection of CA125 in ovarian cancer. Biosensors and Bioelectronics 153 (2020) 112029

37. Fathi M, Safary A, Barar J. Therapeutic impacts of enzyme-responsive smart nanobiosystems, BioImpacts, 2020, 10(1), 1-4.

38. Fathi M, Barar J, Erfan-Niya H, Omidi Y. Methotrexate-conjugated chitosan-grafted pH- and thermo-responsive magnetic nanoparticles for targeted therapy of ovarian cancer. International Journal of Biological Macromolecules 154 (2020) 1175–1184.

39. Seyedeh Saideh Daryabari, Marziyeh Fathi, Majid Mahdavi, Yaghoub Moaddab, Mohammad Ali Hosseinpour Feizi, Behrouz Shokoohi, Reza Safaralizadeh. Overexpression of CFL1 in gastric cancer and the effects of its silencing by siRNA with a nanoparticle delivery system in the gastric cancer cell line. J Cell Physiol. 2020; 1–13.

40. Mitra Alami-Milani, Parvin Zakeri-Milani, Hadi Valizadeh, Marzieh Fathi, Sara Salatin, Roya Salehi & Mitra Jelvehgari. PLA-PCL-PEG-PCL-PLA based micelles for improving the ocular permeability of dexamethasone: development, characterization, and in vitro evaluation. Pharmaceutical Development and Technology, 2020, 25 (6), 704-719.

41. Marziyeh Fathi, Mitra Alami-Milani, Sara Salatin, Sharahm Sattari, Hassan Montazam, Farhad Fekrat, Mitra Jelvehgari. Fast Dissolving Sublingual Strips: A Novel Approach for the Delivery of Isosorbide Dinitrate. Pharmaceutical Sciences, 2019, 25(4), 311-318.

42. Fathi, M., Alami-Milani, M., Geranmayeh, M.H., Barar, J., Erfan-Niya, H., Omidi, Y. Dual thermo-and pH-sensitive injectable hydrogels of chitosan/(poly(N-isopropylacrylamide-co-itaconic acid)) for doxorubicin delivery in breast cancer, International Journal of Biological Macromolecules; 128, 2019, 957-964.

43. Fathi, M., Majidi, S., Zangabad, P.S., Barar, J., Erfan-Niya, H., Omidi, Y. Chitosan-based multifunctional nanomedicines and theranostics for targeted therapy of cancer, Medicinal Research Reviews; , 2018, 382110-2136.

44. Fathi, M., Sahandi Zangabad, P., Barar, J., Aghanejad, A., Erfan-Niya, H., Omidi, Y. Thermo-sensitive chitosan copolymer-gold hybrid nanoparticles as a nanocarrier for delivery of erlotinib, International Journal of Biological Macromolecules; 106, 2018, 266-276.

45. Fathi, M., Zangabad, P.S., Aghanejad, A., Barar, J., Erfan-Niya, H., Omidi, Y. Folate-conjugated thermosensitive O-maleoyl modified chitosan micellar nanoparticles for targeted delivery of erlotinib, Carbohydrate Polymers; 172, 2017, 130-141.

46. Arami, S., Rashidi, M.R., Mahdavi, M., Fathi, M., Entezami, A.A. Synthesis and characterization of Fe3 O4 -PEG-LAC-chitosan-PEI nanoparticle as a survivin siRNA delivery system, Human and Experimental Toxicology; 36, 2017, 227-237.

47. Fathi, M., Barar, J. Perspective highlights on biodegradable polymeric nanosystems for targeted therapy of solid tumors, BioImpacts; 7, 2017, 49-57.

48. Fathi, M., Zangabad, P.S., Majidi, S., Barar, J., Erfan-Niya, H., Omidi, Y. Stimuli-responsive chitosan-based nanocarriers for cancer therapy, BioImpacts; 7, 2017, 269-277.

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50. Arami, S., Mahdavi, M., Rashidi, M.R., Fathi, M., Hejazi, M.S., Samadi, N. Multifunctional superparamagnetic nanoparticles: From synthesis to siRNA delivery. Current Pharmaceutical Design, 23, 2017, 2400-2409.

51. Arami, S., Mahdavi, M., Rashidi, M.R., Fathi, M., Hejazi, M. S., Samadi, N. Novel polyacrylate-based cationic nanoparticles for survivin siRNA delivery combined with mitoxantrone for treatment of breast cancer, Biological; 44, 2016, 487-496.

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53. Fathi, M., Barar, J., Aghanejad, A., Omidi, Y. Hydrogels for ocular drug delivery and tissue engineering, Bioimpacts; 5, 2015, 159-164.

54. Fathi, M., Entezami, A.A., Arami, S., Rashidi, M.R. Preparation of N-isopropylacrylamide/itaconic acid magnetic nanohydrogels by modified starch as a crosslinker for anticancer drug carriers, International Journal of Polymeric Materials and Polymeric Biomaterials; 64, 2015, 541-549.

55. Saleh-Ghadimi, L., Fathi, M., Entezami, A.A. Heteroarm star-shaped Poly (N-isopropylacryamide-co-itaconic acid) copolymer prepared by glucose core as ATRP initiator, International Journal of Polymeric Materials and Polymeric Biomaterials; 63, 2014, 246-255.

56. Fathi, M., Entezami, A.A. Stable aqueous dispersion of magnetic iron oxide core-shell nanoparticles prepared by biocompatible maleate polymers, Surface and Interface Analysis, 46, 2014, 145-151.

57. Fathi, M., Reza Farajollahi, A., Akbar Entezami, A. Synthesis of fast response crosslinked PVA-g-NIPAAm nanohydrogels by very low radiation dose in dilute aqueous solution, Radiation Physics and Chemistry; 86, 2013, 145-154.

58. Fathi, M., Entezami, A.A., Pashaei-Asl, R. Swelling/deswelling, thermal, and rheological behavior of PVA-g-NIPAAm nanohydrogels prepared by a facile free-radical polymerization method, Journal of Polymer Research; 20, 2013, 125.

59. Massoumi, B., Abdollahi, M., Fathi, M., Entezami, A.A., Hamidi, S. Synthesis of novel thermoresponsive micelles by graft copolymerization of N-isopropylacrylamide on poly(ε-caprolactone-co-α-bromo-ε- caprolactone) as macroinitiator via ATRP, Journal of Polymer Research; 20, 2013, 47.

60. Fathi, M., Entezami, A.A., Ebrahimi, A., Safa, K.D. Synthesis of thermosensitive nanohydrogels by crosslinker free method based on N-isopropylacrylamide: Applicable in the naltrexone sustained release, Macromolecular Research; 21, 2013, 17-26.

Book Chapters

1. Marziyeh Fathi, Shagayegh Aslzad, Jaleh Barar, Yadollah Omidi. Advanced nanoformulations for targeting, imaging, and therapy, (2023) Advanced Nanoformulations, 719-744.

2. Elaheh Dalir Abdolahinia, Marziyeh Fathi, X Petridis, Khosro Adibkia, Zahra Pirdel, Mohammad Samiei Encapsulation in dentistry, Principles of Biomaterials Encapsulation, 3(2023) 93-426.

3. S Ahmadi, M Fathi, Y Omidi. Acrylate-based polymeric nanotheranostics. Polymeric Nanosystems, (2023) 85-111.

4. Ailar Nakhlband, Laleh Saleh-Ghadimi, Marziyeh Fathi, Mohammad Samiei, Jaleh Barar, Yadollah Omidi. Recent advances in hydrogels and stem cells. Springer Singapore; Engineering materials for stem cell regeneration, (2021), 589-618.

5. Nazanin Amiryaghoubi, Marziyeh Fathi, Khosro Adibkia, Jaleh Barar, Hossein Omidian, Yadollah Omidi. Chitosan-based biomaterials: their interaction with natural and synthetic materials for cartilage, bone, cardiac, vascular, and neural tissue engineering. Engineering Materials for Stem Cell Regeneration, (2021) 619-650

6. Yousef Pakzad, **Marziyeh Fathi**, Yadollah Omidi, Ali Zamanian, Masoud Mozafari. Nanotechnology for ocular and optic drug delivery and targeting. Elsevier, Woodhead Publishing Series in Biomaterials, **2020**, Pages 499-523.

7. Marziyeh Fathi, Elaheh Dalir Abdollahinia, Nazanin Amiryaghoubi, Yadollah Omidi. Chapter 25: MNPs-polymers nanohybrids. Elsevier, **2020**.

8. Pakzad Y, **Fathi M**, Mozafari M. Chapter 17 - Characterization methodologies of functional polymers. In: Mozafari M, NP Singh Chauhan, editors. Advanced Functional Polymers for Biomedical Applications: Elsevier; **2019**. p. 359-81.