

**CURRICULUM VITAE
MOHAMMAD RAFIENIA**

CONTACT INFORMATION

Associate Proffessor

Biomaterials Nanotechnology and
Tissue engineering Group, Department
of Advanced Medical Technology,
Isfahan University of Medical Sciences,
Isfahan, Iran

Phone: +98 31 39516496

Email: m_rafienia@med.mui.ac.ir

CURRENT STATUS

Biomedical Engineering (Biomaterial), Department of Medical Engineering, School of
Medicine, Isfahan University of Medical Sciences

EDUCATIONAL BACKGROUND

- | | |
|-------------|--|
| 2001 - 2007 | PhD in Biomedical Engineering: Biomaterial (Drug Delivery Systems)
Amirkabir University of Technology |
| 1998 - 2001 | MSc in Biomedical Engineering: Biomaterial
Amirkabir University of Technology |
| 1994 - 1998 | BSc in Material Engineering: Metal Casting
Isfahan University of Technology |

COURSES TAUGHT

**DRUG DELIVERY SYSTEMS, METAL BIOMATERIALS, MODELING IN PHYSIOLOGICAL
SYSTEMS, BIOCOMPATIBILITY, STATIC, TERMODYNAMIC AND HEAT TRANSFERING,
DRAWING, PHYSIC, PHYSIC FOR ANESTHETIZING, SEMINAR,**

PROFESSIONAL EXPERIENCES

- Head of biosensor reaserch center
- The best researcher in Isfahan
- The best researcher in Isfahan university of medical sciences
- etc

RESEARCH PROJECTS

- 2013 **Evaluation of effect of Poly hydroxyl butyrate nanoparticles loaded with simvastatin on stimulating of stem cells and regeneration of apical periodontitis teeth (In vivo study)**
Members: Mohammad Rafienia, Maziar Ebrahimi Dastgerdi, Mansureh Satari
Authority: Iranian council of stemcell technology
- 2013-2014 **In vitro biocompatibility assessment of hyper branched polyglycerol coated Fe₃O₄ nanoparticles**
Members: Mohammad Rafienia, Ali Zarabi, Atefeh Zaree Pur
Authority: Isfahan University of Medical Sciences, Biosensor Reaserch Center
- 2013-2014 **Electrochemical Determination of Curcumin on the surface of Glassy Carbon Electrode Modified with Graphen Based Nanocomposite.**
Members: Mohammad Rafienia, Ali Zarabi, Behzad Mirzaee
Authority: Isfahan University of Medical Sciences, Biosensor Reaserch Center
- 2013-2014 **Preparation and characterization of nano-composite membrane based on Polycaprolactone and bioactive glass nanoparticles containing Cu.**
Members: Shiva Soltani, Mohammad Rafienia, Mehdi Mehdi khani, Shahin Bonakdar, Ali Dust Modammadi
Authority: Iran National Science Foundation (INSF)
- 2012-2014 **Evaluation of mesenchymal stem cell differentiation into chondrocyte on silk-based scaffold containing chitosan nanoparticles**
Members: Mohammad Rafienia, Mohammad Hosein Fathi, Mitra Naeemi, Shahin Bonakdar
Authority: Iran National Science Foundation (INSF)
- 2012 **Evaluation of nano barium titanate coating as a piezoelectric coating on histologic and histomorphometric analysis of bone around dntal implants in animal samples**
Members: Mohammad Rafienia, Jaber Yaghini, Satar Kabiri, seyed Saeed Hoseini
Authority: Iran National Science Foundation (INSF)
- 2013-2014 **Fabrication of tissue engineering scaffold from nanocomposite of starch–cellulose nanofibers and investigation of its properties**
Members: Mohammad Rafienia, Mohammad Mehr Asa, Bijan Nasri
Authority: Isfahan University of Medical Sciences
- 2013- **Synthesis of nanofiber bioactive glass by sol-gel and electro-spinning processes as tissue-engineering scaffolds**
Members: Mohammad Rafienia, Jaleh Amirian, Hosein Salehi, Behruz Movahedi

Authority: Isfahan University of Medical Sciences

- 2012- **Fabrication of Poly hydroxybutyrate-Polyethylene glycol-Folic acid nanoparticles loaded by paclitaxel for drug targeting to cancer cells**
Members: Mohammad Rafienia, Mansureh Satari
Authority: Isfahan University of Medical Sciences, Biosensor Reaserch Center
- 2011-2012 **Fabrication and evaluation properties of Poly hydroxy butyrate micro and nanoparticles**
Members: Mohammad Rafienia, Mansureh Satari
Authority: Isfahan University of Medical Sciences
- 2011-2012 **Synthesis and characterization of MCM-48/Hydroxyapatite nano composite to use in drug delivery system**
Members: Mohammad Rafienia, Saed Karbaci, Hoda Aghaee
Authority: Isfahan University of Medical Sciences
- 2009 -2011 **Investigation of manufacturing polymer coated urethral catheter containing antibacterial drug (gentamicin) for reducing hospital infection**
Members: Mohammad Rafienia, Saed Karbaci, Naser Tavakoli
Authority: Isfahan University of Medical Sciences
- 2005-2007 **A Study about Extraction of Hyaluronic Acid from Cockscomb**
Members: Mohammad Rafienia, Fariba Orang, Hamid Mirzadeh
Authority: Amirkabir University of Technology
- 2005 - 2007 **Manufacture of In situ Forming Systems based on PLGA as corticosteroid Drugs Delivery System**
Members: mohammad Rafienia, Hamid Mirzadeh, Hamid Mobedi, Ahmad Jamshidi
Authority: Iran Polymer and Petrochemical Institute
- 2003 - 2004 **Synthesis and characterization of Polyurethane Biomedical Grade for Medical Applications**
Members: Mohammad Rafienia, Fariba Orang
Authority: Amirkabir University of Technology
- 2000 - 2004 **Strategic Research about applications of Controlled Release Technology in Drug, Food and Agriculture Industries**
Members: Mohammad Rafienia, Shahriar Sharifi, Dr. Rafie, Amin mansur
Authority: Ministry of Science, Research and Technology
- 2001 - 2003 **Investigation of Effects of Porosity and Morphology on Release Behavior of Biological Agents from Polyurethane Microspheres**
Members: Mohammad Rafienia, Fariba Orang
Authority: Amirkabir University of Technology

PUBLICATIONS**A) CONFERENCES****Synthesis of nanofiber ceramic bioactive glass by sol-gel and electro-spinning processes using PVA as tissue-engineering scaffolds**

Conference: ISPST2012, Amirkabir University of Technology, Tehran, Iran, 21-25 October 2012, (Poster)

Authors: Jhaleh Amirian, Behrooz Movahedi, Mohammad Rafienia

Synthesis of Poly hydroxybutyrate-Polyethylene glycol-Folic acid (PHB-PEG-FOL) nanoparticles for targeted drug delivery

Conference: ISPST2012, Amirkabir University of Technology, Tehran, Iran, 21-25 October 2012, (Poster)

Authors: Mohammad Rafienia, Mansooreh sattari, Hamid Mobedi, Mohammad Mahmoudzadeh, Afshin Fassihi

Conference: 1567 "4 13)12)0 "/ * + , - ' .) "' (&

Authors: 0 # & # &: 9\$ (. \$: & #<: ; \$ # &: 8 9"&

Preparation of biodegradable PHB nano-particles for drug delivery system

Conference: 5th Iranian Controlled Release Conference. 2011; (Poster)

Authors: Mansooreh Satari, Mohammad Rafienia, Hamid Mobedi, Mohsen Janmaleki

بررسی خواص شیشه سرامیک سیستم لیتیم دی سیلیکات با افزودن عامل جوانه زای اکسید نیوبیوم

Conference: 17th Iranian Conference on Biomedical Engineering (ICBME). 2010; (Poster)

Authors: ; \$ # & := > ? > : @ A B C & : 8 9"&

بررسی ساخت سوندهای مجاری ادرار با پوشش پلیمری حاوی داروی ضد باکتری جنتامایسین به منظور کاهش عفونت‌های بیمارستانی (آزمون *In Vitro*)

Conference: 17th Iranian Conference on Biomedical Engineering (ICBME). 2010; (Speech)

Authors: محمد رفیعی نیا، حسن زرین مهر، علی پورثمر، علیرضا خاوندی، محسن جانملکی

Application Potentials of Microwave in NanoMagnetic Particle Hyperthermia

Conference: World Congress on Medical Physics and Biomedical Engineering 2009.

(Speech)

Authors: M. Janmaleki, M. Mahmoudi, M. Rafienia, and H. Peirovi

Effect of Polymer Molecular Weight on Morphology and Particle Size of Chitosan Microspheres Prepared via Spray Drying Method

Conference: World Congress on Medical Physics and Biomedical Engineering 2009.

(Speech)

Authors: S. Taranejoo, M. Rafienia, M. Janmaleki, M. Kamali, L. Sadeghzadeh

Estimation of Betamethasone Release Profiles from an in Situ Forming System Based on the Biodegradable Polymer Using Artificial Neural Networks

Conference: World Congress on Medical Physics and Biomedical Engineering 2009.
(Speech)

Authors: M. Amiri, M. Rafienia and A. Sadeghian

In vitro/in vivo studies of betamethasone loaded in situ forming a polylactide- co-glycolide system

Conference: 36th Annual Meeting & Exposition of the Controlled Release Society. 2009;
(Speech)

Authors: A Momeni, M Rafienia, H Mobedi

Simulation of betamethasone release profiles from in situ forming systems based on PLGA

Conference: 32nd Conference of the Canadian Medical and Biological Engineering Society (CMBEC32). 2009; (Speech)

Authors: Saman Hossein Sarraf, Ehsan Marzbanrad, Hamid Mobedi, Mohammad Rafienia, Hamid Mirzadeh, Ahmad Jamshidi

Application of Artificial Neural Network in Prediction of Betamethasone Release Profiles from an in Situ Forming System Based on the Biodegradable Polymer (PLGA75/25)

Conference: Biomedical Engineering 2008 (BioMed 2008). 2008; (Speech)

Authors: mohammad Rafienia, Mahmud Amiri, Hamid Mirzadeh

Effect of Freezing and Thawing Process on Betamethasone Release from Polyvinyl alcohol Nanospheres

Conference: Nanocomposite materials. 2008; (Poster)

Authors: Shahin Bonakdar, Seyed Ali Poursamar, Mohammad Rafienia, Motahareh Hosseini, Mohammad Ali Shokrgozar

A Comparative Study of Physical-Mechanical Properties, Cytotoxicity and Platelet Adhesion of Biomedical Polyurethane Elastomers

Conference: ISPST 8th International Seminar on Polymer Science and Technology. 2007;
(Speech)

Authors: S. Bonakdar, F. Orang, M. Rafienia, A. Navvabzadeh

Comparison of the Effect of Hydrophilicity on Biocompatibility and Platelet Adhesion of Two Different Kinds of Biomaterials

Conference: Iran's 1st International Conference on Biomaterials. 2007; (Speech)

Authors: Shahin Bonakdar, Fariba Orang, Mohammad Rafienia, Rana Imani

Gamma irradiation effects on the release of betamethasone acetate from the biodegradable in situ forming systems

Conference: The 3rd Iranian Conference of Novel Drug Delivery Systems. 2007; (Speech)

Authors: M. Rafienia, A. Jamshidi, H. Mirzadeh, H. Mobedi

Gamma irradiation effects on the release of betamethasone from the biodegradable in situ forming systems

Conference: ISPST 8th International Seminar on Polymer Science and Technology. 2007;
(Speech)

Authors: M. Rafienia, H. Mirzadeh, H. Mobedi and A. Jamshidi

Influence of poly(lactide-co-glycolide) type and gamma irradiation on the betamethasone acetate release from in situ forming systems

Conference: 34th Annual Meeting & Exposition of the Controlled Release Society. 2007;

(Poster)

Authors: Mohammad Rafienia, Hamid Mobedi, Hamid Mirzadeh, Ahmad Jamshidi

Investigating Some Effective Parameters in Betamethasone Release Rate from In Situ Forming systems

Conference: 15th Iranian Seminar of Analytical Chemistry (ISAC 15). 2007; (Speech)

Authors: M. Khanmohammadi. H. Nemati, M. Rafienia, A. Jamshidi

Investigation of drug release and 1H-NMR analysis of the in situ forming systems based on poly(lactide-co-glycolide)

Conference: ISPST 8th International Seminar on Polymer Science and Technology. 2007; (Speech)

Authors: Z. Mohamadnia, E. Ahmadi, M. Rafienia, H. Mobedi, A. Nouri

Micro particles formation, characterization and application of biodegradable Polyurethane for Controlled Released of Theophiline

Conference: TMS, 2007. 2007; (Speech)

Authors: M. Mahmoudi, F. Orang, M. Rafienia

Preparation and Evaluation of Blood Compatibility of Novel Epoxy-Modified Polyurethanes, Iran's 1st International Conference on Biomaterials

Conference: Iran's 1st International Conference on Biomaterials. 2007; (Poster)

Authors: Atefeh Solouck, Hamid Yeganeh, Mohammad Rafienia, Fariba Orang

Preparation Of Patches For Transdermal Delivery Of Glucosamine Hcl For Treatment Of Osteoarthritis

Conference: Iran's 1st International Conference on Biomaterials. 2007; (Speech)

Authors: Hossein Zehtab Minooei, Soheila Salahshoore Kordestani, Fathollah Moztarzade, Mohammad Naghie Tahmasbi, Mohammad Rafienia

Synthesis and characterization of biodegradable hemostas gelatin sponge for application on surgery

Conference: Iran's 1st International Conference on Biomaterials. 2007; (Speech)

Authors: Rana Imani, Mohammad Rafienia

Controlled delivery of Betamethasone from injectable in situ forming biodegradable PLGH system (In vitro study)

Conference: 10th Iranian Pharmaceutical Sciences Conference (IPSC 2006). 2006; (Speech)

Authors: Rafienia M., Mirzade H., Mobedi H., Jamshidi A., Bonakdar S.

Evaluation of Ceftriaxone release from microspheres based on starch

Conference: 8th national Congress of Microbiology. 2006; (Poster)

Authors: Leila Sadeghzadeh, Fariba Orang, Parvize Olia, Mohamade Rafienia, Shahine Bonakdar

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B) JOURNAL PAPERS

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Authors: ; \$ # & : J > \$

- 2- **Preparation and Characterization of Polyurethane Microspheres Containing Theophiline**
Journal: Journal of Bioactive and Compatible Polymers. 2006;21(9):341-349
Authors: **Mohammad Rafienia**, Fariba Orang and Shahriar Hojjati Emami
- 3- **In Vitro Evaluation of Drug Solubility and Gamma Irradiation on the Release of Betamethasone under Simulated In Vivo Conditions**
Journal: Journal of Bioactive and Compatible Polymers. 2007;22(4):443-459
Authors: **Mohammad Rafienia**, Hamid Mirzadeh, Hamid Mobedi, Ahmad Jamshidi
- 4- **Evaluation of Ceftriaxone Releasing from Microspheres Based on Starch Against Salmonella spp.**
Journal: Biotechnology. 2007;6(4):597-600
Authors: Parviz Owlia, Leila Sadeghzadeh, Fariba Orang, **Mohammad Rafienia** and Shahin Bonakdar
- 5- **Synthesis and Characterization of Biodegradable Hemostat Gelatin Sponge for Surgery Application**
Journal: Iranian Journal of Pharmaceutical Sciences. 2008;4(3):201-208
Authors: Rana Imani, **Mohammad Rafienia**, Shahriar Hojjati Emami, Maryam Kabiri, Mohsen Rabbani
- 6- **Preparation and Evaluation of Blood Compatibility of Novel Epoxy-Modified Polyurethanes**
Journal: Iranian Journal of Pharmaceutical Sciences. 2008;4(4):281-288
Authors: Atefeh Solouck, Hamid Yeganeh, **Mohammad Rafienia**, Fariba Orang
- 7- **Investigation of drug release from biodegradable polymeric delivery system by infrared spectrometry**
Journal: International Journal of Polymer Analysis and Characterization. 2008;13(5):353-368
Authors: Mohammadreza Khanmohammadi, Hossien Nemati, **Mohammad Rafienia**, Ahmad Jamshidi, Amir Bagheri Garmarudi

- 8- **A Study of Starch Addition on Burst Effect and Diameter of Polyurethane Microspheres Containing Theophiline**
Journal: Polymers for Advanced Technologies. 2008;19(3):167-170
Authors: Morteza Mahmoudi, Fariba Orang and Shahriar Hojjati Emami, **Mohammad Rafienia**
- 9- **Synthesis, Characterization and Preliminary Investigation of Blood Compatibility of Novel Epoxy-modified Polyurethane Networks**
Journal: Journal of Bioactive and Compatible Polymers. 2008;23(3):276-300
Authors: Hamid Yeganeh, Fariba Orang, Atefeh Solouk, and **Mohammad Rafienia**
- 10- **Comparison of the effect of hydrophilicity on biocompatibility and platelet adhesion of two different kinds of biomaterials**
Journal: Iranian Journal Of Pharmaceutical Sciences. 2008;4(1):37-44
Authors: Bonakdar Shahin,Orang Fariba, **Rafieinia Mohamamd**, Imani Rana
- 11- **Influence of Poly (lactide-co-glycolide) Type and Gamma Irradiation on the Betamethasone Acetate Release from the In Situ Forming Systems**
Journal: Current Drug Delivery. 2009;6(2):184-191
Authors: **Mohammad Rafienia**, Shahriar Hojjati Emami, Hamid Mirzadeh, Hamid Mobedi, Saeed Karbasi
- 12- **Effect of Freezing and Thawing Process on Betamethasone Acetate Release from Polyvinyl alcohol Nanospheres**
Journal: Solid State Phenomena. 2009;151:159-165
Authors: Shahin Bonakdar, Seyed Ali Poursamar, **Mohammad Rafienia**, Mohammad Shokrgozar, Afshin Farhadi, Motahhareh Hosseini
- 13- **Investigation of drug release and ¹H-NMR analysis of the in situ forming systems based on poly(lactide-co-glycolide)**
Journal: Polymers for Advanced Technologies. 2009;20(1):48-57
Authors: Z. Mohamadnia, E. Ahmadi, **M. Rafienia**, H. Mirzadeh and H. Mobedi
- 14- **Application Of Artificial Neural Networks In Controlled Drug Delivery Systems**
Journal: Applied Artificial Intelligence: An International Journal. 2010;24(8):807-820
Authors: **Mohammad Rafienia**; Mahmood Amiri; Mohsen Janmaleki; Alireza Sadeghian
- 15- **Preparation and characterization of absorbable hemostat crosslinked gelatin sponges for surgical applications**
Journal: Current Applied Physics. 2011;11(3):457-461
Authors: Kabiri, M., Emami, S.H., **Rafinia, M.**, Tahriri, M.
- 16- **Chitosan microparticles loaded with exotoxin A subunit antigen for intranasal vaccination against Pseudomonas aeruginosa: An in vitro study**
Journal: Carbohydrate Polymers. 2011;83(4):1854-1861
Authors: Shahrouz Taranejooa, Mohsen Janmalekia, **Mohammad Rafienia**, Mahdi Kamalic and Maysam Mansouri
- 17- **The effects of vitamin E and selenium on cisplatininduced nephrotoxicity in cancer patients treated with cisplatin-based chemotherapy: A randomized, placebo-controlled study**
Journal: Journal of Research in Medical Sciences. 2012; Special Issue (1):49-58.

Authors: Simin Hemati, Nafiseh Arbab Jolfaie, Nafiseh Arbab Jolfaie, **Mohammad Rafienia**, Mohammadreza Ghavamnasiri

- 18- **Coated urinary catheter by PEG/PVA/gentamicin with drug delivery capability against hospital infection**
Journal: Iranian Polymer Journal, (2013) 22:75-83
Authors: **Mohammad Rafienia**, Babak Zarinmehr, Seyed Ali Poursamar, Shahin Bonakdar, Mahdi Ghavami, Mohsen Janmaleki
- 19- **Synthesis and characterization of glutaraldehyde-based crosslinked gelatin as a local hemostat sponge in surgery: an in vitro study**
Journal: Bio-Medical Materials and Engineering, (2013) 23:211-224
Authors: Rana Imani, **Mohammad Rafienia**, Shahriar Hojjati Emami
- 20- **Double-walled microspheres loaded with meglumine antimoniate: Preparation, characterization and in vitro release study**
Journal: Drug Development and Industrial Pharmacy, (2014) 40 (6): 701-710
Authors: Ali Navaei, Morteza Rasoolian, Arash Momeni, Shahriar Emami, **Mohammad Rafienia**
- 21- **Investigation on bioactivity and cytotoxicity of mesoporous nano-composite MCM-48/hydroxyapatite for ibuprofen drug delivery**
Journal: Drug Development and Industrial Pharmacy, (2014) 40 (5):7355-7362
Authors: Hoda Aghaei, Amir Abbas Nourbakhsh, Saeed Karbasi, Roozbeh JavadKalbasi, **Mohammad Rafienia**, Nosrat Nourbakhsh, Shahin Bonakdar, Kenneth J.D. Mackenzie
- 22- **Porous starch/cellulose nanofibers composite prepared by salt leaching technique for tissue engineering**
Journal: Carbohydrate Polymers 108 (2014) 232–238
Authors: Bijan Nasri-Nasrabadi, Mohammad Mehrasa, **Mohammad Rafienia**, Shahin Bonakdar, Tayebbeh Behzad, Shahin Gavanji
- 23- **Silk Fibroin-Chondroitin Sulfate-Alginate Porous Scaffolds: Structural Properties and In Vitro Studies**
Journal: Journal of Applied Polymer Science (2014) 131 (21) 41048-41057
Authors: Mitra Naeimi, Mohammadhossein Fathi, **Mohammad Rafienia**, Shahin Bonakdar

C) BOOKS

An Introduction to Biomaterials

2012; (Translation, in Farsi)

Authors: Mohammad Rafienia, Ali Pursamar, Mahdis Shayan

Application Potentials of Microwave in NanoMagnetic Particle Hyperthermia (Book Chapter)

Publisher: Springer, 2009; (in English)

Authors: M. Janmaleki, M. Mahmoudi, M. Rafienia, and H. Peirovi

<http://www.springerlink.com/content/v5u3251787187463/>

Effect of Polymer Molecular Weight on Morphology and Particle Size of Chitosan Microspheres Prepared via Spray Drying Method (Book Chapter)

Publisher: springer. 2009; (in English)

Authors: S. Taranejoo, M. Rafienia, M. Janmaleki, M. Kamali, and L. Sadeghzadeh

<http://www.springerlink.com/content/x0m03245w7146187/>

Estimation of Betamethasone Release Profiles from an in Situ Forming System Based on the Biodegradable Polymer Using Artificial Neural Networks (Book Chapter)

Publisher: springer. 2009; (in English)

Authors: M. Amiri, M. Rafienia and A. Sadeghian

<http://www.springerlink.com/content/q61041577820n50x/>

An introduction to Tissue-Biomaterial Interactions

2008; (Translation, in Farsi)

Authors: Shahin Bonakdar, Mohammad Rafienia

Biomaterials Principles and Applications

2008; (Translation, in Farsi)

Authors: Mohammad Rafienia, Shahin Bonakdar

Encyclopedia of Biomedical Engineering

2008; (Compilation, in Farsi)

Nanoparticles and their application in controlled release of biological agents

2003; (in Farsi)

Authors: Shahriar Sharifi, Mohammad Rafienia, Esmal Jabari

THESES SUPERVISION

- | | |
|------|---|
| 2014 | <p>Synthesis and characterization of piezoelectric barium titanate nanocoating on titanium dental implant
 <i>Supervisors:</i> Mohammad Rafienia (me as Supervisor)
 <i>Student:</i> Shahram Rahmati
 <i>Place:</i> Isfahan University of Medical Sciences</p> |
| 2014 | <p>Nano-encapsulation of anti-cancer drug in water-based acrylic polymers via emulsion polymerization
 <i>Supervisors:</i> Mohammad Rafienia, Gholamali Farzi (me as Advisor)
 <i>Student:</i> Ali Rajaei
 <i>Place:</i> Hakime Sabsevari University</p> |
| 2014 | <p>Fabrication and Characterization of Poly lactic-co-glycolic Acid and Nano-zeolite Scaffold by Electrospinning as a Bone Tissue Engineering
 <i>Supervisors:</i> Mohammad Rafienia, Hosein Salehi Rezve (me as Supervisor)
 <i>Student:</i> Raheleh Davarpanah
 <i>Place:</i> Islamic Azad University of Najafabad</p> |
| 2014 | <p>Preparation and characterization of silk fibroin-chitosan composite incorporated carbon nanotubes
 <i>Supervisors:</i> Mohammad Rafienia, Hosein Salehi Rezve (me as Supervisor)
 <i>Student:</i> Shahin Ruhi
 <i>Place:</i> Islamic Azad University of Najafabad</p> |

- 2013-2014 **Preparation and characterization of nano-composite membrane based on Polycaprolactone and bioactive glass nanoparticles containing Cu**
Supervisors: Mohammad Rafienia, Mehdi Mehdi Khani (me as Supervisor)
Student: Shiva Soltani
Place: Semnan University
- 2013-2014 **Electrophoretic deposition of Nano Hydroxy apatite-Copper oxide coating on Ti-6Al-4V and evaluation of the coating properties**
Supervisors: Mohammad Rafienia (me as Supervisor)
Student: Mohamamd Hadidi
Place: Islamic Azad University of Najafabad
- 2012- **evaluation of mesenchymal stem cell differentiation into chondrocyte on silk-based scaffold containing chitosan nanoparticles**
Supervisors: Mohammad Rafienia, Mohammad Hosein Fathi (me as Supervisor)
Student: Mitra Naeemi
Place: Isfahan University of Medical Sciences- Isfahan University of Technology
- 2012-2013 **Fabrication of Poly hydroxybutyrate-Polyethylene glycol-Folic acid nanoparticles loaded by paclitaxel for drug targeting to cancer cells**
Supervisors: Mohammad Rafienia, Hamid Keshvari (me as Supervisor)
Student: Fateme Rezaee
Place: Amirkabir University of Technology
- 2012-2013 **Modelling and manufacturing the endoprosthesis of bile duct using by PU nanofibers**
Supervisors: D. Semnani, H. Hasani, Mohammad Rafienia (me as Advisor)
Student: Najmeh Moazeni
Place: Isfahan University of Technology
- 2012-2013 **Synthesis and characterization of polymer nano composites based on MCM-48 and CMK-1 as mesoporous materials and their application in adsorption and release of Ibuprofen**
Supervisors: Rouzbeh Javad Kalbasi, Mohammad Rafienia (me as Advisor)
Student: Forugh Bayat
Place: Azad University of Shahreza
- 2012-2013 **Synthesis and characterization of polymer nano composites based on KIT-5 as mesoporous materials and their application in adsorption and release of Ibuprofen**
Supervisors: Rouzbeh Javad Kalbasi, Mohammad Rafienia (me as Advisor)
Student: Ali Zirakbash
Place: Azad University of Shahreza
- 2012-2013 **Synthesis and characterization of polymer nano composites based on**

- KIT-6 as mesoporous materials and their application in adsorption and release of Ibuprofen**
Supervisors: Rouzbeh Javad Kalbasi, Mohammad Rafienia (me as Advisor)
Student: Keyvani Hafshejani
Place: Azad University of Shahreza
- 2010-2011 **Investigation of manufacturing polymer coated urethral catheter containing antibacterial drug (Gentamicine) for reducing hospital infection**
Supervisors: Mohammad Rafienia, Alireza Khavandi (me as Supervisor)
Student: Babak Zarin mehr
Place: Iran University of Science and Technology
- 2010-2011 **Fabrication and evaluation properties of Poly hydroxyl butyrate micro and nano particles and functionalized them by Folic acid for drug targeting to cancer cell**
Supervisors: Mohammad Rafienia, Hamid Mobedi (me as Supervisor)
Student: Mansureh Satari
Place: Islamic Azad University
- 2010-2011 **Evaluation of gentamicin sulfate release from poly (ethylene-co-vinyl acetate) and poly(ethylene glycol) coating of urethral catheter**
Supervisors: Mohammad Rafienia, Shahin Bonakdar (me as Supervisor)
Student: Fateme Rezaee
Place: Amirkabir University of Technology
- 2010-2011 **Preparation and characterization of bioactive Co-base alloy composite reinforced with nanobioactive glass**
Supervisors: Mohammad Hosein Fathi, Mahdi Ahmadian (me as Advisor)
Student: Razie Gharakhani
Place: Isfahan University of Technology
- 2007 - 2007 **In Vivo Evaluation of Betamethasone and Betamethasone Acetate Release from Injectable In Situ Forming PLGA Implant**
Supervisors: Mohammad Rafienia, Hamid Mobedi (me as Supervisor)
Student: Arash Momeni
Place: Amirkabir University of Technology
- 2006 - 2007 **Evaluation of Theophine Release from Starch Microspheres**
Supervisors: Mohammad Rafienia, Fariba Orang (me as Supervisor)
Student: Mahmudian
Place: Amirkabir University of Technology
- 2006 - 2007 **Synthesis & Characterization of Biodegradable Hemostat Gelatin Sponge by Carbodiimide for Surgery Application**
Supervisors: Mohammad Rafienia, Shahriar Hojjati Emami (me as Supervisor)
Student: Maryam Kabiri
Place: Amirkabir University of Technology
- 2006 - 2007 **Synthesis & Characterization of Biodegradable Hemostat Gelatin Sponge by Glutaraldehyde for Surgery Application**

Supervisors: Mohammad Rafienia, Shahriar Hojjati Emami (me as Supervisor)

Student: Rana Imani

Place: Amirkabir University of Technology

- 2005 - 2006 **Evaluation of Betamethasone and Betamethasone Acetate Release from In Situ Forming Drug Delivery Systems based on PLGA (50/50) and PLGA (75/25)**
Supervisors: Mohammad Rafienia, Hamid Mobedi (me as Supervisor)
Student: Atefe Purjahed
Place: Amirkabir University of Technology
- 2005 - 2006 **Synthesis of Biodegradable Polyurethane Microspheres to Controlled Release of Theophiline**
Supervisors: Fariba Orang (me as Advisor)
Student: Morteza Mahmudi
Place: Amirkabir University of Technology
- 2004 - 2005 **Synthesis and Characterization of Novel Biocompatible Polyurethanes and Evaluation of Their Blood Compatibility**
Supervisors: Hamid Yeganeh, Fariba Orang (me as Advisor)
Student: Atefe Soluk
Place: Amirkabir University of Technology
- 2003 - 2005 **Synthesis and Characterization of Biomedical Polyurethane based on MDI and Improving Properties Related to Suitable Diol**
Supervisors: Fariba Orang (me as Advisor)
Student: Sara Karimianpur
Place: Amirkabir University of Technology
- 2003 - 2004 **Measuring Contact Angle of Liquid with Surface**
Supervisors: mohammad rafienia, hosein rabani (me as Supervisor)
Student: Mahnaz Daliri
Place: Amirkabir University of Technology

THEORIES, DISCOVERIES AND INVENTIONS

- 2012 **Fabrication of Poly Hydroxybutyrate-Polyethylene Glycol-Folic Acid Nanoparticles For Drug Targeting To Cancer Cells**
Pioneers: Mohammad Rafienia- Mansure Satari
- 2011 **Using of Corals As Bioceramic In Restoration Of Bone Defects**
Pioneers: Mohammad Rafienia- Ahmad Toghi Eshghi
- 2008 **In Situ Forming Drug Delivery System Based on Poly Lactic-Glycolic Acid In Order To Release Corticosteroid Drugs**
Pioneers: Mohammad Rafienia- Arash Momeni Borujeni
- 2007 **Making Biodegradable Hemostat Gelatin Sponge For Surgery Application**
Pioneers: Rana Imani, Mohammad Rafienia

FOUNDINGS AND PLANNINGS

HONORS, PRIZES AND AWARDS

- 2012 Selected researcher in Biosensor Research Center during 1391 (2012)
From Isfahan University of Medical Sciences
- 2009 Selected researcher in Isfahan during 1388 (2009)
- 2007 Ranked 1nd in the Ph.D. courses in Biomedical Engineering
From Amirkabir University of Technology
- 2007 Ranked 1nd in the Ph.D. research studies in Biomedical Engineering
From Amirkabir University of Technology
- 2001 Ranked 2nd in the M.Sc. courses in Biomedical Engineering, Amirkabir
University of Technology
From Amirkabir University of Technology
- 1998 Ranked 3rd in the B.Sc. courses in Materials Engineering, Isfahan University of
Technology
From Isfahan University of Technology

RESEARCH INTERESTS

Biodegradable Materials

Injectable Biodegradable scaffolds, Biodegradable Hydrogels, Biopolymers, Biodegradable Photo-Polymerizable Polymers, Biodegradable Biocomposites

Biomaterials

Biocomposites, Bioceramics, Biocompatibility, Hemocompatibility, Sterilization Methods, Dental Materials, Surgical Alloys, porous metals, Surface Treatment of Biomaterials, Orthosis and Prosthesis

Drug delivery systems

In situ forming systems, Micro and Nano capsulation, Vaccine delivery, Drug Delivery in Tissue Engineering, Applications of Artificial Neural Networks in Drug Delivery

Biosensors

Material Science

Advanced materials, Composites, Shape Memory alloys, Selection of Materials

Tissue Engineering

Design and Fabrication of Biodegradable Scaffolds, Stem Cells, Environmental Factors, Regenerating of Different Tissues, Bioreactor Design

Multidisciplinary Scientific Researches

REFERENCES

- 1- PROFESSOR HAMID MIRZADEH, H.MIRZADEH@IPPL.AC.IR