In The Name of Allah

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Assistant Professor of Polymer Engineering,
Advanced Materials Lab., Cell Engineering Department, Royan Institute, Tehran, Iran
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Education

Ph.D. in Polymer Engineering (19.51) 2016
Iran Polymer and Petrochemical Institute (IPPI), Tehran, Iran
Thesis: Synthesis and investigation of catalytic activity of polyurethane and alginate nanostructures in organic condensation reactions and polymerization of isocyanates

M.Sc. in Polymer Chemistry (17.71) 2012
Iran Polymer and Petrochemical Institute (IPPI), Tehran, Iran
Thesis: Preparation and characterization of alginate-based polyurethane elastomers

B.Sc. in Pure Chemistry (17.63) 2010
University of Tehran, Tehran, Iran

Professional Skills

Polymers, Tissue Engineering, Catalysts, Material Chemistry, Functional materials, Nanocomposites

- Supervised more than 15 M.Sc. & Ph.D. and graduate students
- Familiar with synthesis and characterization of different chemicals

Research Interests

- Engineering of skin, cartilage and cardiovascular tissues
- Supramolecular smart hydrogels using polysaccharides
- Development of new polymers for smart drug delivery
- Commercialization of smart polymeric wound dressings and skin substitutes
- Synthesis of green polyurethanes
- Smart polymeric catalysts

Awards & Grants

2017 Ranked as superior plan in First national festival of diabetic wound dressings, Nanochallenges, National Nanotechnology Initiative.

2017 Ranked as superior business plan in First national festival of national commercialized projects, Science & Technology Parks.

2017	Ranked 3 in First festival of commercialization of amniotic derivatives, Royan Biotech.
2016	Ranked 2 in 11th festival for selection of superior Ph.D. Polymer students by Iran Polymer Society
2016	Ranked 1 in annually festival for selection of superior researcher by Royan Institute
2016	Ranked 1 in the courses part of Ph.D. program among Polymer Engineering students at Iran Polymer & Petrochemical Institute
2015	Ranked 2 in 17th National Festival of Khwarizmi Young Award
2015	Ranked 1 in First National Festival of Biological Ideas
2014	Ranked 1 in 11th National Festival of Best Idea
2014	Ranked 2nd in 5th National Festival of Iranian Youth
2013	Ranked 1 in 2nd festival for selection of superior Polymer researcher by Young Researchers and Elites Club, Tehran North Branch, Islamic Azad University
2013	Ranked 1 in 10th festival for selection of superior M.Sc. Polymer students by Iran Polymer Society
2012	Ranked 3rd in the courses part of M.Sc. program among Polymer Science and Technology students at Iran Polymer & Petrochemical Institute
2010	Ranked 2nd in the courses part of B.Sc. program among Pure Chemistry students at University of Tehran

Scientific Memberships

1) Head of Tissue Engineering group of Royan Institute
2) National Foundation of Exceptional Talents
3) Young Researchers and Elites Club, Tehran North Branch, Islamic Azad University
4) Iran Polymer Society

ISI Journal Publications (Published)

1) *Mechanical reinforcement of Gellan gum polyelectrolyte hydrogels by cationic polyurethane soft nanoparticles*, ***2018***, DOI: *https://doi.org/10.1016/j.carbpol.2018.01.028*

2) *Alginic acid: A mild and renewable bifunctional heterogeneous biopolymeric organocatalyst for efficient and facile synthesis of polyhydroquinolines*, ***2018***, DOI: *https://doi.org/10.1016/j.ijbiomac.2017.11.050*

3) *Chemical crosslinking of biopolymeric scaffolds: Current knowledge and future directions of crosslinked engineered bone scaffolds*, ***2018***, DOI: *https://doi.org/10.1016/j.ijbiomac.2017.08.184*

4) *Microparticle-Mediated Delivery of BMP4 for Generation of Meiosis-Competent Germ Cells from Embryonic Stem Cells*, ***2017***, DOI: *https://doi.org/10.1002/mabi.201600284*

5) *Transition-metal-free synthesis of supramolecular ionic alginate-based polyurethanes,* Carbohydrate Polymers, ***2017***, DOI:*10.1016/j.carbpol.2016.11.086*

6) *Seaweed makes super-tough biomaterial, Materials Today, 2016;* DOI:10.1016/j.mattod.2016.03.010

7) *A robust super-tough biodegradable elastomer engineered by supramolecular ionic interactions*. Biomaterials, **2016**; DOI:10.1016/j.biomaterials.2016.01.025

8) *Polyurethane nanomicelles: Novel eco-friendly and efficient polymeric ionic solvent for Cannizzaro reaction*. New Journal of Chemistry, **2015**; DOI:10.1039/C5NJ02313K

9) *Molecular engineering of manipulated alginate-based polyurethanes*. Carbohydrate Polymers, **2014**; DOI:10.1016/j.carbpol.2014.06.023

10) *Alginic acid: A highly efficient renewable and heterogeneous biopolymeric catalyst for one-pot synthesis of the Hantzsch 1,4-dihydropyridines.* RSC Advances, **2014**; DOI:10.1039/C4RA11801D

11) *Noteworthy impacts of polyurethane-urea ionomers as the efficient polar coatings on adhesion strength of plasma treated polypropylene*. Applied Surface Science, **2014**; DOI:10.1016/j.apsusc.2014.08.094

12) *Fast removal of malachite green dye using novel superparamagnetic sodium alginate-coated Fe_3O_4 nanoparticles*. International Journal of Biological Macromolecules, **2014**; DOI:10.1016/j.ijbiomac.2014.05.042

13) *A simple approach for morphology tailoring of alginate particles by manipulation ionic nature of polyurethanes*. International journal of biological macromolecules, **2014**; DOI:10.1016/j.ijbiomac.2014.02.029

14) *Sodium alginate: A renewable and very effective biopolymer catalyst for the synthesis of 3,4-dihydropyrimidin-2(1H)-ones*. Scientia Iranica, **2014**.

15) *Catalytic activity of aqueous cationic polyurethane dispersions: A novel feature of polyurethanes*. Applied Catalysis A General, **2013**; DOI:10.1016/j.apcata.2013.08.023

16) *Highly stretchable nanoalginate based polyurethane elastomers*. Carbohydrate Polymers, **2013**; DOI:10.1016/j.carbpol.2013.03.039

17) *Compatible compositions based on aqueous polyurethane dispersions and sodium alginate*. Carbohydrate Polymers, **2013**; DOI:10.1016/j.carbpol.2012.09.046

18) *Synthesis and characterization of calcium alginate nanoparticles, sodium homopolymannuronate salt and its calcium nanoparticles*. Scientia Iranica, **2012**; DOI:10.1016/j.scient.2012.10.005

ISC Journal Publications

1) *Variations in calcium and alginate ions concentration in relation to the properties of calcium alginate nanoparticles*. Iranian Journal of Polymer Science and Technology, **2013**.
2) *Future of conductive polyacetylene*-based polyurethanes. Iranian Chemical Engineering, **2013**.
3) *Polyurethane binders*. Polymerization, **2013**.

4) *Melt electrospinning: An overview on history, methods and application*. Polymerization, **2015**.
5) *Toughening modification of epoxy resins using polyurethanes: A Review*. Polymerization, **2017**.

Iran. Patents

1) *Synthesis of alginate-based polyurethanes and their applications in skin tissue engineering*. Ref. No: 139350140003012780, **2015**
2) *Room-temperature synthesis of polyurethanes using urethane catalysts*. Ref. No: 139350140003012821, **2015**
3) *Synthesis of alginate-based polyurethanes and their application in skin tissue engineering*. Ref. No: 139350140003012780, **2015**
4) *Alginate salts: Novel green polymeric catalysts*. Ref. No: 139250140003002703, **2013.**
5) *Synthesis and characterization of milli-sized sorbent based on calcium alginate-anhydride functional silane hybrids for adsorption of dye contaminants*. Ref. No: 13915014000303410, **2012**
6) *Multi-component reactions in aqueous anionic polyurethane dispersions with excellent yields*. Ref. No: 13915014000303334, **2012**
7) *Synthesis and characterization of calcium alginate nanoparticles*. Ref. No: 13915014000300538, **2012**

Conference Papers

More than 40 papers in different international and national conferences