



مرکز آموزشی مجازی و آزاد



دانشگاه تربیت معلم آذربایجان



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Dr. Mehrdad Mahkam is associate professor of Organic Chemistry in Faculty of Science in Azarbaijan University of Tarbiat Moallem. He has got his MSc in Organic Chemistry in 1994 and his PhD in Organic Chemistry (Polymer Science) in 2001 both from faculty of chemistry in Tehran University.

Summary of Qualifications :

I attained excellent rank among the graduates of the master's degree Course in 1991.

I attained the excellent rank among the 3000 candidates in the entrance examinations of Master of Science in chemistry in 1991.

I attained the second rank among the fifty candidates in the entrance examinations of organic chemistry Ph.D. Program in 1994.

Dr. Mahkam's current research programs are as follows:

- * Synthesis of organic/inorganic composite as drug delivery systems
- * Synthesis of biodegradable polymers for controlled delivery of protein and peptides, in the form of micro and nanoparticles.
- * Synthesis of pH responsive hydrogels designed for oral delivery of peptides.
- * Synthesis of polymeric carriers for colon- specific drug delivery systems.
- * Synthesis of polyethylene glycol derivatives as matrix or permeation enhancers for transdermal drug delivery systems.
- * Electrospinning
- * Immobilized enzyme: this can provide increased resistance to changes in conditions such as pH or temperature.
- * Molecular imprinting for sensor applications
- * Synthesis of molecular imprinting polymers as carriers for colon- specific drug delivery systems.

TEACHING EXPERIENCE:

Dr. Mahkam currently teaches Organic Chemistry, Advanced Organic Chemistry, Polymer, Synthesis of Organic Chemistry, Medicinal chemistry (Drug Synthesis), Physical Organic Chemistry, ...

Conferences Presentation:

8th Iranian Conference of Chemistry and Chemical Engineering 1994, Scientific

And Industrial Association of Iran, Tehran, Iran M. Mahkam, H. Pajohesh.

7th Iranian Seminar of Organic Chemistry 1999, University of Tehran, Tehran,

Iran, M. Mahkam

16th International Symposium of Network Polymer, 2-6 Sep 2002, Autrans, France,

M. Mahkam

4th International Symposium of Pharmaceutical Chemistry, 17-19 Sep 2003,

Istanbul, Turkey, M. Mahkam

18th International Conference on Chemical Education, 3-8 Aug 2004, Istanbul Hilton Hotel, Turkey, M. Mahkam

40th International Symposium of Macromolecules, 4-9 July 2004, Paris, France,

M. Mahkam

12th International Pharmaceutical Technology Symposium, 13-15 Sep 2004, Princess Maslak Hotel, Istanbul, Turkey, M. Mahkam

International Conference 'Sorbents for life Quality', 11-14 Oct 2004, Belgorod, Russia, M. Mahkam

11th Iranian Seminar of Organic Chemistry, 1-3 February 2005, Isfahan University of Technology, Iran, M. Mahkam

First Seminar of Medicinal & Natural Products Chemistry, Shiraz, Iran, 10-11 May 2005, M. Mahkam.

The 14th International Symposium on Organosilicon Chemistry, Würzburg, Germany, July 31-August 5, 2005, M. Mahkam

40th IUPAC Congress, Beijing, China, 14-19 Aug 2005, M. Mahkam

International Symposium Advanced Polymers via Macromolecular Engineering, Istanbul, Turkey, 15-18 Aug, 2005, M. Mahkam

23rd Conference of the European Colloid and Interface Society, Turkey, Antalya, 7-10 Sep 2009, M. Mahkam.

PUBLICATIONS:

1) H. Pajuhesh, M. Mahkam., Reaction of vinylene trithiocarbonate with chloro-sulfonyl isocyanate. *J.Sci.I.R.Iran*.169 (7), 3, 1996

2) M.Mahkam, N.Sharifi., Synthesis and Characterization of Cubane polyamides., *Polym Int* 49:260-264(2000).

3) M.Mahkam, N.Sharifi. A.A.Entezami., Regulation of controlled release of Ibuprofen from crosslinked polymer containing Cubane as a new crosslinking agent., *J. Bioact. Comp.Polym.*, 15, 396-405(2000).

4) M.Mahkam, N.Sharifi., Preparation of new biodegradable polyurethanes as a therapeutic agent., *J. Polymer Degradation and Stability*. 80(2003) 199-202.

5) M.Mahkam., Controlled-Release of Drugs from Cross-Linked polymers Containing Cubane as a Crosslinking Agent., *J. Macr. Symp*, 200 (2003) 209-216.

- 6) M. Mahkam, M.G. Assadi, R. Zahedi, M. Ramesh, S. Davaran., Linear type azo-containing polyurethanes for Colon specific drug delivery. *J. Bioact. Comp. Polym*, 19, 45-53 (2004).
- 7) K. Safa, M. Babazadeh, H. Namazi, M. Mahkam, M.G. Assadi., Synthesis and characterization of new polymer system containing very bulky tris(trimethylsilyl)methyl substituents as side chains, *Euro. Poly. J.*, 40, 459-466 (2004).
- 8) M. Mahkam, M. Allahverdipoor, Controlled release of biomolecules from pH-sensitive network polymers prepared by radiation polymerization., *Journal of drug Targeting*, 12(3) 151-156, 2004.
- 9) M. Mahkam, Controlled release of biomolecules from pH-sensitive hydrogels by radiation polymerization, *J. Bioact. Comp. Polym*, 19(3) 209-220, 2004.
- 10) M. Mahkam; M.G. Assadi; R. Zahedifar; M. Allahverdipoor; L. Doostie; J. Djozan, Synthesis and evaluation of new linear azo-polymers for colonic targeting, *J. Designed Monomers and Polymers*, 7 (4) 351 – 359, 2004.
- 11) M. Mahkam, Using pH-sensitive hydrogels containing cubane as a crosslinking agent for oral delivery of insulin, *J. Biomedical Materials Research (Applied Biomaterials)*, 15(75B), 108-112, 2005.
- 12) M. Mahkam, L. Doostie., The Relation between swelling properties and cross-linking of hydrogels designed for colon-specific drug delivery, *Journal of Drug Delivery*, 12:343–347, 2005.
- 13) Mohammad G. Assadi, Mehrdad Mahkam and Zohreh Tajrezaei, Synthesis and characterization of some organosilicon derivatives of poly 2-hydroxyethyl methacrylate with cubane as a cross-linking agent, *Journal of Organometallic Chemistry*, 690, (21-22), 4755-4760, 2005.
- 14) Mehrdad Mahkam, Mohammad Assadi, Rana Mohammadzadeh, Synthesis and characterization of crosslinked polyacrylates containing cubane and silyl groups, *Journal of Macromolecular Research*, 14(1), 34-37 2006.
- 15) M. Mahkam, R. Mohammadi, S. O. Ranaei Siadat, S. A. Mohtashameian, New pH-sensitive hydrogels for Colon-specific drug delivery, *Intl. J. Nanosci. & Nanotech, IJNN*, vol:1, 2006.
- 16) Mehrdad Mahkam, Reihaneh Mohammadi, Seyed Omid Ranaei Siadat, Synthesis and evaluation of biocompatible pH-sensitive hydrogels as colon-specific drug delivery systems, *Journal of the Chinese Chemical Society*, 53, 727-733, 2006.
- 17) M. Mahkam, R. Mohammadi, M. G. Assadi, S. O. Ranaei-siadat, M. Barshan, S. E. Ranaei-siadat, Synthesis and characterization of new cross-linked terpolymer systems containing silyl group, *Journal of Silicon Chemistry*, 2006.
- 18) M. Mahkam, R. Mohammadi, S. O. Ranaei Siadat, S. E. Ranaei-siadat, Synthesis and evaluation of pH-sensitive glycopolymers for oral drug delivery systems, *Journal of e-polymer*, vol:5, 2006.
- 19) M. Mahkam, M. Allahverdipoor, R. Mohammadi, S. O. Ranaei-siadat, M. R. Rashidi, S. Davaran, M. Barshan, S. E. Ranaei-siadat, A Designed Oral Delivery System for Insulin, *J. Bioact. Comp. Polym*, 2006.

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- 21) S. Davaran, M. R. Rashidi, J. Hanaee, A. Khani, M. Mahkam, M. Hashemi, Synthesis and Degradation Characteristics of Polyurethanes Containing AZO Derivatives of 5-Amino Salicylic Acid, *J. Bioact. Comp.Polym*, 21: 315-326, 2006.
- 22) J. J. Sardroodi, M. G. Assadi, M. Mahkam, Y. Kazemi., Activity coefficients of the species in the methanol solutions of acetaminophen and two silylated derivatives at 298.15 K, *J. Fluid Phase Equilibria*, 249, 61–66, 2006.
- 23) M. Mahkam, S. O. Ranaei Siadat, New double-walled pH-sensitive hydrogel systems containing nanoparticle drug for colon-specific drug delivery, *Intl. J. Nanosci. & Nanotech, IJNN*, vol 2, no:1, 2006.
- 24) M. Mahkam, M. G. Assadi, Z. Tajrezaei, Synthesis and characterization of new polymer systems containing 4-silylmethylstyrene units, *Journal of the Chinese Chemical Society*, 54, 759-762, 2007.
- 25) M. Galehassadi, M. Mahkam, F. Hosseinzadeh, Synthesis and characterization of new macromolecule systems for colon-specific drug delivery, *e-Polymers*, No: 028, 2007.
- 26) M. Mahkam, Double-walled polymeric drug delivery systems containing nanoparticle drug intended for colon-specific delivery, *Asian Journal of Chemistry*, 19, 2, 2007.
- 27) M. Mahkam, P. Moeini, P. shiri, S. Ali Mohtashameian, S. O. Ranaei Siadat, New nano polymer bonded drug systems for oral delivery, *J. Nano Science & Nano Technology*, 1(1), 7-12, 2007.
- 28) M. Mahkam, P. Moeini, P. shiri, S. Ali Mohtashameian, S. O. Ranaei Siadat, New modified nano Hydrogels for oral drug delivery, *J. Nano Science & Nano Technology*, 1(1), 13-19, 2007.
- 29) M. G. Assadi, M. Mahkam, Z. Tajrezaei, Modification of Styrene Polymer with Organosilicon Groups, *J. Heteroatom Chemistry*, 18(2), 2007.
- 30) M. Mahkam, New pH-Sensitive Glycopolymers for Colon-Specific Drug Delivery, *Drug Delivery*, 14(3) 147 - 153, 2007.
- 31) D. Djozan, T. Baheri, M. H. Pournaghi Azar, M. Mahkam, Preparation of New Fibers on the Basis of Codeine Imprinted Polymer, *Materials and Manufacturing Processes*, 22, 758–763, 2007.
- 32) M. Mahkam, Synthesis, characterization and evaluation of poly [glucose acrylate-methacrylic acid] hydrogels for colon-specific drug delivery, *e-Polymers*, No: 159, 2008.
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- 34) M. Mahkam, Starch-based polymeric carriers for oral-insulin delivery, *J. Biomedical Materials Research Part A*, Published Online: Apr 7 2009.

- 35) M. Mahkam, Novel Carriers for Oral Delivery of Hydrophobic Drugs, *Designed Monomers and Polymers*, 12,247–255, 2009.
- 36) M. Mahkam, N. Poorgholy, L. Vakhshouri, Synthesis and Characterization of Novel pH-Sensitive Hydrogels Containing Ibuprofen Pendants for Colon-Specific Drug Delivery, *Macromolecular Research*, 17(9), 709-713, 2009.
- 37) M. Mahkam, Bioadhesive alginate copolymers as platforms for oral delivery of insulin, *Nature and Science*, 7(6), 61-69, 2009.
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