

Academic Resume

Mohammad Reza Zamanloo

Associate professor of organic-polymer chemistry

Department of Chemistry, Faculty of Basic Science, University of Mohaghegh ardabili.

mrzamanloo@uma.ac.ir

045-33505181 (Tel Room)

RESEARCH INTERESTS

1. Photo- and electro-chromic materials based on Aromatic diimides (Molecular and polymeric forms).
2. Dye sensitized solar cells based on novel dyes (Azo and other dye types).
3. Amphiphilic polymer micellar assemblies for dye solubilizing, drug encapsulation and delivery.

EDUCATION

PhD in Organic Chemistry, August 2003 – Isfahan University of Technology, Isfahan, Iran

MSc in Organic Chemistry, September 1997 – Sharif University of Technology, Tehran, Iran

BSc in Chemistry, February 1994 – Tabriz University, Tabriz, Iran

Paper Publications

1. Aromatic Poly(Amide-Ether)s Containing Naphthalene and Methylene Unites

M. R. **Zamanloo**, Y. Mansoori, G. H. Imanzadeh and S. Taghizadeh.

Polym., Sci., Ser. B, 52, 26-34, **2010**.

2. Novel Optically Active Poly(Amide_Imide)s Derived from L_Aspartic Acid

M. R. **Zamanloo**, G. H. Imanzadeh, Y. Mansoori and M. H. Karimi.

Polymer Science, Ser. B, 53 (5-6), 267–277, **2011**.

3. A Novel Barbituric Acid–Based Azo Dye and its Derived Polyamides: Synthesis, Spectroscopic investigation and Computational Calculations

M. R. **Zamanloo**, Amir nasser Shamkhali, Masoumeh Alizadeh, Y. Mansoori and G. H. Imanzadeh.

Dyes and Pigments, 95, 587-599, **2012**.

4. Polymer–clay nanocomposites via chemical grafting of polyacrylonitrile onto cloisite 20A

Y Mansoori, K Roojaei, MR **Zamanloo**, G Imanzadeh

Bulletin of Materials Science 35 (7), 1063-1070, **2012**.

5. Synthesis and properties of new polyimide/clay nanocomposite films

Y Mansoori, SS Sanaei, MR **Zamanloo**, G Imanzadeh, SV Atghia

Bulletin of Materials Science 36 (5), 789-798, **2013**.

6. Solvent-free C-alkylation of barbituric acid in the nanocrystalline mordenite media
G Imanzadeh, S Kabiri, S Taghavi, M **Zamanloo**, Y Mansoori
Journal of the Chilean Chemical Society 58 (3), 1651-1654, **2013**.
7. Ultrasound-promoted solvent-free aza-Michael addition of p-toluenesulfonamide to fumaric esters by potassium carbonate: Synthesis of p-toluenesulfonamide derivatives
G Imanzadeh, F Kazemi, M **Zamanloo**, Y Mansoori
Ultrasonics sonochemistry 20 (2), 722-728, **2013**.
8. Nanocomposite materials based on isosorbide methacrylate/Cloisite 20A
Y Mansoori, S Hemmati, P Eghbali, MR **Zamanloo**, G Imanzadeh
Polymer international 62 (2), 280-288. **2013**.
9. New series of dimethacrylate-based monomers on isosorbide as a dental material: synthesis and characterization
Z Vazifehasl, S Hemmati, M **Zamanloo**, SM Dizaj
International Journal of Composite Materials 3 (4), 100-107, **2013**.
10. Highly compact co-poly(amide-imide)s from polycondensation of an imide-modified derivative of l-aspartic acid
M. R. **Zamanloo**, M. H. Karimi, and G. H. Imanzadeh.
e-Polymers, 14(6): 417–425, **2014**.
11. Organic-salt-mediated highly regioselective N3-alkylation of 2-thiophenytion via Michael reaction under solvent-free conditions
G.H. Imanzadeh, A Aliabadi, M **Zamanloo**
Green Chemistry Letters and Reviews 9 (2), 106-113, **2016**.
12. Dual photo-electrochromic diimides derived from aliphatic aminothiols and π -electron deficient aromatic dianhydrides
T. Abdinejad, M. R. **Zamanloo**, T. Alizadeh and N. O. Mahmoodi.
Dyes and Pigments, 146, 203-209. **2017**.
13. Photochromic and Electrochromic Diimide Synthesized Simply from Inexpensive Compounds: A Multidisciplinary Experiment for Undergraduate Students
T. Abdinejad, M. R. **Zamanloo**, T. Alizadeh and N. O. Mahmoodi and S. R. Pouran.
Journal of Chemical Education, DOI: 10.1021/acs.jchemed.7b00540. **2018**.
14. Colorimetric sensing of cyanide ion by pyromellitic diimides synthesized in one step from commercially available reactants.
T. Abdinejad, M. R. **Zamanloo**, T. Alizadeh and N. O. Mahmoodi and A. N. Shamkhali.
J. Photochem. Photobio. A: Chemistry 371, 17–24, **2019**.

15. Multi-walled carbon nanotube/barbituric acid-based dye/TiO₂ nanocomposite as a photoanode in dye-sensitized solar cell: activation of the dye with MWCNTs.

T. Alizadeh, F. Zargar and M. R. **Zamanloo**.

J. Mater. Sci.: Mater. Electr., DOI: 10.1007/s10854-019-01119-0, **2019**.

16. A novel olive oil fatty acid-based amphiphilic random polyurethane: Micellization and phase transfer application.

E. Aghaghafari, M. R. **Zamanloo**, I. Omrani and E. Salarvand.

Colloids and Surfaces A, 583, 123951, **2019**.

17. Constructing a Dual-Mode Photochromic and Intrinsically Electrochromic Device Based on Organic Salts Prepared by Acid-Base Neutralization of Pyromellitic Diimides Bearing a Carboxyl Group with Aliphatic Amines.

T. Abdinejad, M. R. **Zamanloo**, M. D. Esrafil and D. Seifzadeh.

J. Photochem. Photobio. A: Chemistry, DOI: 10.1016/j.jphotochem.2019.112162.

18. Study and optimization of parameters affecting the acetylation process of lignin sulfonate biopolymer

K. Shayesteh, G. Mohammadzadeh and M. R. Zamanloo.

International Journal of Biological Macromolecules, 163, 1810–1820, **2020**.

19. Improving the optoelectronic efficiency of novel meta-azo dye-sensitized TiO₂ semiconductor for DSSCs.

B. Seyednoruziyan, M. R. **Zamanloo**, A. N. Shamkhali, T. Alizadeh, S. Noruzi and S. Aslani.

Spectrochim. Acta A Mol. Biomol. Spectrosc., 247, 119143, **2021**, DOI: 10.1016/j.saa.2020.119143.

20. Effects of emulsified essential oils blend on performance, blood metabolites, oxidative status and intestinal microflora of suckling calves

M. Asghari, H. Abdi-Benemar, N. Maheri-Sis, R. Salamatdoust-Nobar, A. Z.M. Salem, M. R. **Zamanloo** and U. Y. Anele.

Animal Feed Science and Technology, 277, 114954, **2021**.

21. Y-shape structured azo dyes with self-transforming feature to zwitterionic form as sensitizer for DSSC and DFT investigation of their photophysical and charge transfer properties

B. Seyednoruziyan, M. R. **Zamanloo**, M. D. Esrafil, A. N. Shamkhali, T. Alizadeh and S. Noruzi.

Spectrochim. Acta A Mol. Biomol. Spectrosc., 261, 120062, **2021**.

22. Solubility and Phase Transfer of Insoluble Dyes in Organic Solvent by Polyurethane Reverse Micelle

E. Aghaghafari, M. R. **Zamanloo** and I. Omrani.

Iran. J. Polym. Sci. Technol. (Persian), 34, 443-455, **2022**.

23. Rotamerism and tautomerism in hydrazone derivatives of ethylacetoacetate: Spectroscopic features, Hammett relationships, and computational calculations

M.R. **Zamanloo**, R. Salmanzadeh, M.D. Esrafil, B. Seyednoruziyan, G.H. Imanzadeh, H. Eskandari
J. Phys. Org. Chem., Doi: 10.1002/poc.4487, **2023**.

More than 30 Presentations as Oral/Poster at National/International **Conferences**.

Supervisor of Graduated Students

Supervised MSc Dissertation

- 1) Saber Taghizadeh (MSc), Synthesis and Characterization of Naphthalenic Poly(Amide-Ether)s Containing Methylene Unites Using Direct Polycondensation: Thermal and Optical Properties, 2007.
- 2) Tooba Abdizadeh (MSc), Synthesis and Characterization of Optically Active Polymeric Gels Based on L-Cysteine: Thermal, Gel and Optical Rotation Properties, 2007.
- 3) Ahmad Shahbazi (MSc), Synthesis and Characterization of Optically Active Polym(Ester-Imide)s Based on L-Aspartic Acid: Thermal and Optical Rotation Properties, 2007.
- 4) Mohammad Hassan Karimi (MSc), Synthesize and Investigation of Physical Properties of Optically Active Co-poly(Amid-Imide)s Based on Amino acid L-Aspartic acid and Adipic acid, 2008.
- 5) Mojtaba Akbarzadeh (MSc), Synthesize and Characterization of Novel Water Soluble and Carboxy Functional Poly(Ester-Imide)s Based on L-Aspartic Acid and Polyethyleneglycols, 2009.
- 6) Gila Wazifeh (MSc), Synthesize of Novel Derivatives of Dimethacrylic Monomers Based on Isosorbide and Preparation of Their Biocompatible Polymers, 2009.
- 7) Maasoom Alizadeh (MSc), Synthesize and Studying of Physical Properties of Amidic Polymers containing Azoic oxochromes Based on Barbituric Acid Derivatives, 2010.
- 8) Mohammad Shahbazi (MSc), Optically Active Poly(Amid-Imide)s Based on Amino Acid L-cysteine: Synthesis, Characterization and Investigation of Properties Such as Thermal, Viscosity and Optical Activity, 2010.
- 9) Mojtaba Karimipour (MSc), Synthesize and Investigation of Physical Properties of Self Colored Polyamides Based on Azo Functions from Barbituric Acid Derivatives, 2010.
- 10) Shahram Mohammadzadeh (MSc), Hyperbranched Polymers Derived from Amino acid L-Cysteine and Pyromellitic Dianhydride, 2011.
- 11) Seyyedabolfazl Seyyedi (MSc), Hyperbranched Polymers based on Amino acid L-Cysteine and Benzophenonetetracarboxylic Dianhydride, 2011.
- 12) Bahareh Seyyed Noroozian (MSc), Synthesis and Characterization of Azoic Polymers Containing Pyrimidine and Barbituric Heterocyclic Rings, (Work in progress).
- 13) Sepideh Lahooti (MSc), Synthesis of Organic-Inorganic Hybrid Self-colored Polymers from Azo-containing Heterocyclic Monomers, 2012.
- 14) Parinaz Mortazavi (MSc), Synthesis and Characterization of Nanostructured Hyperbranched Polyamides from Amino Acid Derivatives, 2013.
- 15) Kobra Rahimi (MSc), Synthesis and Characterization of Nanostructured Hyperbranched Polyesters from L-Aspartic acid, 2013.
- 16) Bahareh Seyyed Noroozian (MSc), Synthesis and Characterization of Azoic Polymers Containing Pyrimidine and Barbituric Heterocyclic Rings, 2013.

- 17) Roobab, Aslani (MSc), Nanostructured hyperbranched azo-polymers based on pyrazolone heterocyclic rings: synthesis, characterization and spectroscopic investigations, 2013.
- 18) Mona Moosavi (MSc), Synthesis and characterization of nanostructured hyperbranched polyamides containing imidazole ring, 2014.
- 19) Naser Fattahi, Nanostructured hyperbranched azo-polymers based on pyrazolone heterocyclic rings: synthesis, characterization and spectroscopic investigations. 2015.
- 20) Fatemeh babazadeh (MSc), Synthesis and Characterization of Polyimides Containing Imidazole Ring and Investigation of Membrane Applications. 2016.
- 21) Mostafa Saleh Shahneshin (MSc), Synthesize, Characterization and Studying of Optical and Physical Properties of Polyamides with azo-benzene Side chain, based on N,N-Bisethanol aniline. 2018.
- 22) Roghayyeh Salmanzadeh (MSc), Enolizable Azo Dyes: Synthesis, Characterization, and Investigation of Optical Properties, 2019.
- 23) Hadi Eatesami (MSc), Synthesis, characterization and investigation of polybenzimidazoles containing ether linkages, 2000.
- 24) Zahra Adham (MSc), Synthesis, Characterization and Investigation of Micelling Properties of Amphiphilic Polyurethanes Based on PEG, 2021.
- 25) Mohsen Moadeli (MSc), Synthesis and characterization of Nanostructured amphiphilic polyurethane based on bio-sourced as delivery systems, 2022.
- 26) Arezu Seddig (MSc), Azo-pyrimidine dyes complexed to BF₂ and Cu (II): synthesis, characterization and investigation of opto-electrochemical properties, 2022.

Supervised PhD Thesis

- 1) Taleb Abdinejad (**PhD**), Synthesis and investigation of photo- and electrochromic properties of compounds obtained from the reaction of 2-aminothiols with various aromatic anhydrides, 2018.
- 2) Eham Aghaghaffari (**PhD**), Synthesis and characterization of nanostructured amphiphilic polyurethane based on bio-sourced materials and its application as delivery system, 2021.
- 3) Bahareh Seyyednoroozian (**PhD**), Manufacture and photovoltaic performance of dye sensitized solar cells based on novel azo-dye sensitizers and investigation of their performance by expanding the π bridge in the form of series and parallel structures, 2021.

Supervising current PhD and MSc students

- 1) Seyyedabolfazl Seyyedi (PhD),
- 2) Smaneh Heydari (PhD),
- 3) Sheyda Moradi (PhD),
- 4) Zahra Adham (PhD),
- 5) Rasool Peyrovi (MSc),
- 6) Hamed Ghaderi (MSc).

More than **25 advised** PhD and MSc students.

MEMBERSHIPS / AFFILIATIONS

دروس تدریس شده:

- کارشناسی شیمی (شیمی آلی ۱، ۲، ۳، جداسازی و شناسایی ترکیبات آلی، کاربرد طیف سنجی در شناسایی ترکیبات آلی، مبانی شیمی پلیمر به همراه آزمایشگاههای دروس مرتبط).
- کارشناسی ارشد (شیمی فیزیک آلی، شیمی آلی پیشرفته، سنتز پلیمر، و مباحث نوین در شیمی آلی ارشد).
- دکتری (شیمی پلیمر پیشرفته، مباحث نوین در شیمی آلی)

فعالیت های اجرایی:

- مدیر گروه شیمی، ۵ سال ۹۵-۹۰.
- راهاندازی آزمایشگاههای شیمی آلی آموزشی و تحقیقاتی.
- مشاور انجمن شیمی دانشجویی (در حال حاضر).