

Hanieh Shaki

Assistant Professor at Golestan University (GU)
Department of Chemical Engineering,
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Personal Information

Nationality: Iranian
Date of Birth: August 18, 1984
Place of Birth: Gorgan, Golestan, Iran
Gender: Female

Educational Background

2011 - 2015 Amirkabir University of Technology (AUT), Tehran, Iran

Ph.D. Polymer Engineering

GPA: 17.88/20

Dissertation: *“Synthesis of antimicrobial dyes based on naphthalimide derivatives and investigation of properties and applications of them in dyeing of textile fabrics”*

2008 - 2010 Institute for Color Science and Technology, Tehran, Iran

M.Sc., Polymer Engineering

GPA: 17.70/20

Thesis: *“Synthesis of novel dyes based on naphthalimide and investigation of antimicrobial properties of them”*

2003 - 2007 Amirkabir University of Technology (AUT), Tehran, Iran

B.Sc., Polymer Engineering

Thesis: *“Synthesis of indigocarmine from indigo and investigation of spectral properties”*

- **2002 - 2003** , Pre-University Certificate: Farzanegan Pre-University Center and High School, Aliabad, Iran
GPA:19.20/20.00

Research interest

- Application of polymers and nanofibers in tissue engineering and medical
- Decolorization of dyes using polymer membranes from colored wastewastewater.
- Application of polymers and nanofibers in removal of water and wastewater pollutants
- Production of nanofibers with different technics (Align nanofibers, Core shell nanofibers, Blend nanofibers)
- Synthesis of antimicrobial dyes and polymers and investigation of application of them.
- Investigation and evaluation of removal of heavy metal ion from water and wastewater by polymeric nanofibers.

Teaching courses

- Advanced Heat Transfer
- Heat Transfer
- Principles of Polymer Engineering
- Material & Energy Balance in Chemical Processes
- Organic Chemistry

Publications

Journal Papers

- 1 H Shaki, K Gharanjig, S Rouhani, A Khosravi (2010) “Synthesis and photophysical Properties of some novel fluorescent dyes based on naphthalimide derivatives.”, *Journal of Photochemistry and Photobiology A: Chemistry*, 216 (1), 44-50.
- 2 H Shaki, K Gharanjig, S Rouhani, A Khosravi, J Fakhar_(2012), “Synthesis and application of some novel antimicrobial monoazonaphthalimide dyes: synthesis and characterisation “*Coloration Technology*, 128 (4), 270-275.

- 3 H Shaki, K Gharanjig, A Khosravi.(2015), “Synthesis and investigation of antimicrobial activity and spectrophotometric and dyeing properties of some novel azo disperse dyes based on naphthalimides”. *Biotechnology progress* 31 (4), 1086-1095.
- 4 H Shaki, K Gharanjig, A Khosravi, (2015) "Spectral, dyeing and antimicrobial properties of some monoazo naphthalimide dyes on polyamide", *Indian Journal of Fibre & Textile Research*. 40 (4) 420-425.
- 5 H Shaki, K Gharanjig, A Khosravi, A Mahboubi. (2015) "Synthesis and Biological Properties of Novel Cationic Fluorescent Dye", *International Journal of Technical Research and Applications*, 103-106.
- 6 H Shaki, A Khosravi, K Gharanjig, A Mahboubi.(2016) “Investigation of synthesis, characterization, photophysical and biological properties of novel antimicrobial fluorescent naphthalimide derivatives” *Materials Technology* 31 (6), 322-331.
- 7 H Shaki, A Khosravi, K Gharanjig. (2016) “Novel Cationic Dye Based on Naphthalimide: Part 1: Synthesis, Characterization and Evaluation of Biology Efficacy as Antimicrobial Agent”, *Prog. Color Colorants Coat.* 9 (4), 261-268.
- 8 H Shaki. (2017) “Studies on UV-Visible, Fluorescent Spectral Properties and Solvatochromic behavior of Naphthalimide Compound Containing Quaternary Ammonium.”, *Prog. Color Colorants Coat.* , 10, 163-172.
- 9 E Zamani, H Shaki, M Rafizadeh, A Khosravi, M Pilehkouhi. (2017) “Synthesis and characterization of novel self-colored PET (polyethylene terephthalate) by step-growth polymerization containing dye based on 1, 8-naphthalimide groups”, *Fibers and Polymers* 18 (8), 1431-1437.
- 10 H Shaki, A Khosravi, K Gharanjig. (2017) “Novel self-coloured polymers based on new fluorescent naphthalimide derivatives: synthesis, characterisation and photophysical properties”. *Pigment & Resin Technology* 46 (3), 244-250.
- 11 H. Shaki, (2018) “Novel monoazo disperse and cationic dyes: preparation, structure investigation, study of spectroscopic, antibacterial and antifungal potential”. *Monatshefte für Chemie - Chemical Monthly*. <https://doi.org/10.1007/s00706-017-2130-6>.
- 12 Milad Pilehkouhi, Hanیه Shaki, Alireza Khosravi, Manochehr Khorasani , Ehsan Zamani, (2018) “Synthesis and Characterization of a Fluorescent Water-Borne Polyurethane Based on a Novel Naphthalimide Dye”. *Journal of Macromolecular Science, Part B*, <https://doi.org/10.1080/00222348.2018.1435501>.

Conference Papers

- 1 H Shaki. "Self-colored Methyl Methacrylate Polymer (PMMA) Based on Naphthalimide Derivatives". 1st National Conference on Gas and Petrochemical Processes, 2017.
- 2 H Shaki. "Studying of a new polymerisable fluorescent dye containing sulfonamide moiety". 1st National Conference on Gas and Petrochemical Processes, 2017.
- 3 H Shaki. "Synthesis and Characterization of fluorescent PET based on Naphthalimide dye". 12th International Seminar on Polymer Science and Technology, Iran, 2016.
- 4 H Shaki. "Synthesis and biological properties of novel cationic fluorescent dye", 8th International Conference on Researches in Engineering, Technology and Sciences (ICRETS), Istanbul, Turkey, 2015.
- 5 H Shaki. "Investigation of synthesis two novel fluorescent dyes and their properties". Second International Conference on Advances in Applied Science and Environmental Engineering, Kuala Lumpur, Malaysia, 2014.
- 6 H Shaki. "A novel fluorescent polymerisable dye based on naphthalimide derivatives: synthesis and characterization". 11th International Seminar on Polymer Science and Technology (ISPST 2014), 2014.
- 7 H Shaki. "A novel yellow-green fluorescent dyes based on 1,8-naphthalimides ". 5th International Color and Coatings Congress (ICCC 2013), Iran, 2013.
- 8 H Shaki. "Synthesis, Characterization and Antimicrobial Activity of a Monoazo Dye Based on Quinoline". Textile Bioengineering and Information Symposium TBIS 2012, Ueda, Japan, 2012.
- 9 H Shaki. "Synthesis of a monoazo disperse dye based on benzthiazole and investigation of its antimicrobial and spectral properties". 13th Iranian National Chemical Engineering Congress & 1st International Regional Chemical and Petroleum Engineering, Iran, 2010.
- 10 H Shaki. "Synthesis and characterization of two novel intermediates of dyes based on naphthalimide". 13th Iranian National Chemical Engineering Congress & 1st International Regional Chemical and Petroleum Engineering, Iran, 2010.
- 11 H Shaki. "Synthesis and Characterization of 4- Nitro-N-2-Aminomethylpyridine 1,8-Naphthalimide". 3th International Color and Coatings Congress, Iran, 2009.
- 12 H Shaki. "Synthesis of an acidic dye by sulfonation of indigo with excellent wash fastness". The 1st International and the 7th National Conference on Textile Engineering, Iran, 2009.

Work Experiences

- Assistant Professor, *Golestan University, Department of chemical engineering, 2016- present.*
- Lecturer at Amirkabir University of Technology, Synthesis of intermediate and dyes Laboratory, 2011-2015.
- Research Assistant at Amirkabir University of Technology, Polymer Engineering Department, Synthesis of intermediate and dyes Laboratory, 2010-2015.
- Research Assistant at Institute for color science and technology, dyes Laboratory, 2008-2012.

Academic Honors

- Selected as the Best Article Presenter in The 4th International Color and Coatings Congress, 2011, Iran

Special skills

- Expert with MATLAB Software
- Familiar with laboratory work
- Chemical Structure Software: Gaussian program, ChemDraw, ChemSketch, IsIs Draw.