

S. Hessam M. Mehr

Department of Chemistry
University of British Columbia
D223 - 2036 Main Mall
Vancouver, BC V6T 1Z1

Phone: +1 (778) 322-5954
hessam@chem.ubc.ca
<http://groups.chem.ubc.ca/macLachlan>

Objectives

- Academic work on supramolecular control of structure and reactivity and its application to the development of more sustainable chemistry
- Contributing to the field of chemistry in other areas such as open scholarly communication, chemical education, software, and commercialization

Areas of research interest

Supramolecular chemistry, organic reaction development, scientific computation, chemical education

Education

Doctor of Philosophy Chemistry, *University of British Columbia*, Vancouver, Canada

Supervisor: Prof. Mark MacLachlan

2011–

Bachelor of Science Electrical Engineering, *Sharif University of Technology*, Tehran, Iran

Supervisor: Prof. Khashayar Mehrani

2005–2009

Publications

- Mehr, S. H. M.; Fukuyama, K.; Bishop, S.; Lelj, F.; MacLachlan, M. J. "Deuteration of Aromatic Rings Under Very Mild Conditions Through Keto-Enamine Tautomeric Amplification" *J. Org. Chem.*, **2015**, Accepted
- Mehr, S. H. M.; Giese, M.; Qi, H.; Shopsowitz, K.; Hamad, W. Y.; MacLachlan, M. J. "Novel PPV/Mesoporous Organosilica Composites: Influence of the Host Chirality on a Conjugated Polymer Guest" *Langmuir*, **2013**, 29 (40), 12579–12584
- Frischmann, P.D.; Mehr, S. H. M.; Patrick, B. O.; Lelj, F.; MacLachlan, M. J. "Role of Entropy and Autosolvation in Dimerization and Complexation of C₆₀ by Zn₇ Metallocavitands" *Inorg. Chem.*, **2012**, 51 (6), 3443–3453
- Mehr, S. H. M.; Khorasani, S. "Influence of asymmetry on the band structure of photonic crystals" in *OPTO*, International Society For Optics And Photonics, **2010**, 76091–76091
- Mehr, S. H. M.; Bahraini, M. "eXAM: A Distributed Online Examination System" in *18th International Conference on Chemical Education*, IUPAC, **2004**, Turkey

Talks and poster presentations

Kinetics by NMR: A Live Demonstration 8th Annual VIVA NMR Symposium, August, 2014, Vancouver

Using Tautomers for Gentle Deuteration of Benzene Rings 97th Canadian Chemistry Conference and Exhibition, June, 2014, Vancouver

Macrocycles as Functional Materials Canada-Japan Joint Symposium on Supramolecular Nanomaterials Science, May, 2012, Whistler

Prior work

Summer 2010

Supervisor: Prof. Sina Khorasani

IPM + Sharif University of Technology

Computational study of light scattering by metal-patterned dielectric slabs

Summer, Fall 2009

Supervisor: Prof. Khashayar Mehrany

Sharif University of Technology

(BSc. Thesis) Time-domain study of beam scattering by finite-sized photonic crystals

Spring, Summer 2008

Institute of Biochemistry & Biophysics (IBB)

Monte Carlo study of DNA damage by gamma rays

University of Tehran

Leadership and service

Vice president Chemistry Graduate Student Society (CGSS), UBC, 2013–2014

Presenter/facilitator *Alumni Weekend* chemistry outreach event, UBC, 2012, 2013, 2014

Presenter/facilitator *Chemistry Field Trips* for high school students, UBC, 2012, 2013, 2014

Presenter/facilitator *Chemistry Beyond the Magic* open house, UBC, 2011, 2012, 2013, 2014

Mathematical illustrator Shahshahani, S. M. "Calculus" (in Persian) ¹

Teaching experience

Shared Instrument Facility (TA) University of British Columbia, 2012–

Chem 121/123 (TA) University of British Columbia, 2011–2012

Organic Chemistry Farzangan High School, 2005–2010

Digital Signal Processing Lab (TA) Sharif Univ. Tech., 2009–2010

Chemistry for the IChO Allameh Helli High School, 2009–2010, 2004–2006

Electromagnetics (TA) Spring 2009, Sharif Univ. Tech.

Supervision

Marcus Farnfield Salicyclideneamines as linker units 2013–2014 (BSc)

Stephanie Bishop Facile H/D exchange in salicyclideneamine derivatives 2013–2014 (BSc)

Mahboobeh Maghami Tautomerism in Schiff base macrocycles 2014–2015 (PhD)

Computer skills

Computational chemistry Gaussian, Psi4

Programming Python, C, Go, HTML/CSS/Javascript

Numerical/symbolic computing MATLAB, SciPy, Mathematica

Languages

Farsi Native

English Near native

French, Italian Fair

Japanese Basic

¹ISBN: 978-964-318456-8, **2008**, Fatemi Publications, Tehran, Iran