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AREAS OF RESEARCH INTEREST

Staged programming, compilation and reasoning on domain-specific knowledge
Closed-loop chemical discovery using novel software and automation techniques
Logic/probabilistic programming in the large

EMPLOYMENT

Post-doctoral research assistant Cronin Lab, *University of Glasgow*, Glasgow, United Kingdom
Autonomous chemical discovery and synthesis 2018–
Researcher Drug Analysis Service, *Health Canada*, Burnaby, Canada
Automatic NMR analysis of mixed drug samples 2017–2018

EDUCATION

Doctor of Philosophy Chemistry, *University of British Columbia*, Vancouver, Canada
Supervisor: Prof. Mark MacLachlan 2011–2017
Bachelor of Science Electrical Engineering, *Sharif University of Technology*, Tehran, Iran
Supervisor: Prof. Khashayar Mehrany 2005–2009

PUBLICATIONS

Catalyst: The Metaphysics of Chemical Reactivity
Cronin, L.; Mehr, S. H. M.; Granda, J. M. *Chem*, **2018**, 4 (8), 1759–1761

Controlling Ligand Exchange through Macrocyclization
Carta, V.; Mehr, S. H. M.; MacLachlan, M. J. *Inorganic chemistry*, **2018**, 57 (6) 3243–3253

Turing the tautomeric behaviour of tris(salicylaldimines)
Mehr, S. H. M.; Oshima, H.; Carta, V.; Patrick, B. O.; White, N. G.; MacLachlan, M. J. *Org. Biomol. Chem*, **2018**, 15 (39), 3243–3253

Formylation of phenols using formamidinium acetate
Mehr, S. H. M.; Depmeier, H.; Fukuyama, K.; Maghami, M.; MacLachlan, M. J. *Org. Biomol. Chem.*, **2017**, 15 (3), 581–583

Stabilization of a Strained Heteroradialene by Peripheral Electron Delocalization
Mehr, S. H. M.; Patrick, B. O.; MacLachlan, M. J. *Org. Lett.*, **2016**, 18 (8), 1840–1843

Deuteration of Aromatic Rings Under Very Mild Conditions Through Keto-Enamine Tautomeric Amplification
Mehr, S. H. M.; Fukuyama, K.; Bishop, S.; Lelj, F.; MacLachlan, M. J. *J. Org. Chem*, **2015**, 80 (10), 5144–5150

Novel PPV/Mesoporous Organosilica Composites: Influence of the Host Chirality on a Conjugated Polymer Guest
Mehr, S. H. M.; Giese, M.; Qi, H.; Shopsowitz, K.; Hamad, W. Y.; MacLachlan, M. J. *Langmuir*, **2013**, 29 (40), 12579–12584

Role of Entropy and Autosolvation in Dimerization and Complexation of C₆₀ by Zn₇ Metallocavitands
Frischmann, P.D.; Mehr, S. H. M.; Patrick, B. O.; Lelj, F.; MacLachlan, M. J. *Inorg. Chem.*, **2012**, 51 (6), 3443–3453

Influence of asymmetry on the band structure of photonic crystals
Mehr, S. H. M.; Khorasani, S. in *OPTO*, International Society For Optics And Photonics, **2010**, 76091–76091

eXAM: A Distributed Online Examination System
Mehr, S. H. M.; Bahraini, M. in *18th International Conference on Chemical Education*, IUPAC, **2004**, Turkey

TALKS AND POSTER PRESENTATIONS

Badass Bonding — Unsettled Electrons in Shape-Shifting Molecules

Inorganic Discussion Group, Department of Chemistry, 2016, UBC

A Switch in Character: Deriving Novel Reactivity from Tautomerism

ISMSC 2015: 10th International Symposium on Macrocyclic and Supramolecular Chemistry, 2015, Strasbourg

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

LEADERSHIP & SERVICE

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

Presenter/facilitator *Chemistry Field Trips* for high school students, UBC, 2012–2016

Presenter/facilitator *Chemistry Beyond the Magic* open house, UBC, 2011–2015

Mathematical illustrator Shahshahani, S. M. *Calculus*, 2007–2008¹

TEACHING EXPERIENCE

Shared Instrument Facility (TA) University of British Columbia, 2012–2016

Organic Chemistry Farzanegan High School, 2005–2010

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

Chemistry for the IChO Allameh Helli High School, Tehran, Iran, 2004–2010

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

STUDENTS SUPERVISED

Hannah Depmeier Multiple-formylation of electron-rich phenols 2016 (BSc)

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

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

Marcus Farnfield Salicylaldimines as photodegradable crosslinkers 2013–2014 (BSc)

Jason Yang Molecular capsules based on salicylaldimines 2013–2014 (BSc)

SOFTWARE

Programming Julia, Prolog, Python, Clojure, C, Rust, Javascript, \LaTeX (github.com/hessammehr)

LANGUAGES

English, Farsi Native

French, Italian Fair

REFERENCES

Available upon request.

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