

# Chemistry @ the Mount

Department of Chemistry and Physics

Mount Saint Vincent University, Halifax, Nova Scotia, Canada B3M 2J6.

## Chemistry Research Opportunities for Students @ the Mount



**Dr. Katherine Darvesh**  
Associate Professor  
katherine.darvesh@msvu.ca

**Research:** Quantum Chemistry, Computational Studies of Potential Anti-Alzheimer Drugs.

**A Sample Publication:**

Darvesh, K. V.; Pottie, I. R.; McDonald, R. S.; Martin, E.; Darvesh, S. "Targetting butyrylcholinesterase for Alzheimer's disease therapy". In: *Quantum Biochemistry*, Wiley-VCH, Vol. 2, pp 757-780 (2010).

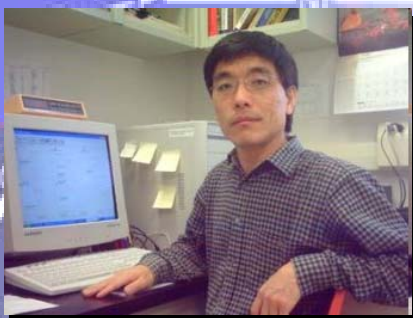


**Dr. Ian Pottie**  
Associate Professor  
ian.pottie@msvu.ca

**Research:** Organic Chemistry, Biological Chemistry, Synthetic Methodology Development.

**A Sample Publication:**

Pottie, I. R.; Higgins, E. A.; Blackman, R. A.; Macdonald, I. R.; Martin, E.; Darvesh, S. "Cysteine Thioesters as Myelin Proteolipid Protein Analogues to Examine the Role of Butyrylcholinesterase in Myelin Decompaction" *ACS Chem. Neurosci.* **2**, 151-159 (2011).



**Dr. Aibing Xia**  
Associate Professor  
aibing.xia@msvu.ca

**Research:** Organometallic Synthesis and Catalysis, Inorganic Chemistry.

**A Sample Publication:**

J. Sanford, C. Dent, J.D. Masuda, and A. Xia, "Synthesis, Characterization, and Application of Pincer-type Nickel Iminophosphinite Complexes," *Polyhedron*, **30**, 1091-1094 (2011).



**Dr. Chérif F. Matta**  
Associate Professor  
cherif.matta@msvu.ca

**Research:** Quantum Biochemistry, Theoretical Chemistry, Studies of Molecular Electron Densities.

**A Sample Publication:**

Arabi, A. A.; Matta, C. F. "Where is electronic energy stored in an adenosine triphosphate?" *Journal of Physical Chemistry A* **113**, 3360-3368 (2009).



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## Why study Chemistry?

- \* **Central science:** Meeting point of physics, biology, medicine, environmental science, etc.
- \* **Backbone of the Canadian economy.**
- \* **Industrial/Government careers** in sectors as: Pharmaceutical, oil, paint, food, materials (e.g. plastics ceramics), national defense, etc.
- \* **Academic careers:** Research and teaching in chemistry.

## Why study Chemistry at the Mount?

- \* **Small class size** (10 - 30 students).
- \* **Faculty-student interaction:** students can be involved in cutting-edge research, and in teaching/marking undergraduate labs.
- \* **Modern instruments:** GC/MS, GC-FID, HPLC, FT-IR, UV-Vis, powerful computational chemistry Linux Cluster, Silicon Graphics workstations.

## Degree Programs in Chemistry @ the Mount:

- \* **20-Unit major** (8-unit chemistry courses).
- \* **20-Unit joint honours** (10-unit chemistry courses).
- \* **Combined major** (6-unit chemistry courses).
- \* **Concentration** (4-unit chemistry courses).
- \* **Minor** (3-unit chemistry courses).

[www.msvu.ca/chemistry](http://www.msvu.ca/chemistry)

