HARRISON—MACRAE FAMILY LECTURE

The Harrison – MacRae Family Lecture Series was established through the generosity of the estate of the late John H. Harrison (Queen's B. Comm., 1949) and Elizabeth (Betty) Harrison (nee MacRae, Queen's B.A., 1949). For over a century the Harrison - MacRae family has attended Queen's University and has shown a distinct enthusiasm for the arts and sciences. Elizabeth Harrison is the daughter of Queen's graduates Alex E. MacRae (B.Sc. Chem. Eng., 1914) and Irene McAllister (B.Sc. Math & Physics, 1914), and sister to Queen's graduates Jean C. Doherty (B.A. 1939), Donalda I. Beattie (B.A. 1939), Marion E. Bradley (B.A. 1946), and brother Robert A. MacRae (B.Sc. Chem. Eng., 1954). Their son Ian Harrison (Queen's B.Sc. Chem. Phys., 1981) is a Professor of Chemistry at the University of Virginia. Numerous children, grandchildren and great grandchildren have likewise attended Queen's University. In recognition of their long affinity for Queen's, this lecture series will feature seminars by distinguished scientists on topics within the fields of chemical physics or physical chemistry.

SELECTED RECENT PUBLICATIONS

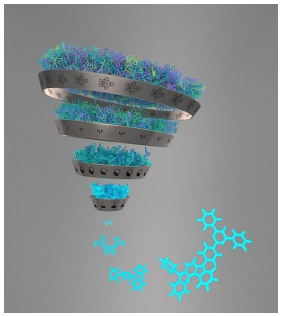
- Rafael Gómez-Bombarelli, David Duvenaud, José Miguel Hernández-Lobato, Jorge Aguilera-Iparraguirre, Timothy D. Hirzel, Ryan P. Adams, and Alán Aspuru-Guzik Automatic chemical design using a data-driven continuous representation of molecules. Preprint: arXiv:1610.02415.
- Rafael Gómez-Bombarelli, Jorge Aguilera-Iparraguirre, Timothy D. Hirzel, David Duvenaud, Dougal Maclaurin, Martin A. Blood-Forsythe, Hyun Sik Chae, Markus Einzinger, Dong-Gwang Ha, Tony Wu, Georgios Markopoulos, Soonok Jeon, Hosuk Kang, Hiroshi Miyazaki, Masaki Numata, Sunghan Kim, Wenliang Huang, Seong Ik Hong, Marc Baldo, Ryan P. Adams, and Alán Aspuru-GuzikDesign of efficient molecular organic light-emitting diodes by a high-throughput virtual screening and experimental approach. Nature Materials. 15 (2016):1120.
- Süleyman Er, Changwon Suh, Michael P. Marshak, and Alán Aspuru-Guzik. Computational design of molecules for an all-quinone redox flow battery. Chemical Science 6 (2015): 885-893.
- Brian Huskinson, Michael P. Marshak, Changwon Suh, Süleyman Er, Michael R. Gerhardt, Cooper J. Galvin, Xudong Chen, Alán Aspuru-Guzik, Roy G. Gordon, and Michael J. Aziz. A metal-free organic–inorganic aqueous flow battery. Nature 505 (2014): 195–198.
- Kaixiang Lin, Rafael Gómez-Bombarelli, Eugene Beh, Liuchuan Tong, Qing Chen, Alvaro Valle, Alán Aspuru-Guzik, Roy G. Gordon, Michael J. Aziz. Vitamin-inspired Redox Flow Battery. Nature Energy. 1 (2016):16102.

Queen's Chemistry

Department of Chemistry
Queen's University

is honoured to host the 2016 Harrison—MacRae Lecturer:

Prof. Alán Aspuru-Guzik
Harvard University



"Billions and Billions of Molecules"

Friday, November 4, 2016
11:30 AM
Room 117, Chernoff Hall

PROF. ALÁN ASPURU-GUZIK

Alán Aspuru-Guzik
Department of Chemistry and Chemical Biology
Harvard University
Cambridge, MA

Alán Aspuru-Guzik is currently Professor of Chemistry at Harvard University, where he started his independent career in 2006 and was promoted to Full Professor in 2013. Alán received his B.Sc. from the National Autonomous University of Mexico (UNAM) in 1999. He obtained a PhD from the University of California, Berkeley in 2004, where he also was a postdoctoral scholar from 2005-2006.

Aspuru-Guzik carries out research at the interface of quantum information and chemistry. In particular, he pioneered the development of algorithms and experimental implementations of quantum computers and dedicated quantum simulators for chemical systems. He has studied the role of quantum coherence in excitonic energy transfer in photosynthetic complexes. He has accelerated discovery by means of computation for organic semiconductors, organic photovoltaics, organic batteries and organic light-emitting diodes.

SELECTED HONOURS & AWARDS

- 2015 Canadian Institute for Advanced Research (CIFAR) Senior Fellow
- 2013 ACS Early Career Award in Theoretical Chemistry
- 2012 Elected Fellow, American Physical Society
- 2010 MIT Technology Review Young Innovator Under 35 (TR35)
- 2010 Everett Mendelsohn Excellence in Mentoring Award
- 2009 DARPA Young Faculty Award
- 2009 Camille and Henry Dreyfus Teacher-Scholar
- 2009 Sloan Research Fellow