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## Laurier researchers receive funding to reduce harm to the environment

WATERLOO – The release of air pollutants, chemical waste and excessive energy use all contribute to changing the earth's climate. Laurier chemistry professors **Hind Al-Abadleh**, **Louise Dawe** and **Ken Maly** are working to lessen the effects of these human activities. Their research received funding from the Canada Foundation for Innovation John R. Evans Leaders Fund, announced April 15 by the Honourable Kirsty Duncan, minister of science.

Al-Abadleh is working to understand air and water quality and composition by studying chemical reactions that produce potentially harmful gases and particles. This funding will help her understand changes to the chemical composition of air and the balance of other chemicals in the atmosphere, as well as the chemical composition of particles that eventually get deposited on trees, lakes, buildings and oceans.

"My work addresses scientific issues related to climate change and water resources, in addition to indoor and outdoor air quality," said Al-Abadleh, associate professor in Laurier's Department of Chemistry and Biochemistry. "This understanding is necessary to determine the impact of compounds in our air that can harm the climate and human health."

Dawe and Maly are examining how to design and control assemblies of molecules to form solar panel films, energy storage materials for fuel cells, and materials that capture and store greenhouse gases. Their research will lead to more environmentally friendly methods of producing these materials, which have traditionally involved the use of large volumes of solvent and keeping molecules at high temperatures for long periods of time. The research being supported here has the potential to perform chemical transformations in ways that require less energy, and with the reduction or elimination of different solvents.

"This funding will allow our research groups to develop materials in a more environmentally friendly way," said Dawe, assistant professor in Laurier's Department of Chemistry and Biochemistry. "Not only are we making strides in discovering the building blocks of new materials, but we are also working in a way that minimizes harm to the environment."

The Canada Foundation for Innovation John R. Evans Leaders Fund awarded Dawe \$40,000 for her "Green Methods for the Preparation of New Materials" project, and Al-Abadleh \$54,000 for her project, "Specialized Tools for Insitu and Online Analysis of Volatile Organic Compounds Relevant to Environmental Systems." The funding is part of nearly \$20 million in funding for 94 projects at 33 universities across Canada.

"When researchers are equipped with the right tools, they can make the kinds of discoveries that improve our environment, economy and wellbeing," said Duncan. "Investments like the one announced today will increase our capacity for innovation and discovery, as well as benefit Canadians for generations to come."

The John R. Evans Leaders Fund was developed to help Canadian universities attract and retain top research talent. For more information, visit [innovation.ca](http://innovation.ca).