Welcome to the monthly IOS Newsletter. We hope that this will serve to keep our community informed on the events and happenings around the IOS.

**Academic/Research**

Prof. Burch discovers proximity-induced high-temperature superconductivity

The latest results from IOS faculty member Prof. Ken Burch’s lab could pave the way for new high-temperature superconducting materials. As published recently in *Nature Communications*, the research team was able to induce superconductivity in a topological insulator by using Scotch tape and glass slides to place the semiconductor in close proximity to a high-temperature superconductor. For a non-technical account about the discovery, see [University of Toronto News](https://www.utoronto.ca/news) and the [Toronto Star](https://www.thestar.com).  

Prof. Steinberg explores limits to Heisenberg uncertainty principle in Physical Review Letters

A recent set of experiments performed by IOS' Prof. Aephraim Steinberg’s group have shown that the disturbance induced by a polarization measurement is less than expected from the Heisenberg uncertainty principle. While the fundamental limit imposed by the principle remains true, it appears that in this case, just trying to observe an optical property does not significantly alter it. These findings, building on recent challenges to Heisenberg’s principle by scientists over the world, were recently published in *Physical Review Letters* and received media attention from the [University of Toronto News](https://www.utoronto.ca/news) as well as the [BBC](https://www.bbc.com).

**Entrepreneurship**

**Verto Nova and Pathcore awarded OCE Market Readiness Awards**

Two IOS resident companies, [Verto Nova](https://www.vertonova.ca) and [Pathcore](https://www.pathcore.ca), have recently been awarded Market Readiness Awards from the Ontario Centres of Excellence. Designed to help researchers advance to the next stages of commercialization, the award will allow the acceleration of Verto Nova’s one-drop mass...
Minister Brad Duguid launches the Banting & Best Centre for Innovation & Entrepreneurship

On Wednesday September 19th, 2012 the Office of the President at the University of Toronto held a launch event at the IOS’ TechnoLabs space for the new Banting & Best Centre for Innovation & Entrepreneurship. Once the epicentre of academic medical research at the University of Toronto, the Banting and Best buildings have been given a fresh focus as the Banting and Best Centre for Innovation and Entrepreneurship. The new Centre is currently being populated with companies that have spun out of research performed at the University in addition to organizations dedicated to the process of commercializing research. The event included remarks from University President Dr. David Naylor, Vice-President Operations Prof. Scott Mabury, Minister of Economic Development and Innovation Brad Duguid and IOS Director Prof. Cynthia Goh, and a media report is available at the University of Toronto News.

Student Activities

IOS1500 Seminar Series October schedule
Scheduled every Wednesday during the Fall semester from 4:00 - 6:00pm in MP137 this graduate-level seminar course is the core course for the Collaborative Master’s Program in Optics organized by the IOS. It is open to students of IOS and consists of both research presentations by fellow students and faculty as well as educational lectures on various topics in optics. If you are interested in attending the presentations see the IOS 1500 - Selected Topics in Optics Research page and contact Emanuel Istrate.

October 3 - Get to know your IOS (presentations on research topics studied at the IOS)
October 10 - Introduction to numerical simulation tools for optics and photonics
October 17 - Get to know your IOS (presentations on research topics studied at the IOS)
October 24 - Introduction to lens design and optical aberrations
October 31 - Get to know your IOS (presentations on research topics studied at the IOS)