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**

**IOS Researchers set record in OLED efficiency**

IOS researcher Professor Zheng-Hong Lu from the Department of Materials Science & Engineering has developed a simple method of using chlorine to drastically reduce the complexity of traditional OLED devices and dramatically improve their efficiency all at the same time. The research group was able to engineer a one-atom thick sheet of chlorine, an abundant halogen onto the surface of an existing industry-standard electrode material (indium tin oxide, ITO) found in today’s flat-panel displays. Using this chlorinated ITO, this team of advanced materials researchers found that they were able to achieve a record efficiency of 50% at 10,000 cd/m² (a standard florescent light has a brightness of approximately 8,000 cd/m²), which is at least two times more efficient than the conventional OLED.

The full paper can be found at [Science 14 April 2011: 1202992](https://doi.org/10.1126/science.1202992).

**Entrepreneurship**

**Announcing Techno2011 Workshop**

Have you ever wished that you could turn the developments made in the lab into something that could make a difference out in the real world? Last summer, the inaugural Techno workshop series drew 35 participants, 26 speakers/workshop leaders, and nucleated 10 companies over the 4-week intensive program. Designed to educate graduate students and post-docs in the fundamentals of building a tech-based business, the hands-on sessions focus on subjects from intellectual property to corporate governance. The IOS is excited to build on the success of Techno2010 and announce that applications are now invited for Techno2011.
Techno2011 will run from June 20th to July 15th and the deadline for applications is May 20th. Go to techno.optics.utoronto.ca for more information and the application procedure. If you have questions, contact techno@optics.utoronto.ca

**Events**

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### Prof. Graham Fleming to visit the IOS as a Distinguished Visiting Scientist

Prof Graham Fleming from UC Berkeley will present a series of 3 lectures while visiting the IOS from May 25th to 27th. Graham Fleming currently serves as UC Berkeley’s Vice Chancellor for Research. In 2007, Fleming led the effort (with co-chair Mark Ratner) to define Grand Challenges in Basic Energy Science for US Department of Energy. The schedule for Prof. Fleming’s visit are as follows,

- **Grand Challenges in Energy: Supply, Demand and Consequences.** Wednesday, May 25 at 2 p.m.
- **Quantum Mechanics for Plants.** Thursday, May 26 at 2 p.m.
- **Plants Aren’t Green Solar Cells: The Regulation of Photosynthetic Light Harvesting.** Friday, May 27 at 2 p.m.

All lectures will take place McLennan Physical Labs, Room 102, 60 St. George Street, Toronto. For more information on the lectures and Prof. Graham’s visit, go to [http://www.optics.utoronto.ca/academic/dvs/fleming/](http://www.optics.utoronto.ca/academic/dvs/fleming/)

### Science Rendezvous: Close Encounters with Science!

Science Rendezvous will continue its mission to develop relationships between educational institutions, libraries, civic institutions, science-based associations, outreach programs, and business institutions to promote science awareness, culture, and literacy. Founded in 2008 by the IOS, last years event involved more than 2,000 volunteers at 300 events across Ontario in cities from Windsor to Kingston. This year we are excited that the fun and family oriented program has grown to include events from coast to coast, from St. John’s to Vancouver! To find events near you, check out [http://www.sciencerendezvous.ca/](http://www.sciencerendezvous.ca/)

### Brown Bag Lunch on Tuesdays

Every Tuesday at noon the IOS conference room hosts informal discussions with faculty and staff on a wide variety of research problems. Bring your own lunch!