Recently in chemistry:

• Supercapacitors are capacitors that are capable of charging nearly instantly and that can release energy in large, quick bursts. A team from Drexel University led by Prof. Yury Gogotsi has developed an efficient supercapacitor, building on their previous discovery of MXenes as supercapacitors (metal-carbides or –nitrides)

Titanium carbide, synthesized with dilute hydrofluoric acid and lithium fluoride, was found to be able to store up to three times the energy of previous MXenes, and up to six times the energy of conventional capacitors. Additionally, the titanium carbide supercapacitor synthesized had a texture similar to clay. The malleability associated with this texture will hopefully allow for future “supercapatteries” (capacitor-battery hybrid) of variable shape.¹

• Braunschweig, et al. has reported the first non-cluster bond (two-electron) between boron and beryllium. This bond occurred in the newly synthesized beryllium bis(diazaborolyl). The bonds were covalent and highly polar in nature, consistent with the chemistry of beryllium, with the boron atoms acting as nucleophiles and beryllium atom acting as an electrophile. The compound was synthesized by reacting lithium diazaborolide (synthesized by Yamashita) and BeCl₂. Crystallography revealed the bond-lengths of the Be-B bonds around 1.94 Å, and a planar geometry for the central Be atom.²

¹ M Ghidiu et al, Nature, 2014, DOI: 10.1038/nature13970
BU Chemia News & Events:

• **November 13:** Chemia sponsored a successful trip to Novartis Pharmaceuticals, which included a tour!

• **December 10, 6-8pm:** Come to our end of the year party! Fun will be had by all.

• Free tutoring every Tues 5-7pm, Wed 6-8pm

BU Chemistry:

• The Monday Colloquium Series of Seminars will resume **February 2, 2015**, with Prof. Eranthie Weerapana (Boston College) and hosted by Prof. Karen Allen.

• Physical Chemistry Seminars:
  • **December 10:** Prof. Bjoern Reinhard (Boston University, Dept. of Chemistry), TBA.
  • **January 6:** Prof. Tyrone Porter (Boston University, Dept. of Mechanical Engineering and Biomedical Engineering), *Stimuli-Responsive Colloidal Nanoparticles for Localized Cancer Therapy*.

• Are you an undergraduate engaged in research looking to present your work? The 7th **Annual Northeast Undergraduate Research and Development Symposium (NURDS) on March 7-8, 2015**, supported by the American Society for Biochemistry and Molecular Biology, is an opportunity to present your projects to an audience of peers. You can have an oral presentation (end of study), a poster (end/mid-study), or a data blitz (beginning of study). Registration closes on **February 10**. For more information, go to [http://www.une.edu/nurds](http://www.une.edu/nurds)

• Links for more opportunities:
  • NSF-funded REU Program: [http://www.pathwaystoscience.org/undergrads.aspx](http://www.pathwaystoscience.org/undergrads.aspx)
  • NASA-supported programs: [http://intern.nasa.gov](http://intern.nasa.gov)
  • DOE-funded Undergraduate Research Internships: [http://science.energy.org/wdts/suli](http://science.energy.org/wdts/suli)
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