



By Liz Seubert

## 462nd Brookhaven Lecture Featuring Chang-Jun Liu

### Tailoring Biomass to Biofuels and Bioproducts: Tailoring Lignocellulosic Feedstocks for a Sustainable Energy Future

October 21, 2010

Today, the world relies on fossil fuels as a primary energy resource. This resource, however, is limited and associated with rising levels of carbon dioxide in the atmosphere. Therefore, the search for renewable biofuels has become increasingly vital. Solutions thus far have focused on first-generation biofuels, such as corn ethanol and biodiesel. But this is not enough.

In the 462nd Brookhaven Lecture, "Biomass to Biofuels and Bioproducts: Tailoring Lignocellulosic Feedstocks for a Sustainable Energy Future," Chang-Jun Liu of the Biology Department will discuss how he and his colleagues are studying a more abundant and environmentally friendly renewable energy source — lignocellulosic biomass — found in plant cell walls.

The lecture will be held at 4 p.m. on Thursday, October 21, in Berkner Hall (note, unusual day). All are welcome to this free event, open to the public, with refreshments offered before and afterward. To join the lecturer for supper at an off-site restaurant after the talk, contact Ann Emrick, [emrick@bnl.gov](mailto:emrick@bnl.gov), Ext. 575 or Kathy Folkers, [folkers@bnl.gov](mailto:folkers@bnl.gov), Ext. 3415.

As Liu will explain, plant cell walls provide unlimited quantities of renewable biomass. However, the intertwined lignin and cellulose that make up the cell walls resist decomposition, so obtaining energy from cellulosic biomass is a challenge. Liu and his colleagues are exploring the biosynthesis and molecular regulation of plant cell walls, particularly that of the most formidable polymer — lignin. With this knowledge, they will develop novel strategies to tailor the plant cell wall's structure and composition for efficient biofuel and biomaterial production.

After earning his Ph.D. in plant biochemistry and molecular biology from the Shanghai Institute of Plant Physiology and pursuing his postdoctoral studies in the Samuel Roberts Noble Foundation and the Salk Institute, Liu joined BNL in May 2005 as an assistant biochemist. He was promoted to associate biochemist in

2007, and then to biochemist in 2010. His research interests focus on the biochemistry and structural biology of plant phenylpropanoid biosynthesis.

2010-2057 | INT/EXT | Media & Communications Office

This is a print-friendly version of this feature. To see the full content, go to:

<http://www.bnl.gov/newsroom/news.php?a=22057>