

BIOENERGY RESEARCH NEWS

The US DOE Advance Research Projects Agency – Energy (ARPA-E) has issued a funding announcement. One of the three categories of interest is BIOENERGY with five subcategories (biomass production, biofuel production via biological methods, biofuel production via non-biological methods, bioenergy supply chain, and other). Program URL: <https://arpa-e-foa.energy.gov/#FoaIdce3cc85c-75cb-4d73-baa5-3cee39bb6bc7>

A **bioenergy textbook** edited by Drs. Yebo Li and Samir Kumar Khanal with the title of “*Bioenergy: Fundamental and Applications*” will be published by Wiley in the summer of 2015. Table of Contents of the textbook is available at: http://oarcd.osu.edu/beems/t01_pageview/Textbook.htm

BBRL NEWS

Proposal “*Soybean oil-based polycarbonate polyols via the incorporation of CO₂ for polyurethane coatings*” prepared by Drs. Yebo Li and Xiaolan Luo was funded by **United Soybean Board** in the amount of \$96,987.

BBRL MEMBER SPOTLIGHT

Yongmei Jiang - Yongmei received her doctoral degree in Biochemical Engineering from East China University of Science and Technology. She is now a principle member in Engineering Research Center of Industrial Microbiology, Ministry of Education and an associate professor in College of Life Science at Fujian Normal University. Her primary research interest focuses on the production of bioenergy from waste biomass. She came to Wooster and happily joined the BBRL as a visiting scholar in December 2014. In winter, she is always fascinated by the blue sky and white snow and she also likes reading and cooking.



JOURNAL CLUB/GROUP SEMINAR UPDATE

The Journal Club had two meetings in January:

- **Yu Dang**- “Simulation as a tool for biopolymers design”, *Science* 346, 1055 (2014).
- **Juliana Vasco Correa**- “Engineering a fungal peroxidase that degrades lignin at very acidic pH”, *Biotechnology for biofuels*, 2014 7: 114

Upcoming events, deadlines, or grants

- **OARDC STUDENT SEEDS**: February 4, 2015
- **249th ACS National Meeting & Exposition**: March 22-26, 2015

BBRL RESEARCH

2014 Peer Reviewed Journal Publications

1. Lin, Y., Ge, X., Liu, Z., Li, Y. 2015. Integration of Shiitake cultivation and solid-state anaerobic digestion for utilization of woody biomass. *Bioresource Technology*. In press. IF: 5.04
2. Park, S., Li, Y. 2015. Integration of biological kinetics and computational fluid dynamics to model the growth of *Nannochloropsis salina* in an open channel raceway. *Biotechnology & Bioengineering*. In press. (IF: 4.16).
3. Li, Y. F., Nelson, M. C., Chen, P. H., Graf, J., Li, Y., Yu, Z. 2015. Comparison of the microbial communities in solid-state anaerobic digesters (SS-ADs) operated at mesophilic and thermophilic temperatures. *Applied Microbiology and Biotechnology* 99:969-980. (IF:3.69).
4. Yang, L., Xu, F., Ge, X., Li, Y. 2015. Challenges and strategies for solid-state anaerobic digestion of lignocellulosic biomass. *Renewable & Sustainable Energy Reviews* 44: 824-834. (IF: 5.51)
5. Ge, X., Matsumoto, T., Keith, L. Li, Y. 2015. Fungal pretreatment of albizia chips for enhanced biogas production by solid-state anaerobic digestion. *Energy and Fuel* 29:200-204. (IF: 2.73).
6. Sheets, J. P., Ge, X., Li, Y. 2015. Effect of limited air exposure and comparative performance between thermophilic and mesophilic solid-state anaerobic digestion of switchgrass. *Bioresource Technology* 180:296-303. IF: 5.04
7. Tong, X., Luo, X., Li, Y. 2015. Development of Blend Films from Soy Meal Protein and Crude Glycerol-Based Waterborne Polyurethane. *Industrial Crops and Products* 67:11-17. (IF:3.21)
8. Bao, Z., Lu, Y., Han, J., Li, Y., Yu, F. 2015. Highly active and stable Ni-based bimodal pore catalyst for dry reforming of methane. *Applied Catalysis A: General* 491:116–126. (IF: 3.67).
9. Chai M., Bellizzi1, M., Wan, C., Cui, Z., Li, Y., Wang, G. L. 2015. The NAC transcription factor OsSWN1 regulates secondary cellwall development in *oryza sativa*. *J. Plant Bio.* 58:1-8.
10. Zhu, J., Yang, L, Li, Y. 2015. Comparison of premixing methods for solid-state anaerobic digestion of corn stover *Bioresource Technology* 175: 430–435. (IF: 5.04)

11. Hu, S., Li, Y. 2015. Production of polyols and waterborne polyurethane dispersions from biodiesel-derived crude glycerol. *Journal of Applied Polymer Science* 132(6). (IF: 1.40)

Accepted with minor/major revision

12. Luo, X., Tong, X., Li, Y. 2015. Crude glycerol-based multi-branched polyols and waterborne polyurethane coatings. *Progress in Organic Coatings*. (IF: 1.85)

Submitted

13. Sheets, J. P., Yang, L., Ge, X., Wang, Z., Li, Y. 2015. Beyond land application: Emerging technologies for the treatment and reuse of anaerobically digested agricultural and food waste. *Renewable & Sustainable Energy Reviews*. (IF: 5.51)
14. Racharaks R., Ge, X., Li, Y. 2015. Cultivation of marine microalgae using shale gas flowback water and anaerobic digestion effluent as the cultivation medium *Bioresource Technology*. (IF: 5.04)
15. Vasco-Correa, J., Li, Y. 2015. Solid-state anaerobic digestion of fungal pretreated *Miscanthus sinensis* harvested in two different seasons *Bioresource Technology*. (IF: 5.04)

Editors

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