

## BBRL NEWS

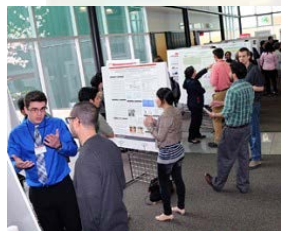
**Drs. Yebo Li and Fuqing Xu** received a \$100,000 award from Ohio Sea Grant on the development of an integrated system for nitrogen and phosphorus removal from animal manure.

**Ms. Kathryn E. Lawson** will join BBRL in the fall to start her Ph.D. study at OSU. Kathryn was awarded four years of combination of university and college fellowships!

**Mr. Johnathon Sheets** received 2nd place poster award in the Ph.D. category on the OARDC Annual Conference.

**Mr. Johnathon Sheets** received the Taiganides FABE Graduate Student of the Year Award for 2015.

**Mr. Braydi McPherson-Hathaway** received a scholarship of \$3,500 from College of Engineering for summer research in Dr. Li's lab.



Part of BBRL members (polyurethanes and biochemical) moved to the new FABE building.

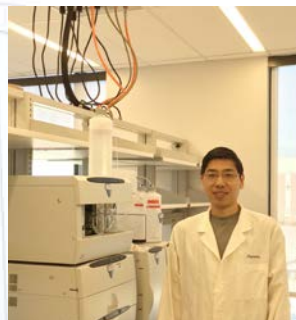


## Upcoming events, deadlines, or grants

- **2015 OSU Materials Week:** May 12-15, 2015
- **Summer term and May session begin:** May 11, 2015
- **Polymer Initiative of Northeast Ohio (PiNO) Conference:** June 12, 2015

## BBRL MEMBER SPOTLIGHT

**Chun Chang** - Chun joined BBRL as a visiting scholar in March 2015. He received his Ph.D. of Biochemical Engineering from Zhejiang University in 2007. Now, he is working at Zhengzhou University as an associate professor. He is happy to join the BBRL group and directed by Dr. Yebo Li. He is currently working with Dr. Xiaolan Luo on the research of biobased materials. In his spare time, he enjoys reading and jogging.



## BBRL RESEARCH

### 2015 Peer Reviewed Journal Publications

1. 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) In press.
2. Yan, Q., Lu, Y., To, F., Li, Y. and Yu F. 2015. Synthesis of tungsten carbide nanoparticles in biochar matrix as a catalyst for dry reforming of methane to syngas. *Catalysis Science & Technology*. (IF: 4.76) In press.
3. 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* 112(5):923-933(IF: 4.16).
4. Vasco-Correa, J., Li, Y. 2015. Solid-state anaerobic digestion of fungal pretreated *Miscanthus sinensis* harvested in two different seasons. *Bioresource Technology*. 185: 211-217 (IF: 5.04).
5. 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* 182:128-135 IF: 5.04
6. 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).
7. 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)
8. 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).

9. 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
10. 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)
11. 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).
12. Chai M., Bellizzi, M., Wan, C., Cui, Z., Li, Y., Wang, G. L. 2015. The NAC transcription factor OsSWN1 regulates secondary cell wall development in *oryza sativa*. *J. Plant Bio.* 58:1-8.
13. 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)
14. 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

15. Li, Y., Xu, F., Wang, Z. 2015. Mathematical modeling of solid-state anaerobic digestion: a review. *Progress in Energy and Combustion Science*. (IF: 16.91)
16. Lin, L., Yang, L., Li, Y. 2015. Effect of feedstock components on thermophilic solid-state anaerobic digestion of yard trimmings. *Energy and Fuel*. (IF: 2.73)

#### Submitted

17. Liu, S., Xu, F., Liew, L. N., Li, Y. 2015 Food waste addition for enhanced giant reed ensiling and methane production. *Bioresource Technology*. (IF: 5.04).
18. 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)
19. Liu, S., Ge, X., Liew, L. N., Liu, Z., Li, Y. 2015. Effect of urea addition on giant reed ensilage and subsequent methane production by anaerobic digestion. *Bioresource Technology*. (IF: 5.04).

#### 2015 Conference Presentation

1. Vasco Correa J., Ge, X., Li, Y. 2015. Enhanced Enzymatic Digestibility of *Miscanthus x giganteus* by Solid-state Fungal Pretreatment Without Sterilization.

2015 OARDC Annual Conference. Columbus, OH. April 16, 2015.

2. Sheets P. J., Li, Y. 2015. Effect of limited air exposure and comparative performance between thermophilic and mesophilic solid-state anaerobic digestion of switchgrass. 2015 OARDC Annual Conference. Columbus, OH. April 16, 2015. (**Second place award of Ph.D. category**)

#### Research grants received in 2015

- **Li, Y. Xu, F.** Development of an integrated system for nitrogen and phosphorus removal from animal manure. **Ohio Sea Grant**, \$100,000, 4/2015 -12/2016.
- Li, Y., Luo, X. Production of polycarbonate biopolyols from corn-ethanol process byproducts for PU Applications. **OARDC SEEDS program**, \$50,000, 4/2015-3/2017.
- Li, Y., Luo, X. Soybean oil-based polycarbonate polyols via the incorporation of CO<sub>2</sub> for polyurethane coatings. **United Soybean Board**, \$96,987, 4/2015-8/2016.

#### Awards Received in 2015

- **Ms. Kathryn E. Lawson** received the Ohio State University distinguished graduate fellowship and early fellowship;
- **Ms. Kathryn E. Lawson** received FAES Environmental Graduate Research Fellowship.
- **Mr. Johnathon Sheets** received 2nd place poster award in the Ph.D. category on the OARDC Annual Conference.
- **Mr. Johnathon Sheets** received the Taiganides FABE Graduate Student of the Year Award for 2015.

#### Editors

Yu Dang ([dang.115@osu.edu](mailto:dang.115@osu.edu))

Adam Khalaf ([khalaf.19@osu.edu](mailto:khalaf.19@osu.edu))