Newsletter

April 2015 (Issue 29)

Bioproducts and Bioenergy Research Laboratory (BBRL)

BIOENERG RESEARCH NEWS

About $8.7 million from USDA-DOE Biomass Research and Development Initiative program is available to fund 4- 16 projects ($500,000-$2,000,000/project) in 2015. It covers most of the topics of biomass, bioenergy and bioproducts research and development: (1) Feedstock Development; (2) Biofuels and Biobased Products Development; and (3) Biofuels and Biobased Products Development Analysis.

BBRL NEWS

Dr. Yebo Li and Yu Dang and Xiaoying Zhao attended United Soybean Board's Adhesives/Paper/Coatings/Inks Technical Advisory Panel (TAP) meeting on March 17-19, 2015 at Hilton Inn St. Louis Airport - St. Louis, MO.

Dr. Xumeng Ge gave talks to students at Tri-way High School on algae cultivation and application.

About 85 ninth graders who are a part of the "Global Impact Academy" toured our lab on March 18th.

JOURNAL CLUB/GROUP SEMINAR UPDATE

The Journal Club had one meeting in March:

- **Xumeng Ge-** Manuscript Draft

GROUP SEMINAR

One group seminar was held in March:

- **Fuqing Xu, Feng Wang** gave a presentation on their project entitled: "Comparison of digestate from solid and liquid anaerobic digesters as inocula for solid state anaerobic digestion of yard trimming".

Upcoming events, deadlines, or grants

- **FABE Spring Banquet and 100 – Year Anniversary Celebration**: April 22, 2015
- **OARDC Annual Meeting:** April 16
- **2015 OSU Materials Week**: May 12-15, 2015
- **Summer term and May session begin**: May 11, 2015

BBRL RESEARCH

2014 Peer Reviewed Journal Publications

1. 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).
2. 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).
3. 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
4. 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).
5. 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)
6. 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).
7. 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
8. 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)
9. 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).
10. 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.*
11. 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)
12. 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

13. 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)

Submitted

14. 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)
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)

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