

BBRL NEWS:

Renewable Energy Workshop 2013

The 6th Annual Renewable Energy Workshop has been scheduled for **November 19th from 8a.m. to 4p.m at the Ohio Agricultural Research and Development Center in Wooster, Ohio.** Ohio State University and industry experts will provide presentations showcasing multiple energy sources including biogas, wind, solar, biomass, and shale gas. Interested parties should refer to the brochure instructions (http://www.oardc.ohio-state.edu/bioenergy/images/REW_2013.pdf) or contact Mary Wicks (wicks.12@osu.edu) to register. Registration fees are \$40 before November 12th and \$50 after that date. Registration for college students is \$20. Lunch is included in registration fees.



Long Lin passed her Oral Proficiency Assessment this month, which will allow her to be a Teaching Assistant next year.

BBRL MEMBER SPOTLIGHT

Liangcheng Yang – Dr. Liangcheng Yang joined BBRL as a postdoctoral researcher in October, 2013. He received PhD in Agricultural and Biological Engineering from the University of Illinois at Urbana-Champaign this past summer. His primary research interests focus on environment and energy engineering, especially indoor air quality, wastewater treatment and bioenergy. Previously, he worked on a USDA project, aiming to develop a biofiltration system for ammonia emission mitigation and greenhouse gas reduction. Dr. Yang will work on anaerobic digestion and waste management during his stay in BBRL. In his free time Dr. Yang likes to play basketball, travel and read. He also likes to give public speeches and he has been a member of Toastmasters International for several years.



Upcoming events, deadlines, or grants

11/20-Master/Doctoral examination forms due (Autumn Grads)
 11/30- 2014 ASABE Annual Meeting abstract due
 12/2 - 2014 Annual IBE Meeting abstract due
 12/3-Approved Thesis/Dissertation due (Autumn Grads)

BBRL RESEARCH

2013 Publications

Sheets, J., Ge, X. M., Park, Y. S., Li, Y.B. 2013. Effect of outdoor conditions on *Nannochloropsis salina* cultivation in artificial seawater using nutrients from anaerobic digestion effluent. *Bioresource Tech. In press.*

Hu, S. J, Luo, X. L., Li, Y. B. 2013. Polyols and Polyurethanes from the Liquefaction of Lignocellulosic Biomass. *ChemSusChem. In press*

Cai, T., Ge, X. M., Park, Y. S., Li, Y. B. 2013. Comparison of *Synechocystis* sp. PCC6803 and *Nannochloropsis salina* for lipid production using artificial seawater and nutrients from anaerobic digestion effluent. *Bioresource Technology*, 144:255-260.

Wang, Z. J., Xu, F. Q., Li, Y. B. 2013. Effects of total ammonia nitrogen concentration on solid-state anaerobic digestion of corn stover. *Bioresource Technology*, 144:281-287.

Cai, T., Park S., Siam Racharaks, Li, Y. B. 2013. Cultivation of *Nannochloropsis salina* in anaerobic digestion effluent for nutrient removal and lipid production. *Applied Energy*. 108 (2013) 486-492.

Canam, T., Dumonceaux, T. J., Record E., Li, Y. B. 2013. White Rot Fungi: The key to sustainable biofuel production? *Biofuels* 4(3):247-250.

Luo, X. L., Hu, S. J., Zhang, X., Li, Y. B. 2013. Thermochemical conversion of crude glycerol to biopolyols for the production of polyurethane foams. *Bioresource Technology* 139:323-329.

Shi, J., Wang Z. J., Stiverson, J. A., Yu, Z. T., Li, Y. B. 2013. Reactor performance and microbial community dynamics during solid-state anaerobic digestion of corn stover at mesophilic and thermophilic conditions. *Bioresource Technology*. 136:574-581

Cai, T., Park, S., Li, Y. B. 2013. Nutrient recovery from wastewater streams by microalgae: status and prospects. *Renewable and Sustainable Energy Reviews* 19: 360-369.

Cherosky P., Li, Y. B. 2013. Hydrogen sulfide removal from biogas by bio-based iron sponge. *Biosystems Engineering* 114:55-59

Xu, F. Q., Shi, J., Lv, W., Yu, Z. T., Li, Y. B. 2013. Comparison of different liquid anaerobic digestion effluents as inoculum and nitrogen sources for solid-state batch anaerobic digestion of corn stover. *Waste Management* 33: 26–32.

Wan, C. X. and Li, Y. B. 2013. Solid-state biological pretreatment of lignocellulosic biomass for biofuel production. In “Green biomass pretreatment and processing methods for bioenergy production”. Edited by Gu, Tingyue. Netherlands: Springer. 67-86.

Accepted with minor/major revision

Wang, Z. W., Li, Y. B. 2013. A theoretical derivation of the Contois equation for kinetic modeling of the microbial degradation of insoluble substrates. *Biochemical Engineering Journal*.

Under review

Hu, S. J., Li, Y. B. 2013. polyols and polyurethane foams from base-catalyzed liquefaction of lignocellulosic biomass by crude glycerol: effects of crude glycerol impurities. *Bioresource Tech.*

Zhu, J. Y., Zheng, Y., Xu, F. Q., Li, Y. B. 2013. Solid-state anaerobic co-digestion of hay and soybean processing waste for biogas production. *Bioresource Tech.*

Zhao, J., Zheng, Y., Li, Y. B. 2013. Fungal pretreatment of yard trimmings for enhancement of methane yield from solid-state anaerobic digestion. *Bioresource Tech.*

Zheng, Y., Zhao, J., Xu, F.Q., Li, Y.B. 2013. Pretreatment of lignocellulosic biomass for enhanced biogas production. *Progress in Energy and Combustion Science*:

Presentations

Lin, L, Xu, F. Q., Michel F, Li, Y. B. Yard trimmings and liquid AD effluent — dry digestion vs. composting comparisons. BioCycle 13th Annual Conference, 10/20-10/23, 2013, Columbus, OH.

Ge, X. M., Matsumoto, T., Li, Y. B. Hawaii-sourced biomass for biogas production: comparing solid-state and liquid digestion. BioCycle 13th Annual Conference, 10/20-10/23, 2013, Columbus, OH.

Racharaks, R., Li, Y. B. Study of the Simultaneous Use of Two Waste Streams for Biofuels Production: The Cultivation of Microalgae in Hydraulic Fracturing Flowback Water and Anaerobic Digestion Effluent. 7th Annual Algae Biomass Summit. 09/30-10/03, Orlando, FL.

Editors

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