

Hui Li-Curriculum Vitae



Hui Li

Ph.D, Associate Professor and Associate Director, Institute of Biological and Environmental Engineering, Hunan Academy of Forestry, Changsha, China

Current Position and Address

Institute of Biological and Environmental Engineering, Hunan Academy of Forestry, Tianxin District, Changsha, Hunan Province, China. 410004;

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Research Interests

Torrefaction, Pyrolysis, Pelletization of Biomass, Liquefaction; Phyto-remediation

Education and Degrees

BSc, Hunan University, China, 2005;

Ph.D, Hunan University, China, 2011

Work and Visit

Postdoctoral Fellow, Hunan Academy of Forestry, China (2012-2014)

Associate Professor, Deputy Director, Hunan Academy of Forestry, China (2015-Present)

Visiting Student, University of British Columbia, Canada (2009-2011)

Visiting Scholar, University of British Columbia, Canada (2015)

Visiting Scholar, University of British Columbia, Canada (2016)

Visiting Scholar, University of British Columbia, Canada (2017-Present)

Talks Given at Conferences

“Aldehyde/Ketone emission from wood pellets during storage”, on 4th Environment-Enhancing Energy (E2-Energy) and Bio-Chemicals Conference 2016, China Agricultural University, Beijing, China, July 6-8, 2016.

“The Co-pelletization of Biomass and Municiple Sludge” on 5th International Conference on Biorefinery -towards Bioenergy, University of British Columbia, college of Forestry, Vancouver, Canada, August 10-12. 2015.

“Analysis of Products from the Subcritical Liquefaction of Agricultural Waste” on “2007 International Symposium on Environmental Science and Technology” , Beijing Xijiao Hotel, Beijing, China, November 13-16, 2007.

Publications

- 1、 **Hui Li**, Siyuan Wang, Xingzhong Yuan, Yanni Xi, Zhongliang Huang, Mengjiao Tan, Changzhu Li. The effects of temperature and color value on hydrochars' properties in hydrothermal carbonization. **Bioresource Technology**, 2018, 249, 574-581.
- 2、 **Hui Li***, Siyuan Wang, Zhongliang Huang, Xingzhong Yuan, Ziliang Wang, Rao He, Yanni Xi, Xuan Zhang, Mengjiao Tan, Jing Huang, Dan Mo, Changzhu Li. Effect of hydrothermal carbonization on storage process of woody pellets: pellets' properties and aldehydes/ketones emission. **Bioresource Technology**, 2018, accepted.
- 3、 **Hui Li**, Longbo Jiang, Changzhu Li, Jie Liang, Xingzhong Yuan, Zhihua Xiao, Zhihong Xiao, Hou Wang. Co-pelletization of sewage sludge and biomass: The energy input and properties of pellets. **Fuel Processing Technology**. 2015, 132(4):55-61.
- 4、 Longbo Jiang, Xingzhong Yuan*, **Hui Li***, Zhihua Xiao, Jie Liang, Hou Wang, Zhibin Wu, Xiaohong Chen, Guangming Zeng. Pyrolysis and combustion kinetics of sludge–camphor pellet thermal decomposition using thermogravimetric analysis. **Energy Conversion & Management**, 2015, 106:282-289.
- 5、 Longbo Jiang, Xingzhong Yuan*, Zhihua Xiao, Jie Liang, **Hui Li***, Liang Cao, Hou Wang, Xiaohong Chen, Guangming Zeng. A comparative study of biomass pellet and biomass-sludge mixed pellet: Energy input and pellet properties. **Energy Conversion & Management**, 2016, 126:509-515.
- 6、 Xingzhong Yuan*, Xiaowei Ding, Lijian Leng, **Hui Li***, Jianguang Shao, Yingying Qian, Huajun Huang, Xiaohong Chen, Guangming Zeng. Applications of bio-oil-based emulsions in a DI diesel engine: The effects of bio-oil

- compositions on engine performance and emissions. **Energy**, 2018, 154:110-118.
- 7、 **Hui Li**, Xinhua Liu, Robert Legros, Xiaotao T. Bi, C J. Lim, Shahab Sokhansanj. Pelletization of Torrefied Sawdust and Properties of Torrefied Pellets. **Applied Energy**. 2012, 93(5):680-685.
 - 8、 **Hui Li**, Xinhua Liu, Robert Legros, Xiaotao Bi, C J. Lim, Shahab Sokhansanj. Torrefaction of sawdust in a fluidised bed reactor. **Bioresource Technology**, 2012, 103(1):453-458.
 - 9、 **Hui Li**, Xingzhong Yuan, Guangming Zeng, Jingyi Tong, Hongtao Cao, Lihua Wang, Mingyang Cheng, Jiachao Zhang, Dan Yang. Liquefaction of rice straw in sub- and supercritical 1,4-dioxane-water mixture. **Fuel Processing Technology**, 2009, 90(5): 657-663.
 - 10、 **Hui Li**, Xingzhong Yuan, Guangming Zeng, Danlian Huang, Huang Huajun, Tong Jingyi, Qiao Youiao, Zhang Jiachao, Zhou Ming. The formation of bio-oil from sludge by deoxy-liquefaction in supercritical ethanol. **Bioresource Technology**, 2010, 101(8): 2860-2866.
 - 11、 Xingzhong Yuan, **Hui Li**, Guangming Zeng, Jingyi Tong, Wen Xie. Sub- and supercritical liquefaction of rice straw in the presence of ethanol-water and 2-propanol-water mixture. **Energy**, 2007, 32(11): 2081-2088.
 - 12、 **Hui Li**, Zhihong Xiao, Zhongliang Huang, Rukuan Liu, Changzhu Li. Co-pelletization of hydrothermal treated rice straw and oil cake additives. **Journal of Bioprocess and Engineering and Biorefinery**. 2014, 3:190-195.
 - 13、 Song Tang, Rukuan Liu, Fubao Fuelbiol Sun*, Chunying Dong, Rui Wang, Zhongyao Gao, Zhanying Zhang, Zhihong Xiao, Changzhu Li, **Hui Li***. Bioprocessing of tea oil fruit hull with acetic acid organosolv pretreatment in combination with alkaline H₂O₂. **Biotechnology for Biofuels**, 2017, 10:86.
 - 14、 Zhongliang Huang, **Hui Li***, Xingzhong Yuan, Lin Lin*, Liang Cao, Zhihua Xiao, Longbo Jiang, Changzhu Li. The energy consumption and pellets' characteristics in the co-pelletization of oil cake and sawdust. **RSC Advance**, 2016, 6, 19199-19207.
 - 15、 Siyuan Wang, Xingzhong Yuan*, Changzhu Li, Zhongliang Huang, Lijian

- Leng, Guangming Zeng, **Hui Li***. Variation in the physical properties of wood pellets and emission of aldehydeketone under different storage conditions. **Fuel**, 2016, 183:314-312.
- 16、 Longbo Jiang, Xingzhong Yuan*, **Hui Li***, Xiaohong Chen, Zhihua Xiao, Jie Liang, Lijian Leng, Zhi Guo, Guangming Zeng. Co-pelletization of sewage sludge and biomass: Thermogravimetric analysis and ash deposits. **Fuel Processing Technology**, 2016, 145:109-115.
- 17、 Xingzhong Yuan*, Lijian Leng, Zhihua Xiao, Cui Lai, Longbo Jiang, Hou Wang, **Hui Li***, Xiaohong Chen, Guangming Zeng. Pyrolysis and combustion kinetics of glycerol-in-diesel hybrid fuel using thermogravimetric analysis. **Fuel**, 2016, 182:502-508.
- 18、 Liang Cao, Xingzhong Yuan*, Longbo Jiang, Changzhu Li, Zhihua Xiao, Zhongliang Huang, Xiaohong Chen, Guangming Zeng, **Hui Li***. Thermogravimetric characteristics and kinetics analysis of oil cake and torrefied biomass blends. **Fuel**, 2016, 175:129-136.
- 19、 Longbo Jiang, Jie Liang, Xingzhong Yuan*, **Hui Li***, Changzhu Li, Zhihua Xiao, Huajun Huang, Hou Wang, Guangming Zeng. Co-pelletization of sewage sludge and biomass: The density and hardness of pellet. **Bioresource Technology**, 2014, 166(5): 435-443.
- 20、 Liang Cao; Xingzhong Yuan*; Hui Li*; Changzhu Li; Zhihua Xiao; Longbo Jiang; Binbin Huang; Zhihong Xiao; Xiaohong Chen; Xiaohong Chen; Hou Wang; Guangming Zeng. Complementary effects of torrefaction and co-pelletization: Energy consumption and characteristics of pellets. **Bioresource Technology**, 2015, 185(6): 254-262.
- 21、 Junyuan Guo, **Hui Li***. Bioflocculant from pre-treated sludge and its application in the treatment of swine wastewater. **Journal of Bioprocess and Engineering and Biorefinery**. 2014, 3:207-215.
- 22、 Zhihua Xiao, Xingzhong Yuan*, Longbo Jiang, Xiaohong Chen, **Hui Li***, Guangming Zeng, Lijian Leng, Hou Wang, Huajun Huang. Energy recovery and secondary pollutant emission from the combustion of co-pelletized fuel from

municipal sewage sludge and wood sawdust. **Energy**, 2015, 91:441-450.

- 23、 Ziliang Wang, C. Jim Lim, John R. Grace, **Hui Li**, Maria Regina Parise. Effects of temperature and particle size on biomass torrefaction in a slot-rectangular spouted bed reactor. **Bioresource Technology**, 2017, 244: 281-288.
- 24、 Lijian Leng, Xingzhong Yuan, Jianguang Shao, Huajun Huang, Hou Wang, **Hui Li**, Xiaohong Chen, Guangming Zeng. Study on demetalization of sewage sludge by sequential extraction before liquefaction for the production of cleaner bio-oil and bio-char. **Bioresource Technology**, 2016, 200:320-327.
- 25、 Lijian Leng, Xingzhong Yuan, Guangming Zeng, Xiaohong Chen, Hou Wang, **Hui Li**, Lihuan Fu, Zhihua Xiao, Longbo Jiang, Cui Lai. Rhamnolipid based glycerol in diesel microemulsion fuel Formation. **Fuel**, 2015, 147:76-81.
- 26、 Zhihua Xiao, Xingzhong Yuan, Hui Li, Longbo Jiang, Lijian Leng, Xiaohong Chen, Guangming Zeng, Fei Li, Liang Cao. Chemical speciation, mobility and phyto-accessibility of heavy metals in fly ash and slag from combustion of pelletized municipal sewage sludge. **Science of the Total Environment**, 2015, 536: 774-783.
- 27、 Miaomiao Ren, Xingzhong Yuan, Yi Zhu, Huajun Huang, Guangming Zeng, **Hui Li**, Ming Chen, Hou Wang, Changya Chen, Ningbo Lin. Effect of different surfactants on removal efficiency of heavy metals in sewage sludge treated by a novel method combining bio-acidification with Fenton oxidation. **Journal of Central South University**, 2014, 21: 4623-4629.
- 28、 Xueli Wang,Xingzhong Yuan, Huajun Huang,Lijian Leng,**Hui Li**,Xin Peng, Hou wang, Guang-ming Zeng. Study on the solubilization capacity of bio-oil in diesel by microemulsion technology with Span80 as surfactant. **Fuel Processing Technology**.2014, 118(2): 141-147.
- 29、 Ren Zhu, Jie Liang, Xingzhong Yuan, Lele Wang, Lijian Leng, **Hui Li**, Huajun Huang, Xueli Wang, Shanxing Li, Guangming Zeng. The formation of rhamnolipid-based water-containing castor oil/diesel microemulsion and their potentiality as green fuels. **Energy & Fuels**, 2014, 28:5861-5871.

- 30、 Huajun Huang, Xingzhong Yuan, Guangming Zeng, Yan Liu, **Hui Li**, Juan Yin, Xueli Wanga. Thermochemical liquefaction of rice husk for bio-oil production with sub- and supercritical ethanol as solvent. **Journal of Analytical and Applied Pyrolysis**. 2013, 102(4): 60–67.
- 31、 Congwei Wang, Jianghong Peng, **Hui Li**, Xiaotao T. Bi, Robert Legros, C.J. Lim, Shahab Sokhansanj. Oxidative torrefaction of biomass residues and densification of torrefied sawdust to pellets. **Bioresource Technology**. 2013, 127:318-325.
- 32、 Huajun Huang, Xingzhong Yuan, Guangming Zeng, Huina Zhu, **Hui Li**, Zhifeng Liu, Hongwei Jiang, Lijian Leng, Wenkai Bi. Quantitative evaluation of heavy metals' pollution hazards in liquefaction residues of sewage sludge. **Bioresource Technology**. 2011, 102(22):10346-10351.
- 33、 Xingzhong Yuan, Jingyu Wang, Guangming Zeng, Huajun Huang, Xiaokai Pei, **Hui Li**, Zhifeng Liu, Minghui Cong. Comparative studies of thermochemical liquefaction characteristics of microalgae using different organic solvents, **Energy**, 2011, 36(11):6406-6412.
- 34、 Xingzhong Yuan, Xiaokai Pei, Guangming Zeng, Huajun Huang, Jingyu Wang, **Hui Li**, Huina Zhu. Co-liquefaction of microalgae and synthetic polymer mixture in sub- and supercritical ethanol. **Fuel Processing Technology**, 2012, 93(1):35-44.
- 35、 Huajun Huang, Xingzhong Yuan, Guangming Zeng, Jingyu Wang, **Hui Li**, Chunfei Zhou, Xiaokai Pei, Qiao You, Liang Chen. Thermochemical liquefaction characteristics of microalgae in sub- and supercritical ethanol. **Fuel Processing Technology**, 2011, 92(1): 147-153.
- 36、 Xingzhong Yuan, Huajun Huang, Guangming Zeng, **Hui Li**, Jingyu Wang, Chunfei Zhou, Huina Zhu, Xiaokai Pei, Zhifeng Liu, Zhantao Liu. Total concentrations and chemical speciation of heavy metals in liquefaction residues of sewage sludge. **Bioresource Technology**, 2011, 102(5): 4104-4110.
- 37、 Xingzhong Yuan, Hongtao Cao, **Hui Li**, Guangming Zeng, Jingyi Tong, Lihua Wang. Quantitative and qualitative analysis of products formed during

- co-liquefaction of biomass and synthetic polymer mixtures in sub- and supercritical water, **Fuel Processing Technology**, 2009, 90(3): 428-434.
- 38、 Xingzhong Yuan, Jingyi Tong, Guangming Zeng, **Hui Li**, Wen Xie. Comparative studies of products obtained at different temperatures during straw liquefaction by hot compressed water. **Energy and Fuels**, 2009, 23(6): 3262-3267.
- 39、 Xingzhong Yuan, Wen Xie, Guangming Zeng, Jingyi Tong, **Hui Li**, Influence of catalyst on the yields and properties of products from biomass liquefaction in subcritical water. **International Journal of Biotechnology**, 2008, 10: 35-45.
- 40、 Jiachao Zhang, Guangming Zeng, Yaoning Chen, Man Yu, Hongli Huang, Changzheng Fan, Yi Zhu, **Hui Li**, Zhifeng Liu, Ming Chen, Min Jiang. Impact of *Phanerochaete chrysosporium* inoculation on indigenous bacterial communities during agricultural waste composting. **Apply Microbiology and Biotechnology**. 2013, 97:3159-3169.
- 41、 Ting Xiong, Xingzhong Yuan, Hou Wang, Lijian Leng, **Hui Li**, Zhibin Wu, Longbo Jiang, Rui Xu, Guangming Zeng. Implication of graphene oxide in Cd-contaminated soil: A case study of bacterial communities. **Journal of Environmental Management**, 2018, 205(1):99-106.
- 42、 Yaoning Chen, Yao Liu, Yuanping Li, Yanxin Wu, Yanrong Chen, Guangming Zeng, Jiachao Zhang, **Hui Li**. Influence of biochar on heavy metals and microbial community during composting of river sediment with agricultural wastes. **Bioresource Technology**, 2017, 243: 347-355.
- 43、 Yaoning Chen, Yanrong Chen, Yuanping Li, Yanxin Wu, Fuzao Zhu, Guangming Zeng, Jiachao Zhang, **Hui Li**. Application of Fenton pretreatment on the degradation of rice straw by mixed culture of *Phanerochaete chrysosporium* and *Aspergillus niger*. **Industrial Crops & Products**, 2018, 112: 290-295.
- 44、 Hou Wang, Xingzhong Yuan, Yan Wu, Guangming Zeng, Xiaohong Chen, Lijian Leng, **Hui Li**. Synthesis and applications of novel graphitic carbon Nitride/metal-organic frameworks mesoporous photocatalysts for dyes removal. **Applied Catalysis B: Environmental**, 2015, 174-175:445-454.

- 45、 Lihua Zhang, Guangming Zeng, Jiachao Zhang, Yaoning Chen, Man Yu, Lunhui Lu, **Hui Li**, Yuan Zhu, Yujie Yuan, Aizhi Huang, Ling He. Response of denitrifying genes coding for nitrite (*nirK* or *nirS*) and nitrous oxide (*nosZ*) reductases to different physico-chemical parameters during agricultural waste composting. **Applied Microbiology & Biotechnology**, 2015, 99:4059-4070.
- 46、 Rukuan Liu, Fanglei Xu, Zhihong Xiao, Changzhu Li, **Hui Li**, Fantao Zeng, Hongqi Ye. Effects of compression ratio on variation of stresses and residual oil of cake in pressing process of castor beans and its curve fitting. **Journal of Central South University**, 2015, 22: 4476:4482.
- 47、 Hou Wang, Xingzhong Yuan, Yan Wu, Guangming Zeng, Xiaohong Chen, Lijian Leng, Zhibin Wu, Longbo Jiang, **Hui Li**. Facile synthesis of amino-functionalized titanium metal-organic frameworks and their superior visible-light photocatalytic activity for Cr(VI) reduction. **Journal of Hazardous Materials**, 2015, 286:187-194.
- 48、 Xingzhong Yuan, Hou Wang, Yan Wu, Guangming Zeng, Xiaohong Chen, Lijian Leng, Zhibin Wu, **Hui Li**. One-pot self-assembly and photoreduction synthesis of silver nanoparticle-decorated reduced graphene oxide-MIL-125(Ti) photocatalyst with improved visible light photocatalytic activity. **Applied Organometallic Chemistry**, 2016, 30:289-296.
- 49、 Fubao Fuelbiol Sun, Song Tang, Rukuan Liu, Yanjun Tang, Rui Wang, Zhanying Zhang, Zhongyuan Gao, **Hui Li**, Changzhu Li, Zhihong Xiao. Biorefining fractionation of the *Camellia oleifera* Abel hull into diverse bioproducts with a two-stage organosolv extraction. **Industrial Crops & Products**, 2016, 94:790-799.
- 50、 Dan Mo, Guangming Zeng, Xingzhong Yuan, Ming Chen, Liang Hu, **Hui Li**, Hou Wang, Piao Xu, Cui Lai, Jia Wan, Chen Zhang, Min Cheng. Molecular docking simulation on the interactions of laccase from *Trametes versicolor* with nonylphenol and octylphenol isomers. **Bioprocess and Biosystems Engineering**, 2017, 28: 1-13.
- 51、 Hou Wang, Xingzhong Yuan, Yan, Wu, Xiaohong Chen, Lijian Leng, Hui

- Wang, **Hui Li**, Guangming Zeng. Facile synthesis of polypyrrole decorated reduced graphene oxide-Fe₃O₄ magnetic composites and its application for the Cr(VI) removal. **Chemical Engineering Journal**, 2015, 262: 597-606.
- 52、 Zhifeng Liu, Guangming Zeng, Hua Zhong, Xingzhong Yuan, Haiyan Fu, Meifang Zhou, Xiaoling Ma, **Hui Li**, Jianbing Li. Effect of dirhamnolipid on the removal of phenol catalyzed by laccase in aqueous solution. **World Journal of Microbiology and Biotechnology**. 2012.28:175-181.
- 53、 Ming Chen, Guangming Zeng, Zhongyang Tan, Ming Jiang, **Hui Li**, Lifeng Liu, Yi Zhu, Zhen Yu, Zhen Wei, Yuanyuan Liu, Gengxin Xie. Understanding lignin-degrading reactions of ligninolytic enzymes: binding affinity and interactional profile. **PLoS ONE**, 2011, 6(9):1-8.
- 54、 Guangming Zeng, Jiachao Zhang, Yaoning Chen, Zhen Yu, Man Yu, **Hui Li**, Zhifeng Liu, Ming Chen, Lunhui Lu, Chunxiao Hu. Relative contributions of archaea and bacteria to microbial ammonia oxidation differ under different conditions during agricultural waste composting. **Bioresource Technology**, 2011, 102(19): 9026-9032.
- 55、 Jiachao Zhang, Guangming Zeng, Yaoning Chen, Man Yu, Zhen Yu, **Hui Li**, Yong Yu, Hongli Huang. Effects of physico-chemical parameters on the bacterial and fungal communities during agricultural waste composting. **Bioresource Technology**, 2011, 102(3): 2950-2956.
- 56、 Guangming Zeng, Zhen Yu, Jiachao Zhang, **Hui Li**, Man Yu, Mingjie Zhao. Response of compost maturity and microbial community composition to pentachlorophenol (PCP)-contaminated soil during composting. **Bioresource Technology**, 2011, 102(10): 5905-5911.
- 57、 Zhen Yu, Guangming Zeng, Yaoning Chen, Jiachao Zhang, Yong Yu, **Hui Li**, Zhifeng Liu, Tang L. Effects of inoculation with *Phanerochaete chrysosporium* on remediation of pentachlorophenol-contaminated soil waste by composting. **Process Biochemistry**, 2011, 46(6): 1285-1291.
- 58、 Yunshan Liang, Xingzhong Yuan, Guangming Zeng, Hua Zhong, **Hui Li**, Weiwei Wang. Effects of surfactants on enzyme-containing reversed micellar

system. **Science China (Chemistry)**, 2011, 54(5): 715-723.

- 59、 Meifang Zhou, Xingzhong Yuan, Hua Zhong, Zhifeng Liu, **Hui Li**, Lili Jiang, Guangming Zeng. Effect of surfactants on laccase production and phenol biodegradation in solid-state fermentation. **Applied Biochemistry and Biotechnology**, 2011, 164(1): 103-114.