



Profile

Shiyong Wu, Ph.D, professor, doctoral supervisor, born in December 1979. The major scientific research projects includes: Special scientific research fund for selecting and training outstanding young teachers in colleges and universities in Shanghai, National Natural Science Foundation of China (Youth Program), National Natural Science Foundation of China (General Program), National 863 Program (sub-project), Shanghai Natural Science Foundation, GOC/WB/GEF, International Collaborative Program (cooperated with Royal Dutch Shell), Special Fund for Basic Scientific Research of Central Colleges, and State Key Laboratory of Coal Combustion Open-end Funds, etc.. As one of the main leaders, the industrialization project of "Large-scale power generation using biomass fixed-bed gasifier" cooperated with Jiangsu Gaoyou Linyuan Science and Technology Empolder Co., Ltd has been successfully demonstrated. "Biomass hydrothermal liquefaction technology to produce liquid fuel" developed with Dongfang boiler Group Co., Ltd and "New conversion technology of low-rank coals" developed with Shaanxi Coal Group Co., Ltd have been conducted in the construction of the pilot continuous unit (600kg/d). More than 80 articles have been published (more than 60 SCI articles), more than 20 patents have been granted (5 patents have been authorized). In 2012, he was selected as one of the First Batch of Young Teachers Scientific Research Backbone Development Plan of East China University of Science and Technology (ECUST). In 2014, he was selected as one of the Second Young Talents Program of ECUST (Scientific Research). He won the "excellent class supervisor" in 2011 and "excellent communist party member" in 2014 in ECUST. In 2014, he got the Second Prizes of Shanghai Science and Technology Progress. One achievement passed the appraisal of Chinese Renewable Energy Industry Association and China rural energy industry association. In the same year, he won the Innovation Award of Science and Technology Teaching and Research in Shanghai Chemical Industry District (Scientific Research) and the Second "Campus Nova" of ECUST (Scientific Research). In 2015, he was awarded the title of "outstanding reviewer" by Fuel Processing Technology, and awarded "membership" by the American chemical society (ACS)

Research Field

Gasification technology of solid fuels such as coal, biomass and petroleum coke; Liquefaction of coal and biomass to produce liquid fuel; Gas purification; Coking and chemical production recovery technology; Preparation technology of inorganic carbon film and its composite film; Membrane treatment of wastewater and membrane separation of gases.

Research results and selected published papers

- (1) Shiyong Wu, Sheng Huang, Liyuan Ji, Youqing Wu, Jinsheng Gao. Structure characteristics and gasification activity of residual carbon from entrained-flow coal gasification slag. *Fuel*, 2014, 122: 67-75.
- (2) Sheng Huang, Shiyong Wu*, Youqing Wu, Yongdi Liu, Jinsheng Gao. Steam Cogasification of Petroleum Coke and Different Rank Coals for Enhanced Coke Reactivity and Hydrogen-Rich Gas Production. *Energy Fuels*, 2014, 28(6): 3614-3622.
- (3) Hao Feng, Shiyong Wu*, Sheng Huang, Youqing Wu, Jinsheng Gao. Regenerable magnesium-based sorbent for high-pressure and moderate-temperature CO₂ capture: Physicochemical structures and capture performances. *Fuel*, 2015, 159: 559-569.
- (4) Liang Li, Sheng Huang, Shiyong Wu*, Youqing Wu, Jinsheng Gao. Roles of Na₂CO₃ in lignite hydroliquefaction with Fe-based catalyst. *Fuel Processing Technology*, 2015, 138: 109-115.
- (5) Shiyong Wu, Fangqi Liu, Sheng Huang, Youqing Wu, Jinsheng Gao. Direct n-hexane extraction of wet sewage sludge at thermal and pressurized conditions: A preliminary investigation on its process and product characteristics. *Fuel Processing Technology*, 2017, 156: 90-97.
- (6) Quan You, Shiyong Wu*, Youqing Wu, Sheng Huang, Jinsheng Gao, Jianxuan Shang, Xiaojian Min, Hua' an Zheng. Product distributions and characterizations for integrated mild-liquefaction and carbonization of low rank coals. *Fuel Processing Technology*, 2017, 156: 54-61.
- (7) Sheng Huang, Shiyong Wu*, Youqing Wu, Jinsheng Gao. Structure characteristics and gasification activity of residual carbon from updraft fixed-bed biomass gasification ash. *Energy Conversion and Management*, 2017, 136: 108-118.
- (8) Huan Li, Shiyong Wu*, Youqing Wu, Sheng Huang, Jinsheng Gao. A Preliminary investigation of CO effects on lignite liquefaction process. *Fuel*, 2018, 221: 417-424.
- (9) Sheng Huang, Xuhui Zhou, Shiyong Wu*, Youqing Wu, Jinsheng Gao. Effect of Carbonization Temperature on the Product Distributions and Characteristics for Integrated Mild Liquefaction and Carbonization of Low-Rank Coals. *Energy & Fuels*, 2018, 32: 4754-4762.
- (10) Huan Li, Quan You, Shiyong Wu*, Youqing Wu, Sheng Huang, Jinsheng Gao. Characteristics of Na₂CO₃-catalyzed water-gas shift reaction under coal liquefaction conditions. *Fuel*, 2018, 232: 639-644.