



Profile

Haifeng Lu is an associate professor in the School of Resources and Environmental Engineering at East China University of Technology. He received his master degree and a doctoral degree from East China University of Technology in 2007 and 2012, respectively. He is committed to the basic research and application development of pulverized coal gasification process. As the person in charge, he presided over the development of the National Natural Science projects, the National key Research and Development Sub-project, the postdoctoral Fund and the horizontal Project of Enterprises, and so on. He has published over 70 academic papers, including more than 20 SCI papers as the first or the corresponding author, and 5 patents granted by the first inventor.

Research Field

- (a) granular flow in silos and hoppers;
- (b) rheology of fine powders at process conditions;
- (c) dense-phase pneumatic conveying of pulverized coal;
- (d) the field of advanced coal gasification.

Research results and selected published papers

1. Yong Jin, Haifeng Lu*, Xiaolei Guo, Xin Gong*. Multiscale analysis of flow patterns in the dense-phase pneumatic conveying of pulverized coal. AICHE Journal. 2019;65(9).(article in press)
2. Yong Jin, Haifeng Lu*, Xiaolei Guo, Xin Gong*. Application of CPFD method in the simulation of vertical dense phase pneumatic conveying of pulverized coal. Powder Technology. 2019.(article in press)
3. Haifeng Lu, Jiakun Cao, Yong Jin, Xiaolei Guo, Xin Gong*. Study on the feeding characteristics of pulverized coal for entrained-flow gasification. Powder Technology. 2019. (article in press)
4. Haifeng Lu, Jiakun Cao, Yong Jin, Xiaolei Guo, Xin Gong*, Lin Fu. Design optimization of an aerated hopper for discharge of cohesive pulverized coal. Powder Technology. 2019. (article in press)
5. Yong Jin, Haifeng Lu*, Xiaolei Guo, Xin Gong*. Flow patterns classification of dense-phase pneumatic conveying of pulverized coal in the industrial vertical pipeline. Advanced Powder Technology. 2019;30(7):1277-1289.
6. Yong Jin, Haifeng Lu*, Xiaolei Guo, Xin Gong*. Characteristics and formation mechanism of plug flow in the industrial vertical pipeline of dense-phase pneumatic conveying of pulverized coal. Chemical Engineering Science. 2019;205:319-331.
7. Yinan Zheng, Haifeng Lu*, Xiaolei Guo, Xin Gong*. Study on the effect of nanoparticles on the bulk and flow properties of granular systems. Fuel Process Technol. 177 (2018) 30-38.
8. Yong Jin, Haifeng Lu*, Xiaolei Guo, Xin Gong*. The effect of water addition on the surface energy, bulk and flow properties of lignite. Fuel Process Technol. 176 (2018) 91-100.
9. Haifeng Lu, Xiaolei Guo, Yong Jin, Xin Gong*. Effect of moisture on flowability of pulverized coal. Chem. Eng. Res. Des. 133 (2018) 326-334.
10. Yong Jin, Haifeng Lu*, Xiaolei Guo, Xin Gong*. Effect of water addition on flow properties of lignite particles. Chem. Eng. Res. Des. 132 (2018) 1020-1029
11. Xueli Chen*, Yang Xu, Haifeng Lu*, Xiaolei Guo. Effect of the moisture content of straw on the internal friction angle of a granular biomass-coal system. Fuel. 215 (2018) 266-217.
12. Haifeng Lu, Xiaolei Guo, Yong Jin, Xin Gong*. Dense-feeding of pulverized coal into the entrained-flow gasifier. Ind. Eng. Chem. Res. 56(2017), 9734-9742.
13. Haifeng Lu, Xiaolei Guo, Peng Li, Kai Liu, Xin Gong*. Design optimization of a venturi tube geometry in dense-phase pneumatic conveying of pulverized coal for entrained-flow gasification. Chem. Eng. Res. Des. 120(2017), 208-217.
14. Haifeng Lu, Xiaolei Guo, Yong Jin, Xin Gong*, Wei Zhao, Diego Barletta, Massimo Poletto. Powder discharge from a hopper-standpipe system modelled with CPFD. Adv. Powder Techno. 28 (2017), 481-490.
15. Haifeng Lu, Xiaolei Guo, Yi Liu, Peng Li, Xin Gong*. Solid-Mass Flow-Rate Prediction in Dense-Phase Pneumatic Conveying of Pulverized Coal by a Venturi Device. Ind. Eng. Chem. Res. 55 (2016), 10455–10464.
16. Haifeng Lu, XiaoleiGuo, Xin Gong*, Diego Barletta, Massimo Poletto. Prediction of solid discharge rates of pulverized coal from an aerated hopper. Powder Technol. 286(2015), 645-653.
17. Haifeng Lu,XiaoleiGuo, Shunlong Tao, Xin Gong*. A further study on effect of gas type on pulverized coal discharge. Powder Technol. 281(2015), 193-199.
18. Haifeng Lu, XiaoleiGuo, Yi Liu, Xin Gong*. Effect of Particle Size on Flow mode and Flow Characteristics of Pulverized Coal. KONA Powder and Particle Journal.32(2015), 143-153.
19. Haifeng Lu, XiaoleiGuo, Wei Zhao, Xin Gong*, Jun Lu. Experimental and CPFD numerical study on hopper discharge. Ind. Eng. Chem. Res. 53(2014), 12160–12169.
20. Haifeng Lu, XiaoleiGuo, Xin Gong*, Xingliang Cong, Kai Liu, Haifeng Qi. Experimental study on aerated discharge of the pulverized coal. Chem. Eng Sci. 71(2012), 438-448.
21. Haifeng Lu, XiaoleiGuo, Xingliang Cong, Kai Liu, Xiaolin Sun, Kai Xie, Xin Gong*, Jun Lu. The discharge of pulverized coal from a pressurized aerated hopper. Ind. Eng. Chem. Res. 51(2012), 13839-13845.
22. Haifeng Lu, XiaoleiGuo, Xin Gong*, Xingliang Cong, Kai Liu, Haifeng Qi. Effects of gas type and hopper pressure on the discharge of the pulverized coal. Ind. Eng. Chem. Res. 51(2012), 3709-3714.
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24. Haifeng Lu, XiaoleiGuo, Wanjie Huang, Kai Liu, Xin Gong*. Flow characteristics and pressure drop across the Laval nozzle in dense phase pneumatic conveying of the pulverized coal. Chem. Eng. Process. 50(2011), 702-708.
25. Haifeng Lu, XiaoleiGuo, Xin Gong*, Xingliang Cong, Weibin Dong. Study on the fluidization and discharge characteristics of cohesive coals from an aerated hopper. Powder Technol. 207(2011), 199-207.
26. Haifeng Lu, XiaoleiGuo, Xin Gong*, Wanjie Huang, Sheng Ma, Chuanhong Wang. Study of the Flowability of Pulverized Coals. Energy & fuels. 23(2009), 5529-5535.