

二、学习及工作经历

(1) 教育经历

1997.09--2001.07重庆大学采矿工程系
本科

2001.09--2006.06重庆大学采矿工程系
博士研究生

(2) 工作经历

2006.07--2011.07重庆大学资源及环境
科学学院任教（其间：2007.07-
2010.12中国科学院武汉岩土力学研究所
博士后；2008.11-2009.12美国哥伦比
亚大学访问学者；2006.07聘为讲师；
2008.09聘为副教授）

2011.08--2016.09武汉大学动力与机械
学院任教（其间：2013.11聘为教授；
2011.08至今武汉大学水射流理论与新技术
湖北省重点实验室副主任）

2016.09至今 武汉大学动力与机械学院
副院长、教授，水射流理论与新技术湖
北省重点实验室副主任

三、主要研究方向

水射流理论与新技术

超临界二氧化碳射流理论与技术应用

煤层气、页岩气安全高效开采

四、主讲课程

《现代能源》（本科生）

五、学术及主要科研成果

(1) 代表性期刊论文

[1]Gan Feng,Yong Kang*, Ze-dong
Sun, et al.Effects of Supercritical

CO₂adsorption on the mechanical characteristics and failure mechanisms of shale. *Energy*, 2019, 173: 870-882.

[2]Can Cai,**Yong Kang***, Xiaochuan Wang, et al. Experimental study on shale fracturing enhancement by using multi-times pulse supercritical carbon dioxide (SC-CO₂) jet. *Journal of Petroleum Science and Engineering*, 2019, 178: 948-963.

[3]Wenchuan Liu,**Yong Kang***, Mingxing Zhang,et al. Experimental and theoretical analysis on chamber pressure of a self-resonating cavitation waterjet. *Ocean Engineering*, 2018, 151: 33–45.

[4]Can Cai,**Yong Kang***, Xiaochuan Wang, et al. Mechanism of Supercritical Carbon Dioxide (SC-CO₂) Hydro-jet Fracturing. *Journal of CO₂ Utilization*, 2018, 26: 575-587.

[5]Dongping Zeng,**Yong Kang***, Lu Xie, et al. A mathematic model and experimental verification of optimal nozzle diameter in needle-free injection. *Journal of Pharmaceutical Sciences*, 2018, 107(4): 1086-1094.

[6]Zhineng Wang,**Yong Kang***, Deng Li, et al. Investigating the hydrodynamics of airlift pumps by wavelet packet transform and the recurrence plot. *Experimental*

Thermal and Fluid Science, 2018, 96: 56-58.

[7]Man Huang,**Yong Kang***, Xiaochuan Wang, et al. Experimental investigation on the rock erosion characteristics of a self-excited oscillation pulsed supercritical CO₂jet. Applied Thermal Engineering, 2018, 139: 445-455.

[8]Zefeng Wang,**Yong Kang***,Zhao Wang, et al. Recycling waste tire rubber by water jet pulverization: powder characteristics and reinforcing performance in natural rubber composites. Journal of Polymer Engineering, 2017.01.26,383.

[9]Wenchuan Liu,**Yong Kang***, Mingxing Zhang, et al. Self-sustained oscillation and cavitation characteristics of a jet in a Helmholtz resonator. International Journal of Heat and Fluid Flow, 2017, 68: 158-172.

[10] Deng Li,**Yong Kang***, Xiaolong Ding, et al. Experimental study on the effects of feeding pipe diameter on the cavitation erosion performance of self-resonating cavitating waterjet. Experimental Thermal & Fluid Science, 2017, 82: 314-325.

[11]Xiaolong Ding,**Yong Kang***, Deng Li, et al. Experimental

Investigation on Surface Quality Processed by Self-Excited Oscillation Pulsed Waterjet Peening. *Materials*, 2017,10(9): 989.

[12]Zefeng Wang,**Yong Kang***, Yi Cheng. Multiresponse optimization of process parameters in water jet pulverization via response surface methodology. *International Journal of Precision Engineering and Manufacturing*, 2017,18(12):1855-1871.

[13]Deng Li,**Yong Kang***, Xiaolong Ding, et al. Effects of Nozzle Inner Surface Roughness on the Performance of Self-Resonating Cavitating Waterjets under Different Ambient Pressures. *Strojniski Vestnik/Journal of Mechanical Engineering*, 2017, 63(2): 92-102.

[14]Gan Feng,**Yang Kang***, Tao Meng, et al. The Influence of Temperature on Mode I Fracture Toughness and Fracture Characteristics of Sandstone. *Rock Mechanics & Rock Engineering*, 2017, (4):1-13.

[15]Deng Li,**Yong Kang***, Xiaolong Ding, et al. Effects of feeding pipe diameter on the performance of a jet-driven Helmholtz oscillator generating pulsed waterjets. *Journal of Mechanical Science and Technology*, 2017, 31(3): 1203~1212.

[16]Deng Li,**Yong Kang***, Xiaolong Ding, et al. Effects of area discontinuity at nozzle inlet on the characteristics of high speed self-excited oscillation pulsed waterjets. Experimental Thermal and Fluid Science, 2016, 79: 254~265.

[17]Yi Hu,**Yong Kang***, Xiaochuan Wang, et al. Experimental and theoretical analysis of a supercritical carbon dioxide jet on wellbore temperature and pressure. Journal of Natural Gas Science and Engineering, 2016, 36: 108~116.

[18]Deng Li,**Yong Kang***, Xiaolong Ding, et al. An experimental investigation on the pressure characteristics of high speed self-resonating pulsed waterjets influenced by feeding pipe diameter. Journal of Mechanical Science and Technology, 2016, 30(11): 4997~5007.

[19]Deng Li,**Yong Kang***, Xiaolong Ding, et al. Effects of area discontinuity at nozzle inlet on the characteristics of self-resonating cavitating waterjet. Chinese Journal of Mechanical Engineering, 2016, 29(4): 813~824.

[20]Zefeng Wang,**Yong Kang***, Zhao Wang. Pulverization of end-of-life tires by ultra-high pressure water jet

process. Journal of Polymer Engineering, 2016, 37(3): 211~225.

(2) 授权发明专利

[1]康勇,李登,王晓川,等.一种自振高压脉冲水射流发生器, ZL201510743182.6.

[2]康勇,王晓川,李登,等.一种腔长连续可调高压自激振荡脉冲射流喷嘴, ZL201410089222.5.

[3]康勇,郑丹丹,栗登峰,等.一种高压水射流螺旋切槽松动爆破方法, ZL2013107347761.

[4]康勇,王晓川,丁小龙,等.一种水射流切割轮胎的装置, ZL201410291806.0.

[5]康勇,李登,丁小龙,等.多功能自振周期偏摆脉冲射流发生器, ZL201510739201.8.

[6]康勇,李登,丁小龙,等.无泵式高压脉冲水射流发生装置, ZL201510799445.5.

[7]康勇,丁小龙,李登,等.一种水射流煤层割缝喷孔处理装置, ZL201510888909.X.

[8]康勇,李登,丁小龙,等.基于亥姆霍兹不稳定性的流体瞬时流速测量装置及方法, ZL201510776803.0.

[9]康勇,李登,王晓川,等.一种高频无泵式高压脉冲水炮及射流发生方法, ZL201510801104.7.

[10]康勇,黄满,王晓川,等.一种超临界二氧化碳脉冲射流油管清污装置及方法, ZL201611182983.0.

[11]康勇,李登,胡毅,等.一种辅助高压水射流割缝防喷装置, ZL201310229014.6.

(3) 主持科研项目

国家自然科学基金面上项目， No. 51474158

湖北省自然科学基金重点项目， No. 2016CFA088

国家重点基础研究计划（973计划）， No. 2014CB239203

教育部新世纪优秀人才支持计划， No. NCET-12-0424

教育部留学回国基金， No. 2012-940

湖北省杰出青年基金， No. 2012FFA020

重庆市自然科学基金， No. CSTC2010BB6069

国家自然科学基金青年项目， No. 50704039

其它重大横向课题多项

(4) 荣誉与奖励

国家科学技术进步二等奖（排名第6）， 2008

高等学校科学研究优秀成果奖（科学技术）技术发明一等奖（排名第4）， 2010

教育部新世纪优秀人才支持计划， 2012

湖北省杰出青年基金资助， 2012

武汉大学“351人才计划”珞珈青年学者， 2012

武汉大学“烛光导航工程”优秀导航师， 2015

第七届河南煤矿安全生产科技进步一等奖（排名第2）， 2016

中国煤炭工业协会科学技术奖一等奖（排名第3）， 2016

(5) 学术兼职

中国职业安全健康协会水射流技术专业
委员会常委

黑龙江省地温能学会理事

湖北省机械工程学会石油机械专业委员
会理事

中国岩石力学与工程学会环境岩土工程
分会青年工作委员会委员

国际岩石力学学会ISRM会员

中国煤炭学会会员

公共安全科学技术学会会员

中国岩石力学与工程学会会员

上一篇：蒋劲

下一篇：刘梅清

[首页](#) [学院概况](#) [师资队伍](#) [人才培养](#) [科学研究](#) [友情链接](#) [合作](#)

[学生工作](#) [联系我们](#) [共享平台](#)

版权所有©2020 武汉大学动力与机械学院 地址：中国 武汉 珞珈山 邮编：430072
邮箱：1234567@whu.edu.cn