

CURRICULUM VITAE

Personal Information			
Name	Cao, Hongliang	Gender	Male
Position Title	Professor		
Working Department	College of Engineering		
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Address	B303, Engineering Building, College of Engineering, Huazhong Agricultural University, Wuhan 430070, China		
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Research Interest			
Biomass Thermochemical Conversion Biochar Structure Control and Engineering New Soil Amendment Products Machine Learning and Its Application			
Professional Memberships			
Member of CSAM and CSAE			
Other Roles			
Editorial Board Member, "Trends in Artificial Intelligence" Editorial Board Member, "Journal of Energy, Environmental & Chemical Engineering" Editorial Board Member, "Global Journal of Energy Technology Research Updates"			
Education & Working Experience			
<u>Working Experience</u> 2018~2019, Adjunct Faculty, Washington State University, USA 2020~present, Professor, College of Engineering, Huazhong Agricultural University 2015~2020, Associate Prof., College of Engineering, Huazhong Agricultural University 2012~2015, Lecturer, College of Engineering, Huazhong Agricultural University, China			
<u>Education Experience</u> 2008~2012, Ph.D., Huazhong University of Science and Technology, Wuhan, China 2006~2008, M.S., Huazhong University of Science and Technology, Wuhan, China 2002~2006, B.S., Hebei University of Science and Technology, Shijiazhuang, China			
Publications			
[1] <u>Hongliang Cao*</u> , Xueshuang Wu, Syed Shatir A. Syed-Hassan, Shu Zhang, Sohrab Haghghi Mood, Yaimie Jefferson Milan, Manuel Garcia-Perez, Characteristics and mechanisms of phosphorous adsorption by rape straw-derived biochar functionalized with calcium from eggshell. <i>Bioresource Technology</i> , 2020; 318:124063. (SCI, IF2019= 7.539)			
[2] Shuanghong Li, <u>Hongliang Cao*</u> , Yupu Yang, Data-driven simultaneous fault diagnosis for solid oxide fuel cell system using multi-label pattern identification. <i>Journal of Power Sources</i> ,			

2018;378: 646-659. (SCI&EI, IF2019= 8.247)

[3] Longyuan Yang, **Hongliang Cao***, Qiaoxia Yuan*, Shuai Luo, Zhigang Liu, Component optimization of dairy manure vermicompost, straw, and peat in seedling compressed substrates using simplex centroid design, Journal of the Air & Waste Management Association, 2018, 68(3): 215-226. (SCI&EI, IF2019= 2.245)

[4] Ya Xin, **Hongliang Cao***, Qiaoxia Yuan*, Dianlong Wang, Yulong Liu, Kinetic analysis of cattle manure pyrolysis process with a novel two-step method: pseudo-component model coupled with multi-peak Gaussian fitting, Environmental Progress & Sustainable Energy, 2018, 37(5): 1618-1625. (SCI&EI, IF2019= 1.989)

[5] Shaban G. Gouda, Zakia Hussein, Shuai Luo, Panpan Wang, **Hongliang Cao**, Qiaoxia Yuan*, Empirical models for estimating global solar radiation in Wuhan City, China. The European Physical Journal Plus, 2018, 133(12): 517. (SCI&EI, IF2019= 3.228)

[6] Ya Xin*, Dianlong Wang, XiangQian Li, QiaoxiaYuan, **Hongliang Cao**, Influence of moisture content on cattle manure char properties and its potential for hydrogen rich gas production. Journal of Analytical and Applied Pyrolysis, 2018, 130: 224-232. (SCI&EI , IF2019= 3.905)

[7] Yao Zhu, Baojun Yi*, Qiaoxia Yuan, **Hongliang Cao**, Shuiping Yan, Combustion Characteristics of Cattle Manure and Pulverized Coal Co-firing under Oxy-Fuel Atmosphere in Non-Isothermal and Isothermal Conditions. BioResources, 2018, 13(3): 6465-6479. (SCI&EI, IF2019= 1.409)

[8] Baojun Yi*, Qiaoxia Yuan, **Hongliang Cao**, Ming Wang, Wenjuan Niu, Shuiping Yan, Combustion characteristics of densified cattle manure briquette in an isothermal condition. BioResources, 2018, 13 (2), 3571-3584. (SCI&EI, IF2019= 1.409)

[9] Baojun Yi*, Qiaoxia Yuan, **Hongliang Cao**, Wenjuan Niu, Ming Wang, Yao Zhu, Shuiping Yan, Effect of alkali and alkaline earth metal species on the combustion characteristics of cattle manures. RSC Advances 2018; 8: 11705 - 11713. (SCI&EI, IF2019= 3.119)

[10] Ya Xin, **Hongliang Cao***, Qiaoxia Yuan*, Dianlong Wang, Two-step gasification of cattle manure for hydrogen-rich gas production: Effect of biochar preparation temperature and gasification temperature. Waste Management, 2017, 68: 618-625. (SCI&EI, IF2019= 5.448)

[11] Xinsong Yuan, Tao He, **Hongliang Cao***, Qiaoxia Yuan*, Cattle manure pyrolysis process: kinetic and thermodynamic analysis with isoconversional methods, Renewable Energy, 2017;107: 489-496. (SCI&EI, IF2019= 6.274)

[12] **Hongliang Cao**, Ya Xin, Qiaoxia Yuan*, Prediction of biochar yield from cattle manure pyrolysis via least squares support vector machine intelligent approach, Bioresource Technology, 2016;202: 158-164. (SCI&EI, IF2019= 7.539)

[13] **Hongliang Cao**, Xi Li*, Thermal management oriented multivariable robust control of a kW scale solid oxide fuel cell stand-alone system, IEEE Transactions on Energy Conversion, 2016; 31(2): 596-605. (SCI&EI, IF2019= 4.501)

[14] **Hongliang Cao**, Ya Xin, Dianlong Wang, Qiaoxia Yuan*, Pyrolysis characteristics of cattle manures using a discrete distributed activation energy model, Bioresource Technology, 2014;172: 219-225. (SCI&EI, IF2019= 7.539)

[15] ***Hongliang Cao***, Xi Li*, Zhonghua Deng*, Jian Li, Yi Qin, Thermal management oriented steady state analysis and optimization of a kW scale solid oxide fuel cell stand-alone system for maximum system efficiency, International Journal of Hydrogen Energy, 2013; 38(28): 12404-12417. (SCI&EI, IF2019= 4.939)

[16] ***Hongliang Cao***, Xi Li*, Zhonghua Deng*, Jianhua Jiang, Jie Yang, Jian Li, Yi Qin, Dynamic modeling and experimental validation for the electrical coupling in a 5-cell solid oxide fuel cell stack in the perspective of thermal coupling, International Journal of Hydrogen Energy, 2011; 36(7): 4409-4418. (SCI&EI, IF2019= 4.939)

[17] ***Hongliang Cao***, Zhonghua Deng*, Xi Li*, Jie Yang, Yi Qin, Dynamic modeling of electrical characteristics of solid oxide fuel cells using fractional derivatives, International Journal of Hydrogen Energy, 2010, 35(4): 1749-1758. (SCI&EI, IF2019= 4.939)

[18] Zhonghua Deng, ***Hongliang Cao****, Xi Li*, Jianhua Jiang, Jie Yang, Yi Qin, Generalized predictive control for fractional order dynamic model of solid oxide fuel cell output power, Journal of Power Sources, 2010; 195(24): 8097-8103. (SCI&EI, IF2019= 8.247)

Additional Information

Grants Awarded

1. National Natural Science Foundation of China, Co-regulation of spatial pore structure and surface adsorption activity sites of biochar used for saving fertilizers in field (31971807, PI), Jan.2020 – Dec. 2023

2. International Science and Technology Innovation Cooperation Among Governments of National Key R&D Program of China, Basic research on integrated technology of biomass oriented thermal conversion and preparation of functional carbon materials (2018YFE0183600, PI), Jan.2020 – Dec. 2022

3. Fundamental Research Funds for the Central Universities(Cultivation Project Aimed for International Cooperation), Multi-objective coordinated regulation of quality, yield and energy consumption of biochar fertilizer based on process optimization of biomass charring (2662019PY081, PI), Jan. 2019 – Dec. 2020

4. Key Lab Fund, Image Processing and Intelligent Control of Education Ministry of China, Data mining method for the charring process of biomass (2017FPY005, PI), Sep. 2017-Aug. 2019

5. Hubei Natural Science Foundation of China, Intelligent modeling and optimization for multi-step charring process of animal manure with biochar application as biofertilizer (2017CFB159, PI), Jan. 2017 – Dec. 2018

6. Fundamental Research Funds for the Central Universities, Control and optimization of biochar properties for its agricultural application (2016PY018, PI), Jan. 2016 – Dec. 2016

7. Fundamental Research Funds for the Central Universities, Intelligent Modeling and optimization for gasification process of cattle manure with in-situ steam agent (2662015QC002, PI), Jan.2015 – Dec. 2016

8. Special Fund for Agro-scientific Research in the Public Interest, Research on key equipment and treatment technology for the solid waste of animal farms (201303091, Co-PI), Jan.2013 –

Dec. 2017

9. National Natural Science Foundation of China, Synergistic regulation mechanism of structure and nutrition of high quality biochar fertilizer based on pyrolysis technology of crop residues (31701310, Participator), Jan.2018 – Dec. 2020

10. National Natural Science Foundation of China, Coordinated regulation of product quality during hydrothermal carbonization of high wet biomass (51406063, Participator), Jan.2015 – Dec. 2018

11. Fundamental Research Funds for the Central Universities, Equipment and treatment technology for agricultural wastes (2015PY077, Participator), June 2015 –Dec. 2017

Awards And Honors

1. Gold Medal, Geneva International Invention Exhibition, 2019

2. Second Rank, Hubei Provincial Science and Technology Progress Award, 2018

3. First Rank, Science and Technology Progress Award of China Federation of Commerce, 2017

4. Winning Prize, The 12th Teaching Competition Among Young Teachers, Huazhong Agricultural University, 2015

5. Second Rank, Teaching Competition Among Young Teachers, College of Engineering, Huazhong Agricultural University, 2015

Google Scholar

<https://scholar.google.com/citations?hl=en&user=SchF-p0AAAAJ>

Available Positions

Thank you for your interest in graduate education and research at College of Engineering of Huazhong Agricultural University. I especially appreciate your interest in my work. The research in my group is dynamic and opportunities arise that may not make it to this web page. So please contact me and let me know your plans and interests.

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