



The 1st International Conference on Energy and Environment

19-22 September, 2019
Nanjing, China

Organizers: Southeast University
Jiangsu Energy Research Society
Co-organizer: Everbright International



International Conference on Energy and Environment 2019

**The 1st International Conference on Energy and Environment
19-22 September 2019, Nanjing, China**

Program Schedule



Organizer: Southeast University, Jiangsu Energy Research Society

Co-Organizer: Everbright International

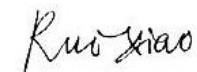
Organizing Committee

Chairman of the Organizing Committee	<i>Rui Xiao</i>	Southeast University, China
Co-chair of the Organizing Committee	<i>Aibing Yu</i>	Monash University, Australia
	<i>Xiaotao Bi</i>	University of British Columbia, Canada
	<i>Kunlei Liu</i>	University of Kentucky, United States
	<i>Kunio Yoshikawa</i>	Tokyo Institute of Technology, Japan
	<i>Yulong Ding</i>	University of Birmingham, United Kingdom

Welcome to ICEE 2019

Welcome to the 1st International Conference on Energy and Environment (ICEE) held by Southeast University, Nanjing from Sep. 19-22, 2019. ICEE is a forum for both scientists and engineers interested in innovation and professional growth of these broad areas relevant to energy and environment. The conference is now firstly hosted by School of Energy and Environment, Southeast University, and jointly organized by Key Laboratory of Energy Thermal Conversion and Control and Jiangsu Energy Research Society.

Energy and environment has always been a vital issue to human beings. Scientist, engineers and entrepreneurs are developing fundamentals and technologies, striving to solve existing problems while identifying potential future technologies. The 1st ICEE is aiming to set up a platform to stimulate new ideas in broad and in-depth communication, present new achievements, explore new issues and promote the development of energy and environment-related science and technologies. Now the 1st conference is initiated in Nanjing, China. We are honored that your attendance of the conference here. There are more than 400 participants from over 20 countries attending, and 100 peer-reviewed technical papers and more than 250 posters will be presented in six sessions. The program includes the latest studies from various aspects on energy and environment. We are also appreciating our sponsors providing support to the conference. We are grateful to our scientific committee for the program planning and abstracts reviewing. Thanks also go to the conference speakers, authors and others who contribute this successful event.



Chairman of the 1st International Conference on Energy and Environment

Scientific Committee

Baosheng Jin	Southeast University, China	Berend van Wachem	Otto-von-Guericke-Universität Magdeburg, Germany
Biaohua Chen	Beijing University of Technology, China	Chunzhu Li	Curtin University of Technology, Australia
Edward J. Anthony	Cranfield University, United Kingdom	Foster Agblevor	Utah State University, United States
George W.Huber	University of Wisconsin-Madison, Unites States	Guanyi Chen	Tianjin University, China
Haibo Zhao	Huazhong University of Science and Technology, China	Haisheng Chen	Institute of Engineering Thermophysics, Chinese Academy of Sciences, China
Hong Yao	Huazhong University of Science and Technology, China	Hongwei Wu	Curtin University of Technology, Australia
Huihe Qiu	The Hong Kong University of Science & Technology, Hong Kong, China	Huilin Lu	Harbin Institute of Technology, China
Jiong Shen	Southeast University , China	John N. Saddler	University of British Columbia, Canada
Junjie Yan	Xi'an Jiaotong University, China	Kun Luo	Zhejiang University, China
Laihong Shen	Southeast University , China	Liang-Shih Fan	The Ohio State University, United States
Longlong Ma	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China	Mao Ye	Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China
Meihong Wang	The University of Sheffield, United Kingdom	Qiang Liao	Chongqing University, China
Qilei Song	Imperial College London, United Kingdom	Rafael Luque	Universidad de Córdoba, Spain
Roger Ruan	University of Minnesota, United States	Ruud van Ommen	Delft University of Technology, Netherlands
Sai Gu	University of Surrey, United Kingdom	Shaozeng Sun	Harbin Institute of Technology, China
Shuiqing Li	Tsinghua University, China	Shurong Wang	Zhejiang University, China
Wenqi Zhong	Southeast University, China	Xiaohu Dai	Tongji University, China
Yong Yan	University of Kent, United Kingdom		

Conference Venue

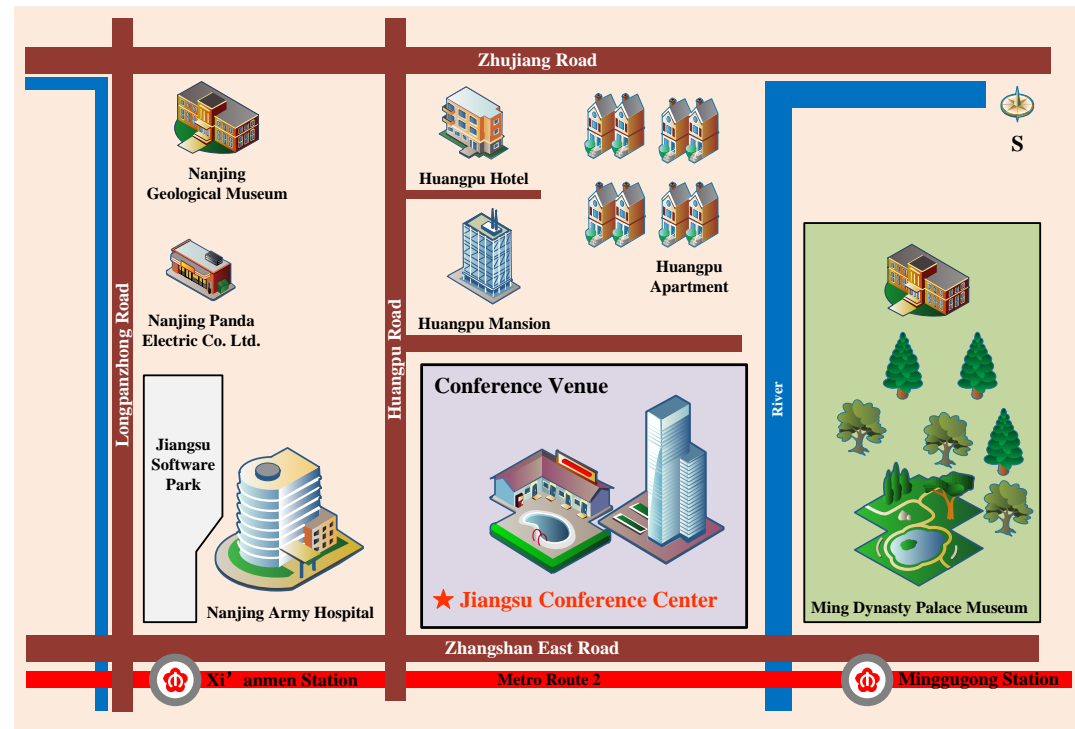
Jiangsu Conference Center (Zhongshan Hotel)

Address: 307 Zhongshan East Road, Xuanwu District, Nanjing

Postcode: 210016

Telephone: 86-25 84818888

Fax: 86-25 84809209



Transportation

From Railway Station

Railway Station is 8 km from Jiangsu Conference Center. You can take Bus Route 190 to 'Huangpulu', then walk there; or you can take Bus Route 17 or 36 to 'Minggugong', and walk 5 minutes to arrive

From South Railway Station

South Railway Station is 12 km from Jiangsu Conference Center. You can take Bus Route 190 to 'Huangpulu', then walk there; or you can take Metro Route 1 or 3 and transfer to 'Xi'anmen' of Metro Route 2, and then walk 5 minutes to arrive

From Lukou International Airport

Lukou International Airport is 42 km from Jiangsu Conference Center. You can take the Airport Shuttle Route 1 to 'Xihuamen' and then walk 10 minutes to arrive

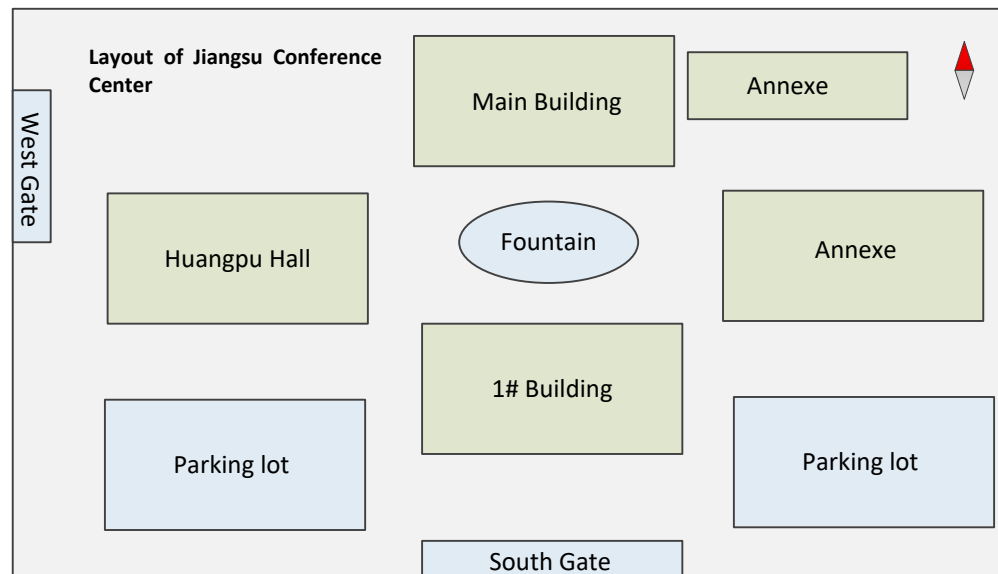
Nearby Hotels

Huangpu Hotel

2-2 Huangpu Road, Xuanwu District, 86-25-84069999, 3 minutes' walk to the venue

Hanting Hotel

2 Huangpu Road, Xuanwu District, 86-25-84822799, 3 minutes' walk to the venue



Main Building	Registration, Opening Ceremony, Plenary Lecture, Parallel Session	
Huangpu Hall	Poster, Plenary Lecture, Closing Ceremony	
Registration	Registration is at the lobby of the Main Building	
Secretary-General	Huiyan Zhang	hyzhang@seu.edu.cn
Secretary	Shiyi Chen	sychen@seu.edu.cn
	Feng Gong	101012551@seu.edu.cn
	Yaping Zhang	amflora@seu.edu.cn
	Hua Qian	keenwa@gmail.com
	Xiaojie Gu	guxj@seu.edu.cn
Emergency Call	Huiyan Zhang	86-13839180368

Summary

SEPT. 19	SEPT. 20		SEPT. 21		SEPT. 22
		Grandeur Hall, Main Building		Huangpu Hall	Technical Excursion
	08:30-09:00	Opening Ceremony and Welcoming Remarks	08:30-10:00	Poster Session	
14:30-22:30	09:00-09:40	Plenary Lecture	10:00-10:20	Break	
Registration	09:40-10:20	Plenary Lecture		Main Building	
	10:20-10:50	Break	10:20-12:10	Parallel Session	
18:00-20:00	10:50-11:30	Plenary Lecture		Zijing Hall	
Welcome Reception	11:30-12:10	Plenary Lecture	12:10-13:30	Lunch	
		Zijing Hall		Huangpu Hall	
	12:10-13:30	Lunch	13:30-14:10	Plenary Lecture	
		Main Building	14:10-14:50	Plenary Lecture	
	13:30-15:10	Parallel Session	14:50-15:10	Break	
	15:10-15:30	Break	15:10-15:50	Plenary Lecture	
	15:30-18:00	Parallel Session	15:50-16:30	Plenary Lecture	
		Zijing Hall	16:30-17:00	Closing Ceremony	
	18:00-19:30	Dinner		Zijing Hall	
			18:00-20:00	Banquet	

THURSDAY, SEPTEMBER 19- AFTERNOON AND EVENING	
	Lobby, Main Building
14:30-22:30	Registration
	Zijing Hall
18:00-20:00	Welcome Reception

FRIDAY, SEPTEMBER 20-MORNING	
	Grandeur Hall, Main Building
08:30-09:00	Opening Ceremony and Welcoming Remarks <i>Rui Xiao, Southeast University, China</i>
	Plenary Lecture Chairman: <i>Yulong Ding, University of Birmingham, United Kingdom</i>
09:00-09:40	Microwave-assisted catalytic pyrolysis of biomass residues <i>Xiaotao Bi, University of British Columbia, Canada</i>
09:40-10:20	Modelling and simulation applied in process engineering <i>Aibing Yu, Monash University, Australia</i>
10:20-10:50	Break and Photograph
	Plenary Lecture Chairman: <i>George Huber, University of Wisconsin-Madison, United States</i>
10:50-11:30	Pressurized chemical looping for fossil fuel conversion <i>Kunlei Liu, University of Kentucky, United States</i>
11:30-12:10	Coal-biomass cofiring challenges and opportunities <i>Andrew Minchener OBE, IEA Clean Coal Centre, United Kingdom</i>
	Zijing Hall
12:10-13:30	Lunch

FRIDAY, SEPTEMBER 20-AFTERNOON

Parallel Sessions							
	Room 307, Main Building	Room 308, Main Building	Room 201, Main Building	Room 206, Main Building	Room 203, Main Building	Room 204, Main Building	Room 205, Main Building
	Thermochemical conversion of biomass	Thermochemical conversion of biomass	Thermochemical conversion solid wastes	Chemical looping and oxy-fuel combustion	Measurement and process control for energy and power engineering	Multiphase flows and reactor design	Energy storage
	<p>Chairman: <i>Tiejun Wang</i>, Guangdong University of Technology, China <i>Xun Hu</i>, Jinan University, China</p>	<p>Chairman: <i>Shurong Wang</i>, Zhejiang University, China <i>Changzhu Li</i>, Hunan Academy of Forestry, China</p>	<p>Chairman: <i>Yongxin Duan</i>, Tsingtao University of Science & Technology, China <i>Ying Zhang</i>, University of Science and Technology of China, China</p>	<p>Chairman: <i>Jingpei Cao</i>, China University of Mining and Technology, China <i>Heather Nikolic</i>, University of Kentucky, United States</p>	<p>Chairman: <i>Xianjun Xing</i>, Hefei University of Technology, China <i>Lu Lin</i>, Xiamen University, China</p>	<p>Chairman: <i>Dong Liu</i>, Nanjing University of Science and Technology, China <i>Kejun Dong</i>, Western Sydney University, Australia</p>	<p>Chairman: <i>David Mitlin</i>, The University of Texas at Austin, United States <i>Xingxing Cheng</i>, Shandong University, China</p>
13:30-14:00	<p>Keynote: Synergies in particulate matter emission during biochar/bio-oil slurry combustion <i>Hongwei Wu</i>, Curtin University of Technology, Australia</p>	<p>Keynote: Catalytic fast microwave-assisted thermochemical conversion of solid wastes for energy and fuel production <i>Roger Ruan</i>, University of Minnesota Twin Cities, United States</p>	<p>Keynote: Renewing pyrolytic-gasification of biomass/wastes and its application <i>Guanyi Chen</i>, Tianjin University, China</p>	<p>Keynote: A brief review of OCAC technology and investigations using ilmenite ore as bed material in FBC <i>Dennis Yong Lu</i>, CanmentEnergy, Canada</p>	<p>Keynote: Study of Solvent-based carbon capture through systems engineering techniques <i>Meihong Wang</i>, The University of Sheffield, United Kingdom</p>	<p>Keynote: Development of ash agglomeration control technology using chemical additives for CFBC burning SRF <i>Dowon Shun</i>, Korea Institute of Energy Research, Korea</p>	<p>Keynote: Role of advanced thermal energy technologies in deep decarbonization of energy systems <i>Peter Lund</i>, Aalto University, Finland</p>

14:00-14:30	Keynote: Biomass Pyrolysis for gas fuel, liquid chemicals and solid carbon-materials polygeneration <i>Haiping Yang,</i> Huazhong University of Science and Technology, China	Keynote: Study on bio-oil composition by two-dimensional gas chromatography-time of flight mass spectrometry <i>Ronghou Liu,</i> Shanghai Jiaotong University, China	Keynote: Clean conversion and valorization of organic solid Waste on basis of thermochemical process <i>Haoran Yuan,</i> Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China	Keynote: Oxy-Coal-based-fuel combustion under elevated pressure and steam environment <i>Shaozeng Sun,</i> Harbin Institute of Technology, China	Keynote: Economic model predictive control: Towards smart energy generation <i>Jinfeng Liu,</i> University of Alberta, Canada	Keynote: Progress of methanol to chemical technology <i>Mao Ye,</i> Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China	Keynote: Energy storage mechanism of sulfur-carbon bridged materials <i>Xiaobo Ji,</i> Central South University, China
14:30-14:50	Clean solid biofuel production from high moisture content biomass waste by employing hydrothermal treatment technology <i>Lu Ding, Guangsuo Yu, Kunio Yoshikawa,</i> East China University of Science and Technology, China	Direct conversion of biomass to acetonitrile by catalytic fast pyrolysis in ammonia <i>Ying Zhang, Ziguo Yuan, Qian Yao, Xin Zhang,</i> University of Science and Technology of China, China	Mutation of arthrospira platensis by gamma irradiation to promote cell tolerance and biodegradation of phenol in coal chemical flue gas <i>Yanxia Zhu, Jun Cheng, Ze Zhang, Rongxin Xia, Jianzhong Liu,</i> Zhejiang University, China	UKy-CAER modular solid fuel conversion <i>Heather Nikolic, Kunlei Liu,</i> University of Kentucky, United States	Dynamic modeling and coordinated control for MGT-CCHP/PEM-FC/ Solar integrated energy system <i>Di Zhou, Long Wu, Lei Pan, Jiong Shen, Junli Zhang,</i> Southeast University, China	Numerical simulation of a chemical looping combustion of biomass: Hydrodynamic investigation <i>Ziad Hamidouche, Xiaoke Ku,</i> Zhejiang University, China	Thermochemical energy storage performance of synthetic Ca-based material during CaO/CaCO₃ cycles under high pressure <i>Hao Sun, Yingjie Li,</i> Shandong University, China

14:50-15:10	Copper-based catalysts with tunable acidic and basic sites for selective conversion of levulinic acid/ester to γ-valerolactone or 1,4-pentanediol <i>Xun Hu, Yüewen Shao, Kai Sun, Qingyin Li, Qianhe Liu, University of Jinan, China</i>	Study on performance of zeolite catalytic pyrolysis of biomass to benzenes and phenols <i>Yanji Li, Jiajing Yi, Qiang He, Meng Ni, Zhentao Yang, Shenyang Aerospace University, China</i>	Effect of ultrasonic treatment on pyrolysis kinetics of municipal sludge <i>Hongyu Jia, Xiuxia Zhang, Jie Chen, Bingkun Liu, Wenhai Ren, China University of Petroleum (East China), China</i>	Products distribution and kinetic analysis on chemical looping with oxygen uncoupling (CLOU) of biomass <i>Zhiqiang Wu, Bo Zhang, Bolun Yang, Xi'an Jiaotong University, China</i>	A uniting-production system of multi-energy in coal mines <i>Feifei Yin, Baisheng Nie, Tao Luo, Lei Wang, Yong Ma, China University of Mining and Technology, China</i>	Combustion kinetics of the coke deposited on industrial MTO catalyst <i>Jianping Zhao, Mao Ye, Zhongmin Liu, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China</i>	In-situ observation of micro-sized York-shell structured alumina-titanium oxide composites in lithium ion batteries <i>Yin Fang, University of Chicago, United States</i>
15:10-15:30	Break						
	Parallel Sessions						
	Room 307, Main Building	Room 308, Main Building	Room 201, Main Building	Room 206, Main Building	Room 203, Main Building	Room 204, Main Building	Room 205, Main Building
	Thermochemical conversion of biomass	Thermochemical conversion of biomass	Thermochemical conversion solid wastes	Chemical looping and oxy-fuel combustion	Measurement and process control for energy and power engineering	Multiphase flows and reactor design	Energy storage
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15:30-16:00	Keynote: Jet biofuel converted from microalgae biodiesel through hydrodeoxygenation and hydrocracking reactions <i>Jun Cheng, Zhejiang University, China</i>	Keynote: Aviation fuel production from lignocellulosic biomass using novel carbonyl alkylation catalyst <i>Foster Agblevo, Utah State University, United States</i>	Keynote: Hydrothermal conversion of biomass to advanced liquid fuels <i>Tiejun Wang, Guangdong University of Technology, China</i>	Keynote: Design, operation and optimization of interconnected fluidized bed reactors for chemical looping combustion of coal <i>Haibo Zhao, Huazhong University of Science and Technology, China</i>	Keynote: Theoretical study on the flexibility and efficiency enhancement for coal-fired power plants <i>Ming Liu, Xi'an Jiaotong University, China</i>	Keynote: Oxy-fuel combustion <i>Hao Liu, University of Nottingham, United Kingdom</i>	Keynote: Pristine or highly defective? Understanding the role of graphene structure for stable lithium metal plating <i>David Mitlin, The University of Texas at Austin, United States</i>
16:00-16:20	Real-time tracking the HDO reactions of lignin model compounds with photoionization mass spectrometry <i>Cunhao Cui, Xiamin Chen, Chunjiang Liu, Xinghua Liu, Zhongyue Zhou, Shanghai Jiaotong University, China</i>	Microwave-assisted catalytic pyrolysis of RDF to produce biochar for soil applications <i>Pu Yang, Dening Jia, Bingcheng Lin, Xiaotao Bi, University of British Columbia, Canada</i>	Microwave hydrothermal carbon and conventional hydrothermal carbon modified by iron to remove phosphate <i>Xiaofei Sun, Yanpeng Mao, Shandong University, China</i>	Mercury release and migration during reduction of iron-based oxygen carriers with coal in chemical looping gasification <i>Jingjing Ma, Mei An, Jiameng Hu, Xiude Hu, Qingjie Guo, Ningxia University, China</i>	Comparison on dynamic characteristics of single-reheat and double-reheat boilers <i>Zhu Wang, Ming Liu, Yongliang Zhao, Xin Li, Daotong Chong, Junjie Yan, Xi'an Jiaotong University, China</i>	On-line detection of the bubble dynamics in a bubbling fluidized bed methanation reactor by pressure fluctuation analysis <i>Yuli Zhang, Mao Ye, Rui Xiao, Hohai University, China</i>	Electrochemical conversion of CO₂ into valuable commercial chemicals <i>Jesse G. Thompson, James Landon, Ayo Omosebi, Daniel Moreno, Kunlei Liu, University of Kentucky, United States</i>

16:20-16:40	<p>Ti-modified AIPO as an effective solid acid catalyst for glucose conversion to 5-hydroxymethylfurfural</p> <p><i>Tao Yang, Wenzhi Li, University of Science and Technology of China, China</i></p>	<p>A review on co-catalysis for microwave-assisted pyrolysis of biomass</p> <p><i>Fei Gao, Kaiqi Shi, Tao Wu, University of Nottingham, United Kingdom</i></p>	<p>Effect of blending sewage sludge with coal on physicochemical properties of products</p> <p><i>Shuai Guo, Xiaoyan Xiong, Deyong Che, Hongpeng Liu, Baizhong Sun, Northeast Electric Power University, China</i></p>	<p>Combustion behavior of bituminous coal char particle in O₂/CO₂/H₂O in a fluidized bed</p> <p><i>Changsheng Bu, Xinye Wang, Jubing Zhang, Guilin Piao, Nanjing Normal University, China</i></p>	<p>Research on direct limit protection control method of temperature before gas turbine for turboshaft engine with variable rotor speed</p> <p><i>Yong Wang, Yerong Peng, Haibo Zhang, Nanjing University of Aeronautics and Astronautics, China</i></p>	<p>Simulation and experimental study of light field information acquisition system</p> <p><i>Chengshuai Yu, Wu Zhou, Huifang Liu, Xiaoshu Cai, University of Shanghai for Science and Technology, China</i></p>	<p>Fabrication of highly efficient thermal energy composite from waste polystyrenes</p> <p><i>Changhui Liu, Xiaotian Ma, Zhonghao Rao, China University of Mining and Technology, China</i></p>
16:40-17:00	<p>Experimental and kinetic modelling studies of the pyrolysis of furfural at various pressures</p> <p><i>Jinglan Wang, Lili Xing, Sirong He, Zhanjun Cheng, Lixia Wei, Jiuzhong Yang, Beibei Yan, Guanyi Chen, Tianjin University, China</i></p>	<p>In-situ catalytic reforming of lignite pyrolysis volatiles to light aromatics over cobalt-modified hierarchical HZSM-5 zeolite</p> <p><i>Xueyu Ren, Jingpei Cao, Xiaoyan Zhao, University of Mining & Technology, China</i></p>	<p>Effects of heating rate on the pyrolysis of waste tires and sulfur emission behavior</p> <p><i>Hao Wang, Hongyun Hu, Baojun Yi, Fu Yang, Yuhan Yang, Hua Tang, Qiang Gao, Hong Yao, Huazhong University of Science and Technology, China</i></p>	<p>Effect of oxygen partial pressure on turbulent premixed methane/oxy-fuel combustion by direct numerical simulation</p> <p><i>Hao Wang, Fan Hu, Zhaohui Liu, Pengfei Li, Huazhong University of Science and Technology, China</i></p>	<p>A handheld visible thermographic instrumentation for measurement of flame temperature</p> <p><i>Xiaohuang He, Chun Lou, Yu Qiao, Jinbang Xu, Zhixiong Zhang, Huazhong University of Science and Technology, China</i></p>	<p>Direct numerical simulation of a temporally evolving pulverized coal/biomass jet flame</p> <p><i>Jiangkuan Xing, Kun Luo, Haiou Wang, Jianren Fan, Zhejiang University, China</i></p>	<p>ZIF-67 derived porous carbon enhances methanogenesis through facilitating interspecies electron transfer</p> <p><i>Hui Li, Jun Cheng, Zhe Fang, Haiquan Dong, Junhu Zhou, Zhejiang University, China</i></p>

17:00-17:20	Integrated C-C coupling/hydrogenation of ketones for aviation fuel derived from biomass pyrolysis over Ni-Mg-Al-O/C bifunctional catalysts <i>Wenbin Dong, Shanshan Shao, Xiaohua Li, Huiyan Zhang, Rui Xiao, Yixi Cai, Jiangsu University, China</i>	Effect of torrefaction on chemical looping gasification of biomass over NiFe₂O₄ <i>Shengpeng Xia, Yuyang Fan, Zhen Huang, Guoqiang Wei, Anqing Zheng, Zengli Zhao, Haibin Li, Guangzhou Institute of Energy Conversion, Chinese Academy Sciences, China</i>	Assessing the impact of climate change on groundwater resources in Brikama, the Gambia <i>Musa J. Sanyang, Lin Zhao, Sheila T. kavwenje, Ajaz Ali, Ashenafi Yohannes, Abdul Rehmana, Tianjin University, China</i>	Chemical looping combustion over CeO₂- MnCo₂O₄ oxygen carrier: reducibility evolution and reduction kinetics <i>Chunqiang Lu, Kongzhai Li, Rongrong Deng, Yannan Zhao Kunming University of Science and Technology, China</i>	Research on modulated thermal wave detection method for photothermal properties of semitransparent materials <i>Juqi Zhang, Zhitian Niu, Yatao Ren, Hong Qi, Harbin Institute of Technology, China</i>	Modeling of gas distribution types on biomass gasification characteristics of spout-fluid bed gasifier <i>Panxing Kang, Yujian Lu, Kuang Wang, Rui Zhang, Luchang Han, Xiayi (Eric) Hu, Xiao Luo, Yefeng (Jeffrey) Zhou, Xiangtan University, China</i>	Solar fuels from sunlight, CO₂ and H₂O <i>Sheng Chu, Zetian Mi, McGill University, Canada</i>
17:20-17:40	Enhancing ethylene selectivity by pre-siting coke for methanol-to-olefins process <i>Jibin Zhou, Jinling Zhang, Tao Zhang, Mao Ye, Zhongmin Liu, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China</i>	Catalytic pyrolysis of biomass with potassium oxalate for co-producing high-quality biofuels and porous carbon <i>Yafei Shen, Niyu Zhang, Rui Yuan, Nanjing University of Information Science & Technology, China</i>	Sustainable treatment of sewage sludge towards superior solid biofuels via hydrothermal co-carbonization with typical fruit and agricultural wastes <i>Chao He, Chaofeng Ge, Zhao Zhang, Rongliang Qiu, Sun Yat-sen University, China</i>	Syngas production from chemical looping gasification of sewage sludge using copper slag modified by NiO as an oxygen carrier <i>Zhen Huang, Zhengbing Deng, Fang He, Anqing Zheng, Guoqiang Wei, Zengli Zhao, Haibin Li, Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China</i>	A TDLAS tomographic system based on multi-frequency wavelength modulation spectroscopy for dynamic flame monitoring <i>Ang Huang, Zhang Cao, Wenshuai Zhao, Lijun Xu, Beihang University, China</i>	Development of ash agglomeration control technology using chemical additives for CFBC burning SRF <i>Jae Hyeok Park, Dal-Hee Bae, Jong-Seon Shin, Dowon Shun, Korea Institute of Energy Research, Korea</i>	Pyrolysis kinetic and reaction mechanism of spent lithium-ion batteries <i>Yiming Lai, Xianqing Zhu, Jun Li, Qiang Liao, Ao Xiao, Yun Huang, Xun Zhu, Chongqing University, China</i>

17:40-18:00	Catalytic effect of CaO for bio-oil reforming predicted by Boltzmann-Monte Carlo-Percolation model <i>Xiaojin Guo, Xiaoyong Xue, Yunhan Xiao,</i> Institute of Engineering Thermophysics, Chinese Academy of Sciences, China	Catalytic fast pyrolysis of cellulose using metal-modified ammoniated HZSM-5 to selectively produce 1-hydroxy-3,6-dioxabicyclo [3.2.1] octan-2-one <i>Zhenxi Zhang, Kai Li, Shanwei Ma, Yang Li, Qiang Lu, Yongping Yang,</i> North China Electric Power University, China	Removal of heavy metal ions and dyes from aqueous solution by thermo-catalytically reformed mixture of lignin and polyethylene <i>Zhanghong Wang, Dekui Shen, Chunfei Wu,</i> Southeast University, China	Exploring microscopic reaction mechanism of H₂S and COS with CuO oxygen carrier in chemical looping combustion <i>Chaohe Zheng, Haibo Zhao,</i> Huazhong University of Science and Technology, China	Distribution dynamic characteristics of a superheater during step disturbance transient processes <i>Chaoyang Wang, Ming Liu, Daotong Chong, Junjie Yan,</i> Xi'an Jiaotong University, China	Impacts of alcohols carbon chain length on nascent soot characteristics: Nanoscale diagnostics <i>Yaoyao Ying, Dong Liu,</i> Nanjing University of Science and Technology, China	Feasibility of biomass solvent extraction product on electric double layer capacitor electrode preparation <i>Zhenzhong Hu, Xian Li, Zhengjun Tu, Weixiang Qian, Weixiang Qian, Mingyue Sun, Hong Yao,</i> Huazhong University of Science and Technology, China
	Zijing Hall						
18:00-19:30	Dinner						

SATURDAY, SEPTEMBER 21-MORNING							
	Huangpu Hall						
08:30-10:00	Poster Session						
10:00-10:20	Break						
	Parallel Sessions						
	Room 307, Main Building	Room 308, Main Building	Room 201, Main Building	Room 206, Main Building	Room 203, Main Building	Room 204, Main Building	Room 205, Main Building
	Thermochemical conversion of biomass	Thermochemical conversion of biomass	Thermochemical conversion solid wastes	Chemical looping and oxy-fuel combustion	Measurement and process control for energy and power engineering	Multiphase flows and reactor design	Energy storage
	Chairman: <i>Wenzhi Li</i> , University of Science and Technology of China, China <i>Ningbo Gao</i> , Xi'an Jiaotong University, China	Chairman: <i>Shuang Wang</i> , Jiangsu University, China <i>Xiaoxiang Jiang</i> , Nanjing Normal University, China	Chairman: <i>Yafei Shen</i> , Nanjing University of Information Science & Technology, China <i>Qiangqiang Ren</i> , Institute of Engineering Thermophysics, Chinese Academy of Sciences, China	Chairman: <i>Jiankun Zhuo</i> , Tsinghua University, China <i>Zhiqiang Wu</i> , Xi'an Jiaotong University, China	Chairman: <i>Junjie Yan</i> , Xi'an Jiaotong University, China <i>Xianjun Xing</i> , Hefei University of Technology, China	Chairman: <i>Liqi Zhang</i> , Huazhong University of Science and Technology, China <i>Junfeng Wang</i> , Jiangsu University, China	Chairman: <i>Peter Lund</i> , Aalto University, Finland <i>Haisheng Chen</i> , Institute of Engineering Thermophysics Chinese Academy of Sciences, China

10:20-10:50	<p>Keynote: Catalytic conversion of cellulose aqueous phase to high value oxygenated chemicals <i>Longlong Ma,</i> Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, China</p>	<p>Keynote: Pyrolysis mechanism of biomass and selective pyrolysis to prepare valuable compounds <i>Qiang Lu</i> North China Electric Power University, China</p>	<p>Keynote: Reaction decoupling leading to advanced combustion and gasification technologies of biomass wastes <i>Guangwen Xu,</i> Shenyang University of Chemical Technology, China</p>	<p>Keynote: Research and development efforts toward a low cost combustion technology <i>Zhaohui Liu,</i> Huazhong University of Science and Technology, China</p>	<p>Keynote: In-situ imaging diagnostics for complex combustion system <i>Shuiqing Li,</i> Tsinghua University, China</p>	<p>Keynote: Multi-scale modeling of dense flows with chemical reaction <i>Kun Luo,</i> Zhejiang University, China</p>	<p>Keynote: Research progress in advanced compressed air energy storage system <i>Haisheng Chen,</i> Institute of Engineering Thermophysics Chinese Academy of Sciences, China</p>
10:50-11:10	<p>Process and mechanism of accelerated aging of biocrude oil from hydrothermal liquefaction of algae, cornstalk, and swine manure <i>Yingxian Wang, Yuanhui Zhang, Zhidan Liu,</i> China Agricultural University, China</p>	<p>Co-pyrolysis of cellulose and polypropylene to aromatic products over layered H-MCM-22 catalyst <i>Yu Shi, Jiankun Zhuo, Junjie Xue, Dahu Zhang, Qiang Yao,</i> Tsinghua University, China</p>	<p>Sludge-to-energy approaches based on pathways that combine anaerobic digestion and pyrolysis: Energy efficiency assessment and kinetics analysis <i>Renjie Chen, Xiaoqing Yu, Bin Dong, Xiaohu Dai,</i> Tongji University, China</p>	<p>Hydrogen production by enhanced steam reforming of 1-Methylnaphthalene with in-situ CO₂ capture: Effect of a novel calcium-based composite adsorbent <i>Qi Liu, Long Han, Guoqiang Xu, Qinhui Wang, Yingjie Zhong,</i> Zhejiang University of Technology, China</p>	<p>Research on economic load dispatch problem in gas-steam combined cycle units <i>Hui Gu, Yanfeng Cui, Fengqi Si,</i> Nanjing Institute of Technology, China</p>	<p>Ordered and disordered structures in vibrating particle bed <i>Kejun Dong, Reza Amirifar, Liangwan Rong,</i> Western Sydney University, Australia</p>	<p>Significantly improved uranium extraction from seawater with advanced nano-structure adsorbents <i>Dong Wang, Hui Wu, Ning Wang,</i> Hainan University, China</p>

11:10-11:30	Combustion characteristics of single woody sphere after oxidative torrefaction <i>Zhimin Lu, Xin Li, Jie Jian, Xiaoxuan Chen, Jinzheng Chen, Yuan Jiang, Shunchun Yao,</i> South China University of Technology, China	Roles of furfural during the thermal treatment of bio-oil at low temperatures <i>Zhe Xiong, Kai Xu, Xun Hu, Yimin Xiong, Junhao Guo, Sheng Su, Song Hu, Yi Wang, Jun Xiang,</i> Huazhong University of Science and Technology, China	Co-gasification of horticultural waste and sewage sludge with steam: kinetic analysis, char structure evolution and synergistic effects <i>Qiang Hu, Chi-Hwa Wang,</i> National University of Singapore, Singapore	Experimental investigation of pressurized combustion characteristics of single coal particle in O₂/N₂ and O₂/CO₂ environments <i>Yusheng Wang, Qianyun Chen, Jing Li, Zhaohui Liu,</i> Huazhong University of Science and Technology, China	New concepts for large-scale integration of biomass gasification with concentrated solar energy for renewable energy carriers A. Gómez-Barea, M. Suárez-Almeida, A. F. Ghoniem, University of Seville, Spain	CFD modelling of air and particle flows in different airway models <i>Y.H. Kim, R.Y. Yang,</i> University of New South Wales, Australia	Thermal transport anisotropy in crystalline materials <i>Sun Bo,</i> Tsinghua University, China
11:30-11:50	Autoignition characteristics of tri-propylene glycol mono-methyl ether (TPGME) in a motored engine and a constant-volume combustion chamber <i>Shiliang Wu, Ziwei Wang, Huiyan Zhang, Rui Xiao,</i> Southeast University, China	Organic potassium salt-assisted one-pot synthesis of biomass-derived porous carbon <i>Mingwei Xia, Wei Chen, Jing Wu, Yingquan Chen, Haiping Yang, Hanping Chen,</i> Huazhong University of Science and Technology, China	Speciation and migration risk of heavy metals in soils from overlapped areas of farmland and coal resources in Northern Xuzhou, China <i>Y. Y. Yang, J. X. Zhang, X. Xiao, M. Du,</i> China University of Mining and Technology, China	Effects of pressure on the characteristics of shenhua bituminous coal gasification char formed in Ar/CO₂ atmospheres in pressurized drop tube furnace <i>Wenda Zhang, Yijun Zhao, Zujie Zhao, Shaozeng Sun,</i> Harbin Institute of Technology, China	Constrained predictive control for SCR denitration system considering ammonia escape <i>Xudong Wang, Yiguo Li,</i> Southeast University, China	Application of electrical property measurement in flame monitoring <i>Die Hu, Zhang Cao, Shijie Sun, Jiangtao Sun, Lijun Xu,</i> Beihang University, China	Reversible fuel cells <i>Bin Lin,</i> University of Electronic Science and Technology of China, China

11:50-12:10	The oxidative torrefaction of heavy metal polluted rice straw in tube reactor and gas pressurized autoclave <i>Mengjiao Tan, Lin Luo, Zhiqiang Wu, Zhongliang Huang, Jiachao Zhang, Zijian Wu, Xiaoli Qin, Shilin Jiang, Hui Li, Hunan Agricultural University, China</i>	New sight on the lignin torrefaction pretreatment: Relevance between the evolution of chemical structure and the properties of torrefied gaseous, liquid, and solid products <i>Junhao Wang, Cong Li, Zhongqing Ma, Zhejiang A & F University, China</i>	Modified hydrochar via in-situ acid-and basic-assisted HTC of biomass waste: the surface properties and application in the removal of Cd <i>R. Khoshbouy, R. Lejiu, D. Lu, K. Yoshikawa, F. Takahashi, Tokyo Institute of Technology, Japan</i>	The sulfation of limestone under O₂/H₂O combustion circulating fluidized bed conditions <i>Liang Chen, Zhongrui Wang, Chunbo Wang, North China Electric Power University, China</i>	Measurement of flame temperature and emissivity distribution using multispectral video imaging <i>Yizhi Huang, Qi Qi, Xun Cao, Chuanlong Xu, Southeast University, China</i>	Optimizing the analysis of multiple coal property indicators based on LIBS and NIR spectral information <i>Huaiqing Qin, Shunchun Yao, Zhimin Lu, Xiaoxuan Chen, Ziyu Yu, Lifeng Zhang, Xiayang Yao, Shuixiu Xu, Jidong Lu, South China University of Technology, China</i>	Defect-free graphene enabling advanced lithium alloy and metal anodes <i>Wei Liu, Sichuan University, China</i>
	Zijing Hall						
12:10-13:30	Lunch						

SATURDAY, SEPTEMBER 21-AFTERNOON	
	Huangpu Hall
	Plenary Lecture Chairman: Kunlei Liu, University of Kentucky, United States
13:30-14:10	Novel thermochemical technologies for a circular economy <i>Chunzhu Li, Curtin University, Australia</i>
14:10-14:50	Economically feasible mass treatment of MSW alternative to landfilling/incineration for developing countries <i>Kunio Yoshikawa, Tokyo Institute of Technology, Japan</i>
14:50-15:10	Break
	Plenary Lecture Chairman: Xiaotao Bi, University of British Columbia, Canada
15:10-15:50	Production of alcohols from biomass via supercritical methanol depolymerization and hydrodeoxygenation over CuMgAlO_x <i>George Huber, University of Wisconsin-Madison, United States</i>
15:50-16:30	Composite phase change materials for thermal energy storage: From molecular modelling based formulation to innovative manufacture and applications <i>Yulong Ding, University of Birmingham, United Kingdom</i>
16:30-17:00	Closing Ceremony
	Zijing Hall
18:00-20:00	Banquet

SUNDAY, SEPTEMBER 22	
08:30-12:30	Technical Excursion
	Close of Conference

SATURDAY, SEPTEMBER 21-MORNING

	Huangpu Hall
08:30-10:00	Poster Session

Group	Title	Authors	Affiliation	Country
A001	Preparation of long-chain oxygenated fuels precursor by cellulose ethanolysis catalyzed by solid base catalysts	Yuan Liu, Shiliang Wu, Huiyan Zhang, Rui Xiao	Southeast University	China
A002	Depolymerization properites of lignin in supercritical ethanol/formic acid co-solvent catalyzed by nano-crystalline cellulose supported NiAu bimetal catalyst	Daliang Guo, Yunpu Guo, Nana Li, Bei Liu, Cheng Zou, Guoxin Xue	Zhejiang University of Science & Technology	China
A003	Direct liquefaction of cyperus esculentus for bio-oil in methanol-water co-solvent: effect of process variables	Feng Wang, Ye Tian, Yuping Xu, Peigao Duan	Henan Polytechnic University	China
A004	The contribution of components to the synergetic effect of co-pyrolysis of biomass and PP over mesoporous catalyst MCM-41 and Al-MCM-41	Junjie Xue, Jiankun Zhuo, Shi Yu, Dahu Zhang, Qiang Yao	North China Electric Power University	China
A005	PAHs emission characteristics of a diesel engine using diesel fuel blended with long-chain ether oxygenated additives	Ziwei Wang, Shiliang Wu, Huiyan Zhang, Rui Xiao	Southeast University	China
A006	Experimental investigation on biodiesel production through transesterification promoted by the HNTs loaded La-Ca catalyst	Shuang Zhao, Shengli Niu	Shandong University	China
A007	Mechanism of guaiacol hydrodeoxygenation for jet fuel precursors in supercritical methanol with reduced CuMgAlOx catalyst	Xiangchen Kong, Chao Liu, Rui Xiao, Yue Han	Southeast University	China
A008	Catalytic ketonization of levoglucosan over nano-CeO ₂ for production of hydrocarbon precursors	Kuan Ding, Hao Zhou, Yaxuan Gao, Deliang Xu, Shu Zhang	Nanjing Forestry University	China
A009	Study on Fe-Zn Co-modified ZSM-5 catalyst for aromatics production in catalytic pyrolysis of sawdust	Pan Li, Chong Shi, Qingfeng Che, Xianhua Wang, Jing Bai, Chun Chang, Shuqi Fang	Zhengzhou University	China
A010	Synergies in selective production of ketones platform compound from biomass pyrolysis vapors over CeO ₂ catalyst	Xianliang Xiang, Shanshan Shao, Xiaohua Li, Huiyan Zhang, Rui Xiao, Yixi Cai	Jiangsu University	China
A011	Comparison and characterization of pyrolysis behaviours and reaction mechanisms of torrefied soft- and hardwood	Yogesh Patil, Xiaoke Ku	Zhejiang University	China
A012	Catalytic fast hydrolysis of seaweed biomass with different zeolite catalysts to produce high-grade bio-oil	Yamin Hu, Shuang Wang, Jiancheng Li, Haiwen Wang, Qian Wang, Zhixia He	Jiangsu University	China
A013	Investigation on synergistic effects and the evolution of char structure during co-pyrolysis of starch biomass model compound and bituminous coal	Haiyu Meng, Shuzhong Wang, Zhiqing Wu, Jun Zhao, Lin Chen, Jiake Li	Xi'an University of Technology	China

Group	Title	Authors	Affiliation	Country
A014	Simulation and analysis of biomass pyrolysis based on solid heat carrier	Bing Wang, Peng Fu, Shan Luo	Shandong University of Technology	China
A015	Effect of CO ₂ atmosphere on biomass pyrolysis and in-line catalytic reforming	JD. Ye, Y. Gao, JW. Hao, YT. Shen, XD. Huo, J. Xiao	Southeast University	China
A016	Effect of leaching pretreatment with light bio-oil and acetic acid on the pyrolysis poly-generation of moso bamboo	Kehui Cen, Dengyu Chen	Nanjing Forestry University	China
A017	Catalytic depolymerization of Kraft lignin to produce liquid fuels via NiSn/USY catalyst	Baikai Zhang, Wenzhi Li	University of Science and Technology of China	China
A018	Catalytic upgrading of bio-oil over hierarchical La/HZSM-5 regenerated by NTP	Xiaohua Li, Yongchen Zhu, Shanshan Shao	Jiangsu University	China
A019	Preparation and characteristic of high surface area lignin-based porous carbon by potassium tartrate activation	Daliang Guo, Kangshuai Yuan, Nana Li, Bei Liu, Guoxin Xue	Zhejiang University of Science & Technology	China
A020	Characteristics of biocrude derived from two-step catalytic hydrothermal liquefaction of microalgae	Donghai Xu, Liang Liu, Shuzhong Wang, Zhiqiang Wu, Yang Guo, Zefeng Jing	Xi'an Jiaotong University	China
A021	Enhanced aromatic monomers production from birch lignin in supercritical ethanol with C α -OH pre-oxidized	Yue Han, Rui Xiao, Chao Liu, Xiangchen Kong, Longlong Ma	Southeast University	China
A022	Study on the core-shell micro/mesoporous zeolites in the catalytic fast pyrolysis of maize straw	Jie Liang, Xiangfei Xue, Yawen Liu, Liu Wu, Yifei Sun	Beihang University	China
A023	Improved production of methyl levulinate from alkali pretreated wheat straw catalyzed by copper sulfate	Chun Chang, Pan Li, Lin Deng, Jing Bai, Shuqi Fang	Zhengzhou University	China
A024	Study on pyrolysis behavior of corn straw catalyzed by coal fly ash	Wenpeng Hong, Yu Zhang, Haifeng Jiang, Haoshu Ding	Northeast Electric Power University	China
A025	Depolymerization of lignin over Ni-Pd bimetallic catalyst using isopropanol as in situ hydrogen source	Jun Hu, Bingxing Jiang, Xiaoxiang Jiang, Ping Lu	Nanjing Normal University	China
A026	Impact of carbonaceous precursors from pyrolysis and hydrothermal carbonization for biomass-based activated carbon production	Junyi Wang, Shuping Zhang, Shuguang Zhu, Houlei Zhang, Xinzhi Liu	Nanjing University of Science and Technology	China
A027	Study on catalytic pyrolysis biomass of alkali modified molecular sieve	Yanji Li, Qiang He, Jiajing Yi, Meng Ni, Zhentao Yang	Shenyang Aerospace University	China
A028	Green conversion of bamboo chips into high-performance phenol adsorbent with simultaneous activation and doping nitrogen	Yunchao Li, Zhenhao Li, Bo Xing, Kaige Wang, Lingjun Zhu, Shurong Wang	Zhejiang University	China
A029	High-temperature pyrolysis characteristics of a single biomass particle	Yao Xu, Xun Zou, Shuai Jin, Ming Zhai	Harbin Institute of Technology	China

Group	Title	Authors	Affiliation	Country
A030	Ultrasound-assisted depolymerization of corn stalk lignin in isopropanol/water system for lignin bio-oil development over PTA/MCM-41 catalysts	Boyu Du, Yang Sun, Bingyang Liu, Yingying Yang, Si Gao, Zhenshu Zhang, Xing Wang, Jinghui Zhou	Dalian Polytechnic University	China
A031	Experimental and kinetic modeling studies of n-propyl ether pyrolysis at low and atmospheric pressures	Jing Tian, Jinglan Wang, Huaijiang Su, Chuangchuang Cao, Zhanjun Cheng, Jiuzhong Yang, Beibei Yan, Guanyi Chen	Tianjin University	China
A032	Life cycle assessment of the production of hydrogen gas and polyol fuel from corn stover via fast pyrolysis and upgrading	Lijun Heng, Rui Xiao	Henan University of Urban Construction	China
A033	Mechanism of gas-pressurized torrefaction and the pyrolysis behaviour of the torrefied biomass	Yiming Sun, Shan Tong, Feng Wang, Xian Li, Guangqian Luo, Hong Yao	Huazhong University of Science and Technology	China
A034	Studies on the precipitation law of oxidative pyrolysis products of lignin model compounds	Yufeng Long, Yonghao Luo, Shanhui Zhao	Shanghai Jiaotong University	China
A035	Catalytic co-pyrolysis of biomass and hydrogen-rich feedstocks for producing hydrocarbon-rich bio-oil	Jing Zhang, Bo Zhang	Southeast University	China
A036	Mechanism of formic acid flow-through fractionation of biomass in preserving lignin aryl ether bonds	Zhaojiang Wang, Hao Zhou	Qilu University of Technology	China
A037	Lignin-first biorefinery of corn stalk by ZrCl ₄ /NaOH-catalyzed oxidation for phenolic carbonyls production	Chao Liu, Fei Lin, Rui Xiao	Southeast University	China
A038	Production of aromatics by catalytic pyrolysis of biomass with metal oxide and HZSM-5 catalysts	Jingzhen Wang, Qian Liu, Wenqi Zhong	Southeast University	China
A039	Study on the mechanism of bond breaking during pyrolysis of lignin modelling by H protons	Min Chen, Huiyan Zhang, Rui Xiao	Southeast University	China
A040	Fenton pretreatment of lignin to remove methoxyls in pyrolytic bio-oil	Kai Wu, Qingyu Liu, Rui Xiao, Huiyan Zhang	Southeast University	China
A041	Synergistic heavy metal recovery in wastewater and algal biofuel production through hydrothermal liquefaction	Hugang Li, Yuanhui Zhang, Zhidan Liu	China Agricultural University	China
A042	Synthesis of renewable polyacids with pinacol and unsaturated carboxylic acids/or aldehydes	Ning Li, Yancheng Hu, Guangyi Li, Aiqin Wang, Tao Zhang	Dalian Institute of Chemical Physics, Chinese Academy of Sciences	China
A043	The interaction between anthracite and biomass on char properties during co-pyrolysis and its influences on gasification reactivity	Xiaoming Li, Hong Zhang, Lifei Zhi	Taiyuan University of Science and Technology	China

Group	Title	Authors	Affiliation	Country
A044	Comparative study on pyrolysis characteristics and kinetics analysis between oleaginous yeast and algal biomass	Dayu Yu, Shuang Hu, Nanhang Dong	Northeast Electric Power University	China
A045	Comparative study on steam gasification of biomass and lignite with conventional and microwave heating	Xiqiang Zhao, Wen Ren, Guoxiu Wang, Bingwen Guo, Shuang Sun, Zhanlong Song	Shandong University	China
A046	Kinetic model for gasification of phenol in supercritical water over Ni-Ru bimetallic catalyst	Mei Yang, Jiandong Zhang, Yang Guo	Xi'an Jiaotong University	China
A047	Investigation into the effective pore size of ZSM-5 in catalytic fast pyrolysis of biomass	Changsong Hu, Rui Xiao, Huiyan Zhang	Southeast University	China
A048	Selective conversion of hemicelluloses into furfural over low-cost metal salts in -valerolactone/water solution	Chao Liu, Ming Wei, Kui Wang, Junming Xu, Jianchun Jiang	Chinese Academy of Forestry	China
A049	Catalytic conversion of macroalgae for producing high-quality biofuel production using algal biochar-based catalysts	Bin Cao, Jianping Yuan, Shuang Wang	Jiangsu University	China
A050	Enhanced production of light olefins from catalytic fast pyrolysis of cellulose over different metal modified ZSM-5 zeolites	Jingai Shao, Mingfa Yang, Chenxi Jia, Haiping Yang, Yingquan Chen, Jianjun Xiao, Hanping Chen	Huazhong University of Science and Technology	China
A051	Study on pressurized upgrading of waste plant pyrolysis oil	Chuan Yuan, Shuang Wang, Bin Cao, Qian Liu, Shuang Zhao	Jiangsu University	China
A052	Digestive performance evaluation of corn straw by pretreatment with straw depolymerization wastewater and different alkalis	Zhi Wang, Yong Sun, Bin Qu, Changyu Liu, Jingbo Qu, Fuli Yang, Xiaodong Chu, Zhiyuan Liu, Qiushuang Cheng	Northeast Agriculture University	China
A053	Different dilute acid pretreatments at room temperature boost selective saccharification of lignocellulose via fast pyrolysis	Li Q. Jiang, Tong C. Su, Xiao B. Wang, An Q. Zheng, Zeng L. Zhao, Hai B. Li	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
A054	Straw biomass upgrading via torrefaction: A novel method to enhance carbon retention rate and the removal of Cl and S	Youjian Zhu, Heng Liu, Xianxian Zhang, Jingai Shao, Xianhua Wang, Haiping Yang, Hanping Chen	Huazhong University of Science and Technology	China
A055	Effects of additives on silage quality of grain stillage and dynamic changes of microbial community	Haiwei Ren, Quanlin Zhao, Hao Zhang, Nana Du, Xiaoxiao Wang	Lanzhou University of Technology	China
A056	Hydrothermal carbonization of miscanthus: Preparation, property and combustion with lignite	Yongsheng Zhang, Ibrar Zahid, Jamie Minaret, Animesh Dutta	Zhengzhou University	China

Group	Title	Authors	Affiliation	Country
A057	A tar- derived biochar electrocatalyst for efficient nitrogen reduction to ammonia under Ambient Conditions	Lifang Deng, Lufeng Wang, Xin Qian, Haoran Yuan	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
A058	Ultrasound-assisted depolymerization of corn stalk lignin in isopropanol/water system for lignin bio-oil development over PTA/MCM-41 catalysts	Boyu Du, Yang Sun, Bingyang Liu, Yingying Yang, Si Gao, Zhenshu Zhang, Xing Wang, Jinghui Zhou	Dalian Polytechnic University	China
A059	Preparation of furfural from xylose catalyzed by magnetic carbon-based solid acid	Zhiqiang Qi, Zhihe Li, Wei Qi	Shandong University of Technology	China
A060	Response surface method to optimize preparation of biodiesel by calcium base solid alkali KF/CaO catalytic Aquilaria Sinensis Seed oil	Aihua Zhang, Jilie Li	Central South University of Forestry and Technology	China
A061	Synergistic effect of hydrothermal co-liquefaction of spirulina and lignin: Optimization of operating parameters by response surface methodology	Bin Wang, Bo Zhang, Zhixia He, Huan Feng, Sabariswaran Kandasamy, Haitao Chen	Jiangsu University	China
A062	Heterogeneous catalyzed transesterification of cottonseed oil accelerated by electric field	Piyaphong Yongphet, Junfeng Wang, Dongbao Wang, Chanez Maouche, Wei Zhang, Haojie Xu	Jiangsu University	China
A063	CFD-DEM simulation of methanol to olefins (MTO) regeneration	Chao Song, Mao Ye	Dalian Institute of Chemical Physics, Chinese Academy of Sciences	China
A064	Effect of Fe ₃ O ₄ nanostructures as efficient catalyst for the hydrothermal liquefaction of bio-oil production	Sabariswaran Kandasamy, Bo Zhang, Zhixia He, Haitao Chen, Huan Feng, Qian Wang, Bin Wang, Narayanamoorthy Bhuvanendran, Sivakumar Esakkimuthu	Jiangsu University	China
A065	Effective one-pot production of γ -valerolactone from biomass-derived methyl levulinate over CuO _x -CaCO ₃ catalyst	Xuejuan Cao, Xing Tang, Xianhai Zeng, Yong Sun, Lu Lin	Xiamen University	China
A066	Enhanced separation and characterization of components in yellow liquor from biomass pretreatment: for a greener biorefinery approach	Ning Ding, Huiqiang Wang, Xianhai Zeng, Yong Sun, Xing Tang, Lu Lin	Xiamen University	China
B001	Combustion characteristics of coal tar residue with microwave-assisted hydrothermal treatment	Zhiwen Xu, Zhiyuan Liang, Yungang Wang, Qinxin Zhao	Xi'an Jiaotong University	China

Group	Title	Authors	Affiliation	Country
B002	Effect of additives on slagging and ash mineral conversion during high-alkali Zhundong coal gasification	Yanqi Fan, Qinggang Lyu, Haixia Zhang, Zhiping Zhu, Pengfei Dong	Institute of Engineering Thermophysics, Chinese Academy of Sciences	China
B003	Synthesis of Fe supported catalyst from pyrolysis peat in steam reforming of model tar compound	Shuxiao Wang, Jing Gu, Jun Zhang, Haoran Yuan	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
B004	The effect of methanol on protein extraction and dewaterability in mechanical dewatered sludge	Cijia Wang, Weiyun Wang, Kangni Wang	Shenyang Aerospace University	China
B005	Kinetic studies on the pyrolysis of electronic plastic waste	Zhitong Yao, Weiping Su, Shaoqi Yu	Hangzhou Dianzi University	China
B006	Study on combustion characteristics of methanol-base fuel for boiler	Yan Xiong, Zhiqiang Wang, Xingxing Cheng, Chunyuan Ma	Shandong University	China
B007	Distribution of activation energies during the pyrolysis of chlorella vulgaris and dunaliella salina	Vikul Vasudev, Xiaoke Ku	Zhejiang University	China
B008	Migration characteristics of heavy metals in rubber waste under catalytic pyrolysis with molecular sieves	Tao Huang, Yuting Tang, Shuling Wang	South China University of Technology	China
B009	Catalytic effects of calcium carbonate enriched shell on the oily sludge pyrolysis	Zhengda Yang, Riyi Lin, Xinwei Wang, Jianliang Zhang	China University of Petroleum (East China)	China
B010	Enhanced heavy metal removal of graphene oxide nanofiltration membrane grafted with polyaniline	Shiyang Zhang, Songyi Liao, Ruibin Wang, Yonggang Min	Guangdong University of Technology	China
B011	Combustion characteristics of hydrothermal-treated sludge in regeneration reactor of calcium-looping (Ca-L) and its effect on calcium carbonate decomposition	Jingang Li , Qing Wu , Dongdong Fang , Lihui Zhang, Feng Duan	Anhui University of Technology	China
B012	Catalytic hydrogenation liquefaction of sewage sludge over Ni-Mo catalysts in ethanol-water co-solvent with addition of aluminum	Rundong Li, Wenchao Teng, Tianhua Yang, Enhui Liu, Yanlong Li	Shenyang Aerospace University	China
B013	Analysis on the treatment of printing and dyeing wastewater by graphene- chitosan composite materials	Yanji Li, Meng Ni, Yanji Li, Qiang He	Shenyang Aerospace University	China
B014	Effects of deashing and activation on physicochemical properties of sludge-based biochar and its lead adsorption capacities	Junjie Zhang, Jingai Shao, Hanping Chen	Huazhong University of Science and Technology	China

Group	Title	Authors	Affiliation	Country
B015	Mechanism insight into the pyrolysis of chemical pretreated cassava residue	Jun Zhang, Jing Gu, Yazhuo Wang, Denian Li, Lifang Deng, Haoran Yuan, Yong Chen	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
B016	Composition and variation of thermal asphalt based on intermediate product of oil shale extracted by ionic liquids	Wenpeng Hong, Ming Jiang, Haifeng Jiang, Haoshu Ding	Northeast Electric Power University	China
B017	Optimization of condition for gasification of source-classified municipal solid waste	Guoan Yuan, Ruina Zhang, Shanping Chen	Shanghai Environmental Sanitation Engineering Design Institute Co., Ltd.	China
B018	Comparison of MSW incineration and gasification by Life Cycle Analysis: influence on greenhouse gas emissions	Wenchao Ma, Chicaiza Cristhian, Terrence Wenga, Guanyi Chen, Lei Zhong	Tianjin University	China
B019	ReaxFF molecular dynamics simulations of the combustion reactions of pyrrole and pyridine	Wei Feng, Hongcun Bai, Qingjie Guo	Ningxia University	China
B020	Experimental study on coupling power generation technology of ultra-supercritical million unit mixed with 60% moisture sludge	Li Feng	Shanghai Shangdian Caojing Power Generation CO. LTD.	China
B021	Theoretical study on the effect of defective kaolin surface on PbO vapor adsorption	Wenting Lv, Yun Chen, Junbin Zhang, Changsheng Bu, Guilin Piao, Dandan Chen, Junguang Meng, Xinye Wang	Nanjing Normal University	China
B022	Impacts of bio-char catalysts with different specific surface areas on catalytic pyrolysis of bamboo wastes	Zhiqun Chen, Haiping Yang, Yingquan Chen, Wei Chen, Hanping Chen	Huazhong University of Science and Technology	China
B023	Simulation on dual fluidized bed gasification of traditional Chinese medicine residue biomass	Liguo Yang, Haibin Guan, Xiaoxu Fan, Hongwu Zhang, Rongfeng Sun	Qilu University of Technology	China
B024	Study on preparation and properties of sludge-based foamed thermal insulation materials	Yiwei Wang, Qi Sun, Cailing Zhou, Xin Song, Shifu Ge	Southeast University	China
B025	Preparation and performance of sludge-based desulfurizer by calcification	Xin Song, Yuan Li, Cailing Zhou, Yiwei Wang, Shifu Ge	Southeast University	China
B026	Impacts of CaO on NO _x precursor formation during the pyrolysis of a sludge protein model comprising a mixture of amino acids	Shuai Guo, Tiecheng Liu, Deyong Che, Xingcan Li, Baizhong Sun	Northeast Electric Power University	China
B027	Effect of heating rates on thermal decomposition and syngas production of non-recycled plastic waste bottles through TG-MS gasification	Imtiaz Ali Jamro, Wenchao Ma, Beibei Yan, Gulzeb Rajput, Guanyi Chen	Tianjin University	China

Group	Title	Authors	Affiliation	Country
B028	Preparation of environmental-friendly rubber filling oil from aromatic-rich heavy oil by hydrodesulfurization and hydrodearomatization	Changqing Liu, Tiejun Wang, Yufei Ma	Guangdong University of Technology	China
B029	Multiscale approach on product distribution from pyrolysis of styrene-butadiene rubber	Shengwei Deng, Han Zhuo, Yinbin Wang, Jianguo Wang	Zhejiang University of Technology	China
B030	Mechanism research on pyrolysis characteristics and kinetics of waste distiller's grains (WDG)	Wei Yang, Wei Qi, Qiong Wang, Shuna Liu, Zhenhong Yuan	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
B031	Sewage sludge anaerobic co-digestion with different model components of agricultural straw: Experimental and kinetic study	Pengfei Li, Dekui Shen	Southeast University	China
B032	The fate of fuel-nitrogen during entrained flow gasification of nitrogen-rich wood waste	Yipeng Feng, Zengli Zhao, Xiaobo Wang, Haibin Li, Kun Zhao, Liqun Jiang, Anqing Zheng, Zhen Huang	Henan Institute of Science and Technology	China
B033	Co-pyrolysis of PE, PP and PVC: Behaviors and kinetics	Zhilong Yuan, Zheng Wang, Maolin Yang, Peitao Zhao	China University of Mining and Technology	China
B034	Effects of macroelement cations on P speciation in sewage sludge derived hydrochar by using hydrothermal treatment	Yang Yu, Ran Yu, Zhenya Zhang	Southeast University	China
B035	Gasification performance of real MSW-Derived hydrochar in various atmosphere and temperature	Chuanjin Lin, Zheng Wang, Maolin Yang, Peitao Zhao	China University of Mining and Technology	China
B036	Comparison of the disposal methods for the waste tires in China	Dahai Zheng, Wen Wang, Ruinian Xu, Biaohua Chen	Beijing University of Technology	China
B037	Migration and transformation of phosphorus during hydrothermal carbonization of sewage sludge	Xiaoyuan Zheng, Zhengwei Jiang, Yutong Ye, Wei Chen, Zhi Ying	University of Shanghai for Science and Technology	China
B038	Effects of torrefaction on biomass ash properties and its corrosion behavior	Jinhan Wang, Dunxi Yu, Jingkun Han, Jianqun Wu, Fangqi Liu, Zihao Wang, Minghou Xu	Huazhong University of Science and Technology	China
B039	Improvement of waste activated sludge dewaterability by biolysis pre-treatment and chemical re-flocculation	Lei Gao, Ran Yu	Southeast University	China
B040	Nitrogen transformation in sewage sludge during hydrothermal treatment	Shan Cheng, Hong Tian, Yanshan Yin, Wei Zhang, Yun Yu, Yu Qiao	Changsha University of Science & Technology	China

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B041	Study on the thermal behaviors and product characteristics of co-pyrolysis and co-gasification between biomass and polyethylene	Hongang Fan, Leilei Cheng, Genyang Tang, Jing Gu	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
B042	Co-pyrolysis of cellulose and high-density polyethylene: Product distribution and synergistic effects	Hongang Fan, Leilei Cheng, Genyang Tang, Jing Gu	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
B043	Migration mechanism of chlorine during torrefaction of fermentation residue from food waste	Genyang Tang, Hongang Fan, Leilei Cheng, Jing Gu	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
B044	Modification of pyrolytic carbon black from waste tires and the application in rubber compounding	Zhengqing Kong, Chong Sun, Jiwen Liu, Peijun Li, Xinyan Shi, Benxin Li, Hao Yin, Yongxin Duan	Qingdao University of Science and Technology	China
B045	Study on phenomenon and mechanism of polyethylene high-pressure pyrolysis in different oxygen concentration atmospheres and solvent	Leilei Cheng, Hongang Fan, Genyang Tang, Jing Gu	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
B046	CO ₂ gasification kinetics of waste tyre chars with different ash compositions	D. Hungwe, R. Khoshbouy, K. Yoshikawa, F. Takahashi	Tokyo Institute of Technology	Japan
B047	Can phosphate-adsorbed on crab shell biochar make a difference in removing lead from aqueous?	Haiyan Guo, Fei Shen	Sichuan Agricultural University	China
B048	Arsenic partitioning in high-temperature ash deposits during co-combustion of coal and biomass	Huimin Liu, Xin Sun, Chan Zou, Chunbo Wang, Yueming Wang, Jost Wendt	North China University of Science and Technology	China
B049	Study on key process parameters of glyphosate waste liquid combustion system process	Jun Zhao, Tao Wang, Rui Zhang, Shuzhong Wang	Xi'an Jiaotong University	China
B050	Preparation and properties of surface-loaded CNT pyrolytic carbon black by supercritical fluid deposition	Hao Yin, Zhengqing Kong, Yongxin Duan, Xinyan Shi	Qingdao University of Science and Technology	China
B051	Study on biochemical characteristics and migration of organic matter after pre-treatment of high solids sludge by thermal hydrolysis	Xiyu Wang, Hailei Chen, Shifu Ge	Southeast University	China

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B052	Preparation of sulphoaluminate based 3D printing cementitious materials	Han Wu, Yanpeng Mao	Shandong University	China
B053	Preparation of activated carbon from coal liquefaction residue for mercury removal	Huijun Chen, Yahui Wang, Qihuang Huo, Lina Han, Weiren Bao, Liping Chang, Jiancheng Wang	Taiyuan University of Technology	China
C001	Preparation and chemical looping combustion performance of Cu-based oxygen carriers	Jingchong Yan, Hanren Jiao, Hengfu Shui	Anhui University of Technology	China
C002	MILD/Oxy-MILD combustion performance in a mid-scale natural gas furnace when diluting by N ₂ , H ₂ O and CO ₂	Yihao Xie, Yaojie Tu, Chongchong Luan, Bing Shi, Shunta Xu, Hao Liu	Huazhong University of Science and Technology	China
C003	The N-sorption performance of Al-based nitrogen carrier during Chemical Looping Ammonia Generation technology with different coals	Quan Zhang, Ye Wu, Mingqian Feng, Dong Liu	Nanjing University of Science and Technology	China
C004	Enhanced performance of red muds modified by metal oxides as oxygen carriers in chemical looping combustion of methane	Shen Lin, Kongzhai Li, Yanhui Long, Kun Yang	Kunming University of Science and Technology	China
C005	Ce-Fe-Zr-O/MgO honeycomb oxygen carriers in fixed bed scheme for chemical-looping steam methane reforming	Yanhui Long, Kongzhai Li, Shen Lin, Kun Yang	Kunming University of Science and Technology	China
C006	A high-performance oxygen carrier with high oxygen transport capacity and redox stability for chemical looping combustion	Dongxu Cui, Dewang Zeng, Rui Xiao	Southeast University	China
C007	CFD modeling on char surface reaction behaviours of pulverized coal MILD-oxy combustion: effect of steam	Zewu Zhang, Liqi Zhang, Cong Luo, Zhenghong Zhao, Chuguang Zheng	Huazhong University of Science and Technology	China
C008	A high-performance iron-based oxygen carrier from sulfuric acid residue for chemical looping combustion	Zhong Ma, Dewang Zeng, Rui Xiao	Southeast University	China
C009	Process simulation and water use analysis for staged pressurized oxy-combustion systems based on Aspen Plus	Zihan Chen, Xiang Zhang, Zhaohui Liu	Huazhong University of Science and Technology	China
C010	Numerical analysis of NO _x formation characteristics of the 35MW testing facility under staged oxy-combustion	Teng Guo, Junjun Guo, Tai Zhang, Fan Hu, Zhaohui Liu, Pengfei Li	Huazhong University of Science and Technology	China
C011	Hydrogen production by steam reforming of acetic acid over Ni/ ZnO-CeO ₂ catalyst	Shan Luo, Peng Fu, Bing Wang	Shandong University of Technology	China
C012	CO ₂ capture and H ₂ production from steam gasification of bagasse char using novel synthetic Ca-based material	Xianyao Yan, Yingjie Li, Xiaotong Ma, Zhiguo Bian, Jianli Zhao, Zeyan Wang	Shandong University	China
C013	Interactions between an oxygen carrier and a traditional Chinese herbal medicine wastes during chemical looping gasification process	Fang Liu, Li Yang, Xin Wu, Xi Zhang	China University of Mining and Technology	China

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C014	Effect of impurity gases on catalytic performance of activated carbon during methane cracking	Li Yang, Xin Wu, Xi Zhang, Fang Liu	China University of Mining and Technology	China
C015	Experimental investigation on ash deposition of Zhundong coal during pressurized oxy-fuel combustion in a lab-scale fluidized bed	Xinglei Qiu, Lunbo Duan, Yuanqiang Duan, Changsui Zhao	Southeast University	China
C016	Experimental investigation on ignition and co-combustion characteristics of semi-coke and bituminous coal blends	Shaowei Zheng, Yingjie Hu, Zhiqiang Wang, Xingxing Cheng	Shandong University	China
C017	Study on the isothermal combustion characteristics of pulverized coal under O ₂ /H ₂ O and O ₂ /N ₂ atmospheres	Fan Zhao, Chunbo Wang	North China Electric Power University	China
C018	Hydrogen production by steam reforming of acetic acid over Ni/ ZnO-CeO ₂ catalyst	Shan Luo, Peng Fu, Bing Wang	Shandong University of Technology	China
C019	Microwave-assisted pyrolysis and oil characterization of Zaoquan vitrinite coal	Wei Feng, Hongcun Bai, Qingjie Guo	Ningxia University	China
C020	Development of a low-cost oxygen carrier from red mud and fine natural ore for chemical looping combustion of coal	Yanan Wang, Haibo Zhao, Kunlei Liu	Huazhong University of Science and Technology	China
C021	Enhanced hydrogen production performance at intermediate temperatures through the synergistic effects of binary oxygen carriers	Yu Qiu, Dewang Zeng, Rui Xiao	Southeast University	China
C022	Novel two-stage fluidized bed system for continuous CO ₂ capture by means of potassium-based sorbents	Jian Zhong, Jiliang Ma, Xiaoping Chen, Ye Wu, Tianyi Cai, Daoyin Liu	Southeast University	China
C023	Experimental study on combustion characteristics of coal under pressurized O ₂ /CO ₂ atmosphere	Jiqing Yan, Mengxiang Fang	Zhejiang University	China
C024	Chemical looping gasification of biomass with bimetallic oxygen carriers	Jingli Wu, Tao He, Zhiqi Wang, Jinhu Wu, Jianqing Li, Hanjing Tian, Yuxin Wang	Qingdao Institute of Bioenergy and Bioprocess Technology	China
C025	The reaction of NO+CO over Ce modified Cu-FeO _x catalysts at low temperature	Luyuan Wang, Xingxing Cheng, Zhiqiang Wang, Rongfeng Sun, Gaiju Zhao, Chunyuan Ma	Qilu University of Technology	China
C026	Enhanced hydrogen production performance through the controllable redox exsolution within CoFeAlO _x spinel oxygen carrier materials	Dewang Zeng, Yu Qiu, Rui Xiao	Southeast University	China
C027	Syngas from biomass gasification with Fe ₂ O ₃ -CaO oxygen carrier	Min Li, Lei Chen, Laizhi Sun, Shuangxia Yang, Hua Chen, Xiaodong Zhang	China University of Petroleum	China
C028	Moderate-temperature chemical looping splitting of CO ₂ and H ₂ O for syngas generation over Ni-modified ceria-zirconia solid solution	Zeshui Cao, Xing Zhu, Kongzhai Li, Yonggang Wei, Hua Wang	Kunming University of Science and Technology	China

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C029	Investigation of the regeneration of a CO ₂ -loaded ammonia solution with solid acid catalysts	Yin Xu, Baosheng Jin	Yangzhou University	China
C030	Chemical looping reforming of biomass based pyrolysis gas coupled with CO ₂ splitting by using Ca-modified hematite oxygen carrier	Guoqiang Wei, Zhen Huang, Haibin Li	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	China
C031	Numerical analysis of reaction performance of a single oxygen carrier particle in chemical looping combustion	Peifeng Zheng, Shiyi Chen, Wenguo Xiang	Southeast University	China
D001	Pd-Ni-P Electro-catalyst for hydrogen production	Ming Zhao, Zinan Kang, Yue Lin, Yanfang Wu, Jingpei Cao	University of Mining & Technology	China
D002	Experimental study on atomization characteristics of SCR pneumatic nozzle	Jingkai Yan, Zhiqiang Wang	Shandong University	China
D003	Study on the influence of training sample number of extreme learning machine based on PReLU activation function on NOx prediction	Zhiwen Shen, Qingwei Li	Shanghai University of Electric Power	China
D004	A novel oxy-fuel combustion s-CO ₂ power cycle integrated supercritical water gasification of coal	Zilong Zhu, Yaping Chen, Jiafeng Wu	Southeast University	China
D005	Effects of Co/Ce ratio on NO reduction by petroleum gas over Co-Ce-Ti oxide catalyst	Zhihao Wang, Xingxing Cheng, Yilan Xu, Zhiqiang Wang, Meixia Wang	Shandong University	China
D006	Thermoelectric performance of pyrolysis bio-char obtained from hydrothermal pretreatment	Yinhai Su, Shuping Zhang, Lingqin Liu, Dan Xu, Yuanquan Xiong	Southeast University	China
D007	Study on gasification characteristics of biomass fluidized bed	Shuang Xi, Mengxiang Fang	Zhejiang University	China
D008	Design of solar dish receiver for thermal use in sewage sludge drying process	Daoxiang Teng, Feng Hu, Qianjin Dai	Xuzhou University of Technology	China
D009	Deep learning for volumetric tomography and prediction of 3D flows	Jianqing Huang, Hecong Liu, Weiwei Cai	Shanghai Jiaotong University	China
D010	Fluidized bed coal gasification: Influence of O ₂ /C molar ratio and steam/coal mass ratio on gasification performance and sulfur transformation	Shenxian Xian, Haixia Zhang, Zhen Chai, Denghao Jiang, Zhiping Zhu	Institute of Engineering Thermophysics, Chinese Academy of Sciences	China
D011	An intelligent integrated control method for maximum power point tracking of PV	Feng Hu, Daoxiang Teng, Bin Hu	Xuzhou University of Technology	China
D012	In-situ measurement of SO ₂ absorption rate and colloid concentration of spray droplets in desulfurization using rainbow refractometry	Yingchun Wu, Dongyan Xu, Can Li, Qimeng Lv, Xuecheng Wu	Zhejiang University	China

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D013	Dynamic modeling of the combustion system for a tangentially fired boiler	Xuqi Bao, Yiguo Li	Southeast University	China
D014	Model predictive control of a desulfurization system based on moving horizon estimation	Zhenyu Guo, Yiguo Li	Southeast University	China
D015	A simplified generalized predictive control for denitrification system in thermal power plant	Xiaobo Cui, Hongxia Zhu, Rui Xue, Hui Gu	Nanjing Institute of Technology	China
D016	Diagnostics for chemical structure and nascent soot of ethylene inverse diffusion flames with diluents	Jiaqi Duan, Dong Liu	Nanjing University of Science and Technology	China
D017	Research and application of multiobjective robust fuzzy control algorithms for double reheat steam system	Miao Liu, Gengda Li, Baowei Chen	Guodian New Energy Technology Research Institute Co., Ltd.	China
D018	Development of a two-line DLAS sensor for liquid film measurement	Yufeng Guo, Huinan Yang, Li Peng, Chuanliang Li, Jin Tao, Weiwei Wu, Mingxu Su	University of Shanghai for Science and Technology	China
D019	Analysis and research on measurement and control technology of oil and gas wells	Kejiang Gu	Sinopec Oilfield Service huadong Corporation	China
D020	Dynamic characteristics of a double reheat steam turbine system with regenerative turbine	Xiaodong Zhang, Xuan Zhai, Ming Liu, Junjie Yan	Dongfang Electric Corporation Dongfang Turbine Co.,LTD	China
D021	Genetic algorithms based on beetle antennae search for microgrid economic dispatch	Lei Zhou, Xueyu Dong, Jianzhong Zhu	Nanjing Institute of Technology	China
D022	Photoelectrocatalytic degradation of norfloxacin by Ti ³⁺ self-doping TiO ₂ nanotube	Chao Lin, Beibei Li, Lei Wu	Southeast University	China
D023	Electrochemical self-doping and photoelectrochemical performance of TiO ₂ nanotubes	Tianyi Zheng, Beibei Li, Lei Wu	Southeast University	China
D024	Simulation study on transient melting and heat transfer behavior of nanoparticles enhanced PCM in beakers	Bingkun Huang, Jun Wang, Enyi Hu, Xin Guo	Southeast University	China
D025	Control of SCR inlet temperature under variable load in thermal power plant	Honghong Shen, Jianxing Ren, Fangqin Li, Gang Liu, Chuang Ma, Xin Hou, Yudong Liu, Guizhou Ren	Shanghai University of Electric Power	China
D026	Scientometric based evolutionary trends analysis in integrated energy system	Fan Zhang, Yali Xue	Tsinghua University	China
D027	Characterization of external acoustic excitation on premixed bluff-body flames using digital image processing	Liuyong Chang, Yuzhen Lin, Zhang Cao, Lijun Xu	Beihang University	China

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D028	Nascent soot particles diagnostics in crotonate/ethylene inverse diffusion flame	Bo Jiang, Dong Liu	Nanjing University of Science and Technology	China
D029	Modelling and analysis of pressurized oxy-coal combustion in a circulating fluidized bed	Yan Shi, Wenqi Zhong, Yingjuan Shao, Xuejiao Liu	Southeast University	China
D030	Research on maximum power point tracking strategy based on PSO with Adaptive Inertia Weight and Mutation	Yong Yang, Rong Li, Jianzhong Shi	Nanjing Institute of Technology	China
D031	Signal stabilization method of laser induced breakdown spectroscopy for measurement of solid particles	Ziyu Yu, Shunchun Yao, Lifeng Zhang, Huaiqin Qin, Xiaoxuan Chen, Xiayang Yao, Shuixiu Xu, Zhimin Lu, Jidong Lu	South China University of Technology	China
D032	Selection of reference value on LIBS quantitative analysis of unburned carbon in fly ash	Xiayang Yao, Lifeng Zhang, Shunchun Yao	South China University of Technology	China
D033	Study on dynamic characteristics of a 660MW solar-assisted coal-fired power generation system	Xin Li, Ming Liu, Yongliang Zhao, Junjie Yan	Xi'an Jiaotong University	China
D034	Mechanistic investigation of low temperature NH ₃ -SCR: capture and identification of unstable intermediates	Renzhi Zou, Wenshuo Hu, Yi Dong, Chenghang Zheng, Xiang Gao	Zhejiang University	China
D035	Simplified nonlinear dynamic model and analysis on 2-on-1 NCB units	Nianci Lu, Jiong Shen, Lei Pan	Southeast University	China
D036	Research on datum calculation of daily coal consumption and early warning mechanism of coal storage in coal-fired power plant	Huirong Zhao, Daogang Peng, Yikun Li	Shanghai University of Electric Power	China
D037	Modelling and dynamic characteristics analysis of marine double-reactor and four-turbine nuclear power plant	Chengcheng Cui, Jiong Shen, Junli Zhang	Southeast University	China
D038	A new control strategy for combined heat and power unit	Wei Wang, Sitong Jing	North China Electric Power University	China
D039	Modeling of the adaptive cycle engine based on infrared prediction	Haoying Chen, Hezi Liu, Haibo Zhang	Nanjing University of Aeronautics and Astronautics	China
D040	Matching method of STOVL aircraft engine design point model	Shuwei Pang, Qihong Li, Hailing Feng	Nanjing University of Aeronautics and Astronautics	China
D041	Research on thermal cycle analysis and modeling technology of scramjet	Zhihua Xi, Yuan Gao, Haibo Zhang	Nanjing University of Aeronautics and Astronautics	China
D042	Application of DOB based MPC in nuclear power coordinated control system	Yuxuan Li, Jiong Shen, Junli Zhang	Southeast University	China

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D043	The characteristics of thermal oil mass flow rate distribution in SGS system of PTCSP under cloudy conditions	Anming Wang, Jiping Liu, Ming Liu, Junjie Yan	Xi'an Jiaotong University	China
D044	Some considerations of flame soot measurements through thick optical medium using the imaging line-of-sight spectral emission method	Yang Huang, Jiangfan Liu, Sen Li, Tairan Fu	Tsinghua University	China
D045	Study on the hot carriers relaxation mechanisms in InGaN alloys	Yi Zhang, Liangliang Tang, Pei Wang, Chang Xu, Gavin Conibeer	Hohai University	China
D046	Grey wolf optimization RBF neural network applied to coal-fired boiler NO _x emission prediction	Wenwei Qin, Jianhong Lu, Xiaobo Cui	Southeast University	China
D047	Application of matrix theory to predict outcomes of climate changes	Chicaiza Cristhian, Navarrete Vanessa, Camacho Christian, Chicaiza Ángel	Tianjin University	China
D048	Visible light catalytic activity and mechanism of silver vanadate composites loaded with gold nanoparticles	Shixian Xiong, Sizhao Zhang, Dianyu E, Zhengquan Li	Jiangxi University of Science and Technology	China
D049	Structural improvement of chitosan aerogel leveraging the oxidization reactions	Sizhao Zhang, Shixian Xiong, Dianyu E, Zhengquan Li	Jiangxi University of Science and Technology	China
D050	DFT insights to mercury species mechanism on pure and Mn doped Fe ₃ O ₄ (111) surface	Jiamin Chen, Changsong Zhou, Hao Wu, Hongmin Yang	Nanjing Normal University	China
D051	High efficiency using deep eutectic solvents-cosolvent mixture as the extractant in the separation of anthracene from crude anthracene	Lan Yi, Jie Feng, Zhongyang Luo, Wenying Li	Zhejiang University & Taiyuan University of Technology	China
D052	Thermodynamic evaluation of a molybdenum oxides assisted looping coal gasification integrated with solid oxide fuel cell for power generation with CO ₂ capture	Fangzhou Li, Jingxian Kang, Yuncai Song, Jie Feng, Wenying Li	Taiyuan University of Technology	China
E001	Numerical simulation of solid-liquid flow in stirred tanks based on KTGF model	Ximing Li, Shengli Niu, Chunmei Lu	Shandong University	China
E002	Optimum design of structure and performance of three-dimensional droplet layer of liquid droplet radiator	Xingying Zhao	Nanjing University of Science and Technology	China
E003	The numerical investigation on pre-treatment of flexible biomass particles in baffled-rotating cylindrical kilns	Conghui Gu, Zhulin Yuan, Shouguang Yao	Jiangsu University of Science and Technology	China
E004	Vertical distribution model for aerosol in Nanjing and comparison to Modtran	Jin Shu, Yuge Han, Dengfeng Ren	Nanjing University of Technology	China
E005	The effect of indoor human-induced particle resuspension under different ventilation conditions	Zheng Shuihua, Zhang Jiansheng, Du Weiyuan, Zhao Lipan	Zhejiang University of Technology	China

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E006	Full-loop simulation of CO ₂ capture process in a dual fluidized bed system	Yu Shen, Jiliang Ma, Daoyin Liu, Xiaoping Chen, Ying Wu, Tianyi Cai, Ye Wu	Southeast University	China
E007	Experimental study and theoretical analysis of the rebound characteristics of SiO ₂ particle under high-temperature conditions	Jianxu Wei, Zhimin Zheng, Yang Wang, Mingyan Gu	Anhui University of Technology	China
E008	Experimental study of the mixing in fluidized bed by using microwave technique	Runjia Liu, Yong Zhang, Rui Xiao	Southeast University	China
E009	Numerical simulation on oxy-fuel co-firing of coal and biomass in fluidized beds	Qinwen Liu, Wenqi Zhong, Aibing Yu	Southeast University	China
E010	Model study of the heat and mass transfer in microwave-induced pyrolysis of sewage sludge	Qianjin Dai, Feng Hu, Daoxiang Teng	Xuzhou University of Technology	China
E011	Particulate matter emissions from the combustion of high chlorine and sodium coal	Daoyang Ma, Yingdian Li, Xinwei Xu, Zhongfa Hu, Xuebin Wang	Xi'an Jiaotong University	China
E012	Decrease of high-carbon-ash landfilling by its co-firing inside a cement calciner	Hrvoje Mikulčić, Gaofeng Dai, Jiaye Zhang, Xuebin Wang, Houzhang Tan, Milan Vujanović	Xi'an Jiaotong University	China
E013	Fluidization behavior of flexible biomass particles in a fluidized bed	Fan Geng, Changgeng Gui, Haixu Teng	China University of Mining and Technology	China
E014	Three-dimensional modelling of oxy-fuel combustion in a S-CO ₂ CFB	Jinrao Gu, Yingjuan Shao, Wenqi Zhong, Aibing Yu	Southeast University	China
E015	Capture of arsenic in coal combustion flue gas at high temperature in the presence of CaSiO ₃ with good anti-sintering	Yue Cao, Min Song, Bing Song, Fanyue Meng	Southeast University	China
E016	Research on clean combustion and combustion mechanism of sludge circulating fluidized bed	Junjie Zhou, Yao Xiong, Heqing Tian	Zhengzhou University	China
E017	Respirable dust management using water spray suppression under air ventilation in the large underground cavern group of hydropower station	Pei Wang, Shuai Shen, Deyou Liu, Ling Zhou, Zhang Yi	Hohai University	China
E018	A DFT study of decoupled NO _x adsorption and reduction by CO over catalyst Fe/ZSM-5	Kai Fan, Mingliang Zhao, Xingxing Cheng, Zhiqiang Wang, Meixia Wang	Shandong University	China
E019	PM1 emission and economic evaluation during combustion of biomass after typical pretreatments	Tianyu Liu, Chang Wen, Wenyu Wang, Changkang Li, Enze Liu, Haowen Liu	Huazhong University of Science and Technology	China
E020	CFD-DEM investigation of thermo-chemical behaviours in blast furnace	Dianyu E, Qinfu Hou, Aibing Yu	Jiangxi University of Science and Technology	China
E021	Lattice-Boltzmann computation of hydraulic pore-to-pore conductance in packed beds of particles	Liangwan Rong, Kejun Dong, Aibing Yu	South China University of Technology	China

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E022	Conversion of fuel-N to NO and N ₂ O during devolatilization and combustion of char in a pressurized fluidized bed	Zhaozhi Li, Yingjuan Shao, Wenqi Zhong	Southeast University	China
E023	Modeling and analysis of print circuit heat exchanger in supercritical CO ₂ power cycle for high temperature gas-cooled reactors	Mingzhu Shi, Yingjuan Shao, Wenqi Zhong	Southeast University	China
E024	Mineral interactions and emissions of PM10 during co-combustion of coal with solid waste	Yufeng Zhang, Xiaowei Liu, Yishu Xu, Jiuxin Qi, Ziwen Hu, Jie Xu, Minghou Xu	Huazhong University of Science and Technology	China
E025	Effect of pellet size and density on temperature distribution and pyrolysis behavior during fast pyrolysis of straw pellet	Huping Liu, Yun Yu	Huazhong University of Science and Technology	China
E026	DEM investigation of heat transfer during coal tar pitch oxidation in a bubble fluidized bed	Jiazhe Xue, Wenqi Zhong, Yingjuan Shao, Liyu Xie	Southeast University	China
E027	Generation of local quantities of particle-fluid flows and formulation of constitutive relations	Qinfu Hou, Yongli Wu, Zongyan Zhou, Jennifer S. Curtis, Aibing Yu	Monash University	Australia
E028	CFD-DEM simulation of large-scale dilute-phase pneumatic conveying system	Shibo Kuang, Ke Li, Aibing Yu	Monash University	Australia
E029	Experimental study on electric-field-induced droplet generation and motion in a dielectric liquid	Wang Dongbao, Wang Junfeng, Piyaphong Yongphet, Zhang Wei, Xu Haojie	Jiangsu University	China
E030	CFD-DEM simulation of two-phase pneumatic conveying through a by-pass system	Zhengquan Li, Kaiwei Chu, Renhu Pan, Pei Zhang, Aibing Yu	Jiangxi University of Science & Technology	China
E031	Application of cement output optimization of ceramic grinding medium in cement combined grinding system	Huabiao Qi, Guojian Cheng	Jiangsu Industrial Technology Research Institute	China
E032	Numerical analysis of electrostatics in gas-solid flow	Zhen Tan, Cai Liang, Jiang Chen	JITRI Institute for Process Modelling and Optimization	China
E033	Filtration of biomass pyrolysis char particles in a cyclone - Granular bed filter	Minshu Zhan, Minghao You, Zhen Tan, Jiang Chen	Jiangsu Industrial Technology Research Institute	China
F001	Direct conversion of carbon dioxide to aromatics over bifunctional iron-based catalyst	Chengyan Wen, Chenguang Wang, Jiandong Jiang	Southeast University	China
F002	The modelling and research of zinc bromine redox flow battery for energy storage	Zhicheng Xu, Qi Fan, Jun Wang	Southeast University	China
F003	Highly porous N-doped carbons production from biomass for high-performance supercapacitors without chemical nitrogen-containing dopants	Dan Xu, Yinhai Su, Shuping Zhang, Yuanquan Xiong	Southeast University	China

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F004	Thermochemical energy storage and attrition behavior of limestone during CaO/CaCO ₃ cycles in a fluidized-bed reactor	Zhangke Ma, Yingjie Li	Shandong University	China
F005	Highly-efficient and cheap macroporous MgO-stabilized CaO pellets for thermochemical energy storage in concentrated solar power plants	Ke Wang, Feng Gu, Peter T. Clough, Pengfei Zhao, Edward J. Anthony	China University of Mining and Technology	China
F006	Effects of microstructure-sensitive gas diffusion on Cr poisoning in porous cathodes of solid oxide fuel	Weiqiang Lv	University of Electronic Science and Technology of China	China
F007	Room temperature ferroelectricity of hybrid organic-inorganic perovskites with mixed halides and its effect on the performance of perovskite solar cells	Juanxiu Xiao, Jingjing Chang, Bichen Li, Furkan Halis Isikgor, Dong Wang, Zhen Fan, Zhenhua Lin, Jianyong Ouyang, Kaiyang Zeng, Jingsheng Chen	Hainan University	China
F008	TiO ₂ /graphite-like carbon hybrid composite with hierarchical porosity used as paraffin encapsulation substrates for latent heat storage	Xiang Wang, Yali Li, Jinhong Li	China University of Geosciences	China
F009	Strategies for the stabilization of metal anodes for Li and Na metal batteries	Yang Zhao	University of Western Ontario	Canada
F010	Carbon capsule with high performance for lithium/sodium battery	Xian Jian, Hong Wang, Wei Tian	University of Electronic Science and Technology	China
F011	Carbon film based electrode for efficient large area perovskite solar cells	Junyan Xiao	Wuhan University of Technology	China
F012	CaO/Ca(OH) ₂ thermochemical energy storage performance of CaO/MgO-based composite material from calcium looping cycles for CO ₂ capture	Chunxiao Zhang, Yingjie Li, Yi Yuan	Shandong University	China
F013	N-doped mesoporous carbon derived from bio-oil as an efficient electrocatalyst for oxygen reduction reaction	Chunlin Xia, Rui Xiao, Ming Li, Jiahuan Xu	Southeast University	China
F014	Reaction mechanisms for reduction of CO ₂ to CO on monolayer MoS ₂	Yunlong Xie, Xiuzhang Wang, Ying Yu, J.-M. Liu	Hubei Normal University	China
F015	Solid waste and graphite derived solar steam generator for highly-efficient and cost-effective water purification	Feng Gong, Wenbin Wang, Hao Li, Yiqing Guo, Yuhui Song, Dawei (David) Xia, Rui Xiao	Southeast University	China
F016	Investigation on a coupling recursive food waste anaerobic fermentation system with power generation	Yanqin Li, Zhigang Liu, Zushuai Li	Zhengzhou University	China
F017	Multi-objective optimization of solar/wind/battery off-grid hybrid system using MOEA/D	Rong Li, Yong Yang, Jianzhong Shi, Hongxia Zhu	Hohai University	China

Group	Title	Authors	Affiliation	Country
F018	Hard templating synthesis of bean dreg-based mesoporous carbon for supercapacitors	Zisheng Lin, Lin Wu, Xinye Wang, Changsheng Bu, Janguang Meng, Guilin Piao, Jubing Zhang	Nanjing Normal University	China
F019	Scalable production of photothermal conversion system for highly-efficient water purification	Hao Li, Wenbing Wang, Dimitrios V. Papavassiliou, Feng Gong	Southeast University	China
F020	Boron Nitride/graphene 2D materials with Fe doping as high-efficiency catalyst for ambient nitrogen reduction	Qiang Zhou, Peiling Chen, Bin Wang, Feng Gong	Southeast University	China

Southeast University



Southeast University (SEU), located at Nanjing, the ancient capital city of six dynasties, is a prestigious institution of higher learning renowned both at home and abroad. As one of the national key universities under direct administration of the Ministry of Education of China and jointly established with Jiangsu Province, it is also listed as one of the universities involved in National “Project 211” and “Program 985” financed by the Central Government to build world-class universities. In 2017, SEU was ranked on the list of constructing “Class A first-rate world universities”

SEU is one of the oldest institutions of higher learning in China with profound cultural heritage. In 1952 when national colleges and universities greatly adjusted their departments and disciplines, e.g., moving out literature and science disciplines, based on the College of Engineering of the original State Central University, relevant disciplines of Fudan University, Chiao Tung University, Zhejiang University and University of Nanking etc. were incorporated successively to establish Nanjing Institute of Technology on the original site of State Central University. In May 1988, the university was renamed to Southeast University. In the past 120-year school management, SEU, in the spirit of patriotism and concerning people all over the world, has been always making unyielding efforts in pursuit of prominence to achieve scientific progress and national rejuvenation. With time goes by, SEU has gradually shaped its outstanding university spirit of “rigor, truthfulness, unity and diligence”, the university management philosophy of “being renowned for science and serving the country with talents”, and the university motto of “striving for perfection”.

School of Energy and Environment



東南大學
能源与环境学院
school of energy and environment seu



The School of Energy and Environment (SEE) at Southeast University originates from both the group of sanitary engineering in 1931 and the discipline of thermal power engineering in 1932 at the National Central University. Many preeminent scholars and experts, like Professor QIAN Zhonghan, Professor WU Darong, Professor FAN Congzhen, Professor WANG Shoutai, Professor XIA Ranru etc., taught here and were famous in energy engineering field. The senior outstanding scholars in Environment Science, like Professor XU Baojiu, Professor NIU Shiru, Professor HU Jiajun, Professor QIN Linyuan etc., also worked here. So far, more than ten thousands specialized talents graduated from here and seven among them won the academicians of Chinese Academy of Sciences and the members of China Engineering Academy. SEE at Southeast University runs two first-class disciplines of Power Engineering & Thermal Engineering Physics and Environment Science Engineering, which includes the 10 second-class disciplines such as Power Engineering & Thermal Engineering Physics, Environment Science and Engineering, Refrigeration and Cryogenic Engineering, Environment Science Engineering etc.. Both Power Engineering & Thermal Engineering Physics and Environment Science Engineering are the key first-class disciplines in Jiangsu Province. Moreover, Power Engineering & Thermal Engineering Physics is also the advanced and outstanding discipline in Jiangsu province. Thermal Energy Engineering is the national key discipline with the second-class in China. Two Changjiang Scholar Fellowships by Ministry of Education are offered in Both Thermal Energy Engineering and Power Engineering.

Biography- Xiaotao Bi



Prof. Xiaotao Bi received BSc (1985) and MSc (1988) degrees from Tsinghua University, and a PhD (1991-1994) degree from the University of British Columbia. He is currently a professor in the Chemical and Biological Engineering Department and a Fellow of Canadian Academy of Engineering. He has held the position as an associate director of the Clean Energy Research Centre, a director of China-Canada Joint Centre for Bioenergy Research and Innovation, and the manager of the Fluidization Research Centre.

His research has been focused on fluidization and multiphase reactor systems, spanning from turbulent fluidization, fast fluidization, choking and instability, high density circulating fluidized beds, conical spouted beds, pressure waves and fluctuations, flow patterns and regimes transitions, electrostatics in particle systems, as well as novel fluidized bed reactors for NO_x reduction, biomass gasification, biomass torrefaction and catalytic combustion of H₂/CH₄ mixtures.

Biography- Aibing Yu



Prof. Aibing Yu received B.S. (1982) and M.S. (1985) degrees from Northeastern University, and a PhD (1990) degree from the University of Wollongong. He is currently a Fellow of Australian Academy of Science (AAS), Australian Academy of Technological Sciences and Engineering (ATSE), Royal Society of New South Wales (RSNSW), and Institution of Chemical Engineers (IChemE). Prof. Yu is also a Member of ARC College of Experts (Engineering and Environmental Sciences) and DEST Research Quality Framework (Engineering and Technology), and Honorary President of Federation of Chinese Scholars in Australia as well as a Member of Overseas Expert Advisory Board – Science and Technology, Chinese Government.

His research has been focused on particle science and technology, process engineering, process metallurgy, chemical engineering, material engineering, modelling and simulation, multiphase flow, powder technology, blast furnace and nanoparticles and application. He has received awards including the Josef Kapitan Ironmaking Award from the Iron and Steel Society (2002), Outstanding Overseas Chinese Scholar Award (2003), Ian Wark Medal and Lecture from Australian Academy of Science (2010), ExxonMobil Award from Australian and New Zealand Federation of Chemical Engineers (2010), and Distinguished Visiting Fellowship Award from the Royal Academy of Engineering (2011).

Biography- Kunlei Liu



Prof. Kunlei Liu, received his Bachelors of engineering degree (1988) and his PhD (1993) in Thermoenergy engineering from the Southeast University, Nanjing, China. He is a now professor of Mechanical Engineering at the University of Kentucky and the Associate Director for Research at the Center for Applied Energy Research. Prior to the University of Kentucky, Prof. Liu has been employed by Southeast University, Western Kentucky University, Environmental Systems Corporation (ESC), and Babcock & Wilcox.

He has over 29 years' experience in directing research projects in the areas of combustion, gasification, and emissions control. Since 2006, as principal investigator, he has received more than \$65M from US DOE, the State of Kentucky, and an industrial consortium to develop a robust and cost-effective technology for pollution control, water treatment, CO₂ capture and utilization from power generation processes that covers advanced catalytic solvent development and evaluation, process integration, membrane-based solvent enrichment, chemical looping combustion/gasification, and metal behavior in the post-combustion carbon capture system. His research interests include fossil fuel combustion and gasification, emission control, carbon management in power plants and biomass utilization for fuels and chemicals.

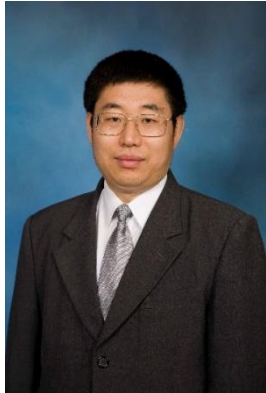
Biography- Andrew Minchener OBE



Dr. Andrew Minchener OBE is a Fellow of the Energy Institute and a Chartered Engineer. With effect from July 2013, he became the General Manager of the IEA Clean Coal Centre, being responsible for all aspects of the Centre's activities and with special emphasis on maintaining a strong international profile for all aspects of clean coal utilization.

He has 40 years' experience in fossil fuel and biomass/waste utilisation, systems development, energy and environmental consultancy, and contract research and development, especially for clean coal technology development and deployment, and CCS issues. This includes specific expertise in policy/institutional/regulatory analysis, techno/socio-economic analysis, training/capacity building, knowledge transfer and international business development. He has undertaken numerous overseas assignments, including over 160 missions to the People's Republic of China. In recent years he has worked with a number of organisations including the UK Department of Energy and Climate Change, the World Bank, the Asian Development Bank, the International Energy Agency, the European Commission and the IEA Clean Coal Centre to undertake a wide range of studies covering clean coal utilisation and CCS in China and other parts of Asia, and Europe.

Biography- Chunzhu Li



Prof. Chunzhu Li obtained his PhD in Chemical Engineering in 1993 from Imperial College London. After completing his postdoctoral research at Imperial College London and CSIRO, he joined Monash University in 1996 where he served as a Lecturer, Senior Lecturer, and then a Professor.

During his time at Monash University from 1996 to 2009, a key focus of Prof. Li's research was low-rank fuels, especially Victorian brown coal and biomass. His interest in coal has included many aspects of coal science and technology such as pyrolysis, gasification, liquefaction and combustion of coal, as well as the structure and properties of coal. Prof. Li took up a role at Curtin University in January 2009. His initial work was to establish a major university research center, which was further expanded into the current Fuels and Energy Technology Institute, the largest energy research establishments in Australian universities. He is also a John Curtin Distinguished Professor. At Curtin, Prof. Li's research has been specially focused on the bioenergy science and engineering, while continuing his research on coal, catalysis and fuel cells.

Biography- Kunio Yoshikawa



Prof. Kunio Yoshikawa is currently a professor of School of Environment and Society, Tokyo Institute of Technology, Japan. He is an associate editor of Applied Energy. Prof. Yoshikawa graduated from Tokyo Institute of Technology and obtained PhD in 1986. After graduation from Tokyo Institute of Technology, Prof. Yoshikawa worked for Mitsubishi Heavy Industries for one year, and then went back to his home university to become a research associate, associate professor and professor.

His major research areas are energy conversion, thermal engineering, combustion, gasification, waste treatment technologies and atmospheric environmental engineering, and he wrote more than 200 papers. His main awards are AIAA (American Institute of Aeronautics and Astronautics), Best Paper Award in 1999, ASME (American Society of Mechanical Engineers) James Harry Potter Gold Medal in 2001, JSME (Japan Society of Mechanical Engineers) Environmental Technology Achievement Award in 2006, Fellow of JSME in

2008 and Best Educator Award of Tokyo Institute of Technology in 2014.

Biography- George Huber



Prof. George W Huber is the Richard Antoine and Dorothy O'Brien Professor of Chemical Engineering at University of Wisconsin-Madison. He obtained his Ph.D. in Chemical Engineering from University of Wisconsin-Madison (2005) under the direction of James Dumesic. He obtained his B.S. (1999) and M.S. (2000) degrees in Chemical Engineering from Brigham Young University where he studied under the direction of Calvin Bartholomew. In summer of 2015, George did a sabbatical visit with Professor Tao Zhang at Dalian Institute of Chemical Physics. George did a post-doctoral stay with Avelino Corma at the Technical Chemical Institute at the Polytechnical University of Valencia, Spain (UPV-CSIC).

His research focus is on developing new catalytic processes for the production of renewable liquid fuels and chemicals. He has received awards including the AIChE Colburn Award, the Thomson Reuters highly cited researcher award, the Camille Dreyfus Teacher-Scholar award, and the NSF career award.

Biography- Yulong Ding



Prof. Yulong Ding holds the founding Chamberlain chair of Chemical Engineering and Highview-RAEng Chair of Cryogenic Energy Storage and is Director of the Birmingham Centre for Energy Storage at the University of Birmingham. He joined Birmingham in October 2013. Prior to his appointment at Birmingham, he was Professor and Director of Institute of Particle Science & Engineering at the University of Leeds. He was the founding director of the joint Institute for Energy Storage between University of Leeds and Institute of Process Engineering of Chinese Academy of Sciences.

He has research interests in energy materials and energy processes and currently focusing on developing novel technologies for electrical and thermal energy storage at different scales. He has been a PI or Co-I of research projects with over £20M funding over the past 10 years. He has 13 patents, 400 papers with 180 in peer reviewed journals (H-Index of ~ 42). He was listed as top 1% highly cited researchers with consistent impact over 2002-2012 in the engineering category by Thomson Reuters. He also invented the liquid air energy storage technology and led the initial stage of development of the technology.

Biography- Peter Lund



Prof. Peter D. Lund is Professor in Advanced Energy Systems at Aalto University, Finland. He has 40 years of experience in energy technologies, systems, and policies. He has had visiting positions at Hubei University (Wuhan), Technical University of Dresden (Germany), Southeast University (Jiangsu). He led for 10 years the national programme on new energy technologies (Tekes/Nemo).

Prof. Lund is active in senior roles with European Union initiatives in energy: he chaired the Advisory Group Energy of European Commission 2002-06 and the Energy Steering Panel of European Academies Science Advisory Council (EASAC, 2013-2017). He has served in advisory role for many energy programs worldwide and business, incl. IEA. He is member of the Finnish Academy Science and Letters and Swedish Engineering Academy in Finland. Dr. Lund is Editor for Wiley Interdisciplinary Reviews: Energy and Environment and member of several editorial boards. He has given numerous invited talks and co-published 280 peer-reviewed science papers with more than 10,000 citations. He has been internationally awarded, lastly with the Jinling Award in 2016.

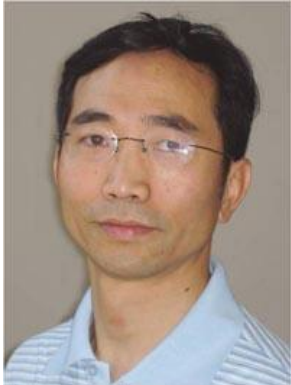
Biography- Hongwei Wu



Prof. Hongwei Wu received his Bachelor and Master of Engineering in 1993 and 1996, respectively, both in Thermal Power Engineering. He then pursued his PhD in Chemical Engineering at the University of Newcastle, Australia, and received his PhD degree in August 2000. From 2010, he has been made as a full professor of Chemical Engineering at Curtin University. Prof Wu was the recipient of the inaugural 2018 Curtin Awards for Excellence in Higher Degree by Research Supervision. He is a fellow of the Combustion Institute (2019). Since 2008, Prof Wu has also been serving as the Associate Editor of Energy & Fuels - a prestigious journal published by the American Chemical Society in the field of fuels and energy.

Prof. Wu's research areas include production of green chemicals from biomass, bioenergy science and engineering, fuel science and engineering, production, characterisation and processing of slurry fuels, thermochemical processing or co-processing of fuels, biochar production, tuning characterisation and applications, transformation of mineral matter in fuels, reactive turbulent flows, Solar-thermochemical processing, Emission from fuel thermochemical processing, etc.

Biography- Roger Ruan



Prof. Roger Ruan's is a professor in University of Minnesota Twin Cities, United States. His current interests include catalytic nonthermal plasma synthesis of ammonia and other nitrogen products, intermittent vacuum assisted thermophilic anaerobic digestion and algae and aquaponics system for complete waste utilization, catalytic microwave assisted pyrolysis and gasification of biomass and solid wastes for energy fuels, chemicals, and materials production, food shelf stability and quality enhancement and safety assurance.

Prof. Ruan has published over 450 papers in refereed journals and holds 18 US patents. He is a fellow of ASABE and a fellow of IFT, and also a top cited author in the area of agricultural and biological sciences with an h-index of 53, i10- index of 182 and over 11,000 citations. He has received over 175 projects totaling over \$40 million in various funding for research. He has served as an editorial board member of Bioresource Technology, Engineering, Journal of Food Process Engineering, The Open Plasma Physics Journal, and Associate Editor of Transactions of ASABE, Engineering Applications in Agriculture, and Transactions of CSAE, and Chairman of Editorial Board and Editor-in-Chief of International Journal of Agricultural and Biological Engineering.

Biography- David Mitlin



Prof. David Mitlin is a David Allen Cockrell Endowed Professor at the Walker Department of Mechanical Engineering, The University of Texas at Austin. Prior to that, he was a Professor and General Electric Chair at Clarkson University, and an Assistant, Associate and full Professor at the University of Alberta. Prof. Mitlin has published about 150 peer-reviewed journal articles on various aspects of energy storage materials and on corrosion – fouling phenomena. This work is cited at near 2000 times per year. Prof. Mitlin holds 5 granted U.S. patents and 13 more pending full applications, with all of them licensed currently or in the past. He has presented 125 invited, keynote and plenary talks at various international conferences. Prof. Mitlin is an Associate Editor for Sustainable Energy and Fuels, a Royal Society of Chemistry Journal focused on renewables. Dave received a Doctorate in Materials Science from U.C. Berkeley in 2000, M.S. from Penn State in 1996, and B.S. from RPI in 1995. He grew up in upstate NY and in southern CT.

Biography- Foster Agblevo



Prof. Foster Agblevo received B.Sc. (1979) degree in Chemical Engineering from University of Science and Technology, M.A.Sc. (1984) degree in Chemical Engineering and Applied Chemistry from University of Toronto, and a Ph.D (1988) degree in Chemical Engineering and Applied Chemistry from University of Toronto. Prof. Agblevo is a USTAR Endowed Professor, Director of USTAR Bioenergy Center, Graduate Committee Chair, Department of Biological Engineering, Utah State University. Prof. Agblevo serves as board member for several small startup companies in the USA.

Prof. Agblevo is an expert in thermochemical biomass conversion and rapid characterization of biomass feedstocks. He was former Vice Chairman E 48 Committee on Biotechnology of the American Society of Testing and Materials (ASTM) and has developed eight ASTM standards. Prof. Agblevo has organized and chaired several sessions of the Cellulose and renewable materials Division of the American Chemical Society and the American Institute of Chemical Engineers. His current Projects are major in wastewater treatment of using reformulated red mud as flocculant/coagulant, catalytic pyrolysis of pinyon-juniper wood and catalyst development for in situ catalytic pyrolysis of biomass.

Biography- Dowon Shun



Dr. Dowon Shun is Principal Researcher in Low Carbon Process Laboratory, Climate Change Technology Research Division in Korea Institute of Energy Research. Dr. Shun obtained B.Sc. and M.Sc. both in Chemical Engineering of Hanyang University, Korea. Dr. Shun obtained his Ph.D. Degree from University of Utah, United States, majored in Fuels Engineering.

Dr. Shun's research areas focus on waste plastics, oil sand pyrolysis, fluidized bed combustion and boiler development for coal and RDF. Dr. Shun also conducted research low rank coal upgrading and stabilization by drying. Dr. Shun has published above 100 peer reviewed paper.

Biography- Meihong Wang



Prof. Meihong Wang joined the Centre for Process Systems Engineering at Imperial College London in 1999 as Research Assistant (also part-time PhD at UCL), then Postdoctoral Research Fellow from in 2002. He joined Cranfield University as Lecturer in Process Systems Engineering and MSc Course Director on Carbon Capture and Transport in 2006 and held the post until 2012 before joining the University of Hull in 2012 as Reader. In 2016, Meihong moved to the University of Sheffield as Professor of Energy Systems Engineering.

Prof. Wang is a Chartered Engineer. He has published over 180 technical papers. One of his publications was awarded SAGE Best Paper Prize 2014 and Ludwig Mond Prize 2014 by IMechE. Another paper was given Award for the Most Cited Review Paper by Applied Energy Journal in 2016 (during ICAE2017 in Cardiff UK). Since 2006, Meihong has been involved in 21 research projects worth around £20 million from UK Research Councils (EPSRC and NERC), European Union (EU) and Industry as investigators.

Biography-Hao Liu



Prof. Hao Liu is a professor of Energy Engineering in University of Nottingham, United Kingdom. Professor Liu acts as the Associate Director of the EPSRC Centre for Doctoral Training in Carbon Capture and Storage and Cleaner Fossil Energy at Nottingham. He is a Chartered (Energy) Engineer and a member of the Energy Institute. He has research expertise in coal combustion, power plant engineering, fluidized bed technology, and biomass combustion and gasification. Prof Liu is the Head of the Low Carbon Energy and Resources Technologies (LCERT) Research Group.

His current research interests concentrate on renewable energy technologies (in particular biomass technology), clean combustion and carbon abatement technologies. Many of his past and present research projects involve collaborations with UK/International universities/institutions and industrial partners.

Biography- Guangwen Xu



Prof. Dr. Guangwen Xu, President, chair professor, and director of Key Laboratory on Resources Chemicals and Materials of Ministry of Education in Shenyang University of Chemical Technology, an adjunct professor of Institute of Process Engineering (IPE), Chinese Academy of Sciences (CAS). He graduated from Tsinghua University for his Bachelor and from Chinese Academy of Sciences for his Doctor in Chem. Eng. He has worked in 2015-2017 as the director of Southwest Research and Design Institute of Chemical Industry, in 2006-2015 as a professor and a team leader in IPE, CAS, in 1996-2006 in Japan and Germany as, in succession, a NEDO industrial researcher in AIST, an AvH fellow in Technical University Hamburg-Harburg (TUHH), and a senior researcher in IHI Corporation, Ltd. (Japan).

His expertise includes fluidization and particle technologies, thermochemical conversion of fuels, gas-solid reaction analysis, flue gas denitration and syngas methanation. By far, he has published more than 320 papers and one monograph about fuel decoupling thermochemical conversion, applied for more than 100 patents, and successfully developed and commercialized a few fuel conversion and environment protection technologies to utilize low-rank coal and biomass wastes like spirit lees and Chinese herb residues, clean flue gas (NO_x removal) and characterize gas-solid reactions using micro fluidized bed (MFB).

Biography- Longlong Ma



Prof. Longlong Ma is a researcher of Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences. Prof. Ma obtained B.S. in Shenyang University of Technology and obtained PhD. in East China University of Science and Technology.

Dr. Ma's research focuses on the theoretical basis study of bio-aqueous phase catalytic conversion, biomass pyrolysis, gasification and power generation, and biomass group efficient transfer and utilization. He has published more than 230 peer-reviewed papers. He was honored with the first prize of the 2017 Guangdong Science and Technology Award (Natural Science) and Second Award of Science and Technology Progress of China in 2008.

Biography- Guanyi Chen



Prof. Guanyi Chen is the Dean, Chair professor of Biomass/wastes Energy and Environment in the School of Environmental Science and Engineering, Qiusi College, Tianjin University, Tianjin, China. He received PhD degree in Zhejiang Univeristy in 1998, and then moved to the University of Hong Kong and Delft University of Technology (the Netherlands) for taking the research position there for 5 years. Now he is the Director of the China- Australia Centre for Sustainable Urban Development there. He is former Dean of the School of Environmental Science and Engineering, Tianjin University.

His research focuses on wastes to energy by thermal-chemical conversion with biological processes. He contributed to over 240 publications with SCI-indexed Journal paper of around 120. He is a member of International Standard Organization (ISO/TC255) responsible for Safety and Environment Issues in the field of biogas. He is chairman of 6th international Conference on Gasification Technology and Its Application in 2018, and Chairman of the 1st International Symposium on Bioenergy and Environment in 2017.

Biography- Shuiqing Li



Prof. Shuiqing Li is a Professor in the Department of Thermal Engineering at Tsinghua University. Prof. Li obtained his B.S. in Department of Energy Engineering of Zhejiang University (1993) and PhD. Degree In School of Mechanical and Energy Engineering of Zhejiang University (1997).

Prof. Li's research areas focus on particulate and granular flows, heterogeneous combustion and high-temperature phenomena. He is a recipient of the National Award for New Century Excellent Talents (2009) and the Tsinghua University Award for Young Talents on Fundamental Studies (2011). He is a Member of Combustion Institute, a Member of American Association for Aerosol Research (AAAR) and a Member of Chinese Society of Particology.

Biography- Shaozeng Sun



Prof. Shaozeng Sun received BEng (1980-1984), MEng (1984-1987) and PhD in Eng (1991-1995) degrees from Harbin Institute of Technology, China. He is currently a full professor in School of Energy Science and Engineering, Harbin Institute of Technology. He has held the position as the director of Combustion Engineering Research Institute (CERI-HIT), Harbin Institute of Technology, and the funding director of National Engineering Laboratory for Reducing Emissions from Coal Combustion (NELRECC) of China.

His research has been focused on coal combustion, gasification and control of pollutants from coal combustion, biomass into energy via thermal chemical conversion and carbon sequestration by advanced power generation system of near zero emissions. Prof. Sun has been making continuous research on coal combustion, inventing and developing HBC (Horizontal Bias Combustion) and RBC (Radial Bias Combustion) burner technology, 'Air Blanketing Fuel' combustion technology, and 'Stereo Stage Combustion' technology, etc. Those technologies have been used by all the seven large utility boiler makers from China for new boilers and applied by over a hundred of power plants from China, US and South Korea for retrofitting the existing boilers. He has patented over 30 inventions.

Biography- Ronghou Liu



Prof. Ronghou Liu is Professor of Department of Resource and Environment, School of Agriculture and Biology in Shanghai Jiaotong University (SJTU). He is director of Biomass Energy Engineering Research Centre, School of Agriculture and Biology, SJTU. Prof. Liu obtained B.S., M.S. and PhD. in Shenyang Agricultural University.

Prof. Liu's research areas focus on biomass energy engineering and energy/ecology integrated system. Ronghou has had more 20 year experience in the field of renewable energy and environment. He wins Tang Cornell-China Scholar in 2008. Prof. Liu has published 6 books, more than 10 Chinese invention patents, and more than 40 SCI and EI papers. Prof Liu is also Executive member of Chinese Renewable Energy Society; Executive member of Chinese Biogas Society; Executive member of Chinese Biomass Development Center; editorial board member of International Journal of Global Energy Issues, editorial board of Transaction of the CSAM, editorial board member of Transaction of the CSAE, etc..

Biography- Jun Cheng



Prof. Jun Cheng is Qishi Distinguished Professor, College of Energy Engineering in Zhejiang University. Prof. Cheng obtained B.S. in Thermal Power Engineering of Shandong University. Prof. Cheng obtained M.S. and PhD. both in Zhejiang University, majored in Energy and Environment Engineering

Prof. Cheng's research areas focus on New Energy and Environment Engineering, including Biomass Energy, Solar Energy, Hydrogen Energy, Pollutants Control in Coal Combustion, CO₂ capture and utilization. He has received several awards including First Class Award of Natural Science of Zhejiang Province (2017), Leading Talent of National Special Support Program (2016). Prof. Cheng has published above 150 peer reviewed paper.

Biography- Zhaohui Liu



Prof. Zhaohui Liu is a full professor in State Key laboratory of Coal Combustion (SKLCC), Huazhong University of Science and Technology (HUST), Wuhan, China (10,000 people).

Prof. Liu has background in thermal engineering. He joined SKLCC in 2000, and became full professor in 2005. He had coordinated over 20 national level projects, including major research & development project, major fundamental research project (973), high-tech R&D project (863), S&T support program and national science foundation of China (NSFC). He has intensive experience in oxy-fuel facility design, key component development, system integration, commission and operation, and deep understanding in the fundamental area such as ignition, char oxidation, nitrogen oxides formation, radiative heat transfer etc. He has authorized 2 books, 70+ peer reviewed journal papers and been granted 12 patents. He had been awarded as National High-level personnel (10,000 people plan) for oxy-fuel combustion in 2013, and National Natural Science Award for turbulent gas-particle flow model in 2014.

Biography- Haisheng Chen



Prof. Haisheng Chen, BEng, PhD, is currently the deputy Director of Institute of Engineering Thermophysics (IET), Chinese Academy of Sciences (CAS). He received his bachelor from Xi'an Jiaotong University in 1997 and Ph.D from IET-CAS in 2002. He joined IET-CAS in 2009 as a “100-Talents” professor after previous employments at University of Leeds, IET-CAS, Vrije University of Brussels and Beihang University. He is now also the Director of China National Research Centre of Physical Energy Storage and the President of Energy Storage Alliance, China Energy Research Society.

He has been working on design, experiment and numerical simulation of fluid dynamics, heat transfer and chemical systems related to energy storage and power engineering. More specifically, his research includes energy storage material and system, micro/ nano scale flow & heat transfer, fluid dynamics of internal flow of turbomachinery. His research has led to 300+ peer-reviewed papers, 2 books, 9 book chapters, 150+ patents and 11 provincial level awards.

Biography- Mao Ye



Prof. Mao Ye is a professor of Dalian Institute of Chemical Physics, Chinese Academy of Sciences. Prof. Ye obtained B.Eng. in Thermal Power Engineering of Jiangsu University of Science and Technology and M.Eng. in Engineering Thermophysics in Southeast University. Prof. Ye also pursued his PhD. Degree in Thermal Engineering in Southeast University.

Prof. Ye's research areas include catalytic process development, fluidized bed reactor scale-up, CFD and reactor modelling of fluidized beds, measurement techniques of fluidized beds. He was honored with Leading Scientists for Innovation, National 1000 Talent Program (2017) and awarded as Zhang Dayu Scholar, Dalian Institute of Chemical Physics (2017). He is the editorial board member of Carbon Resources Conversion and also the editorial board member of Frontiers of Chemical Science and Engineering

Biography- Kun Luo



Prof. Kun Luo is professor in State Key Laboratory of Clean Energy Utilization, College of Energy Engineering in Zhejiang University. Prof. Luo obtained his B.S. in Thermal Power Engineering Department of Wuhan University (1996-2000). Prof. Luo pursued his PhD. in Zhejiang University, majored in State Key Laboratory of Clean Energy Utilization (2000-2005). He did the Postdoctoral Fellow in Center for Turbulence Research in Stanford University (2007-2009).

Prof. Luo's research areas focus on Computational Multiphase Reactive Flow, Wind Energy and Air Quality Modeling. He has published more than 150 peer-reviewed papers. Prof. Luo was selected as a Youth Changjiang Scholar of the Ministry of Education in 2016. He is an editorial board member of 3 international SCI indexed journals and was especially invited to deliver reports for 12 international academic conferences.

Biography- Haoran Yuan



Prof. Haoran Yuan is a researcher of Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences. Dr. Yuan obtained B.S. in School of Mechanical and Automotive Engineering, Hefei University of Technology. Prof. Yuan obtained PhD. in Institute of Integrated Technology, Guangzhou Institute of Energy, Chinese Academy of Sciences

Prof. Yuan has hosted over 20 scientific projects, including the Youth and General Projects funded by National Natural Science Foundation of China, Special Youth Project on Apparatus R&D funded by Chinese Academy of Sciences, Subject of the State Science and Technology Support Project, and so on. The main achievements include 43 SCI-indexed papers (27 as first and corresponding author) and 15 EI-Indexed on peer-reviewed academic Journals, 3 pieces of PCT and 31 national invention patents in review (23 pieces authorized), 3 monographs. He had the honor of the Second Prize of National Scientific and Technological Progress Award in 2011, "Pearl River Science and Technology Nova" in 2013, "Guangdong Province Special Support Plan-Science and Technology Innovation Top-Notch Personnel" and the membership of "Youth Innovation Promotion Association" in 2014.

Biography- Haibo Zhao



Prof. Haibo Zhao is Professor of State Key Laboratory of Coal Combustion, School of Energy and Power Engineering in Huazhong University of Science and Technology. Prof. Zhao obtained B.S., M.S. and PhD. in Huazhong University of Science and Technology, majored in thermal engineering.

Prof. Zhao is mainly engaged in the research of coal-fired pollutant control, combustion source functional nanoparticles, environmental thermal economics, energy conversion and utilization of new technologies. He was honored as the National "10,000 Plan" Youth Talents and First Award of Natural Science of the Ministry of Education. He has published 90 peer-reviewed papers (77 authors of the first or correspondence) until 2016. Prof. Zhao has applied for 9 invention patents, 2 utility model patents, 1 computer software copyright, 5 open invention patent applications.

Biography- Haiping Yang



Prof. Haiping Yang is a full professor in the State Key Laboratory of Coal Combustion, Huazhong University of Science and Technology, Wuhan, China. Prof Yang' research is focused on Biomass pyrolysis/gasification for H₂ enriched gas fuel, liquid bio oil and carbon contained materials and chemicals. So far she has published over 100 SCI papers, and 5 were cited in ESI, and the highest SCI cite for 1 paper is over 2000. Now she owns Newton Advanced Fellowships (2018) and the Most Cited Chinese Researchers (Elsevier, 2014-2018). She gained the National Science Fund for Excellent Young Scholars program in 2016 (China). She is a member of the editor board of Fuel and Journal of Analytical and Applied Pyrolysis, also managing guest editor of Fuel and guest editor of Journal of Analytical and Applied Pyrolysis.

Biography- Jinfeng Liu



Prof. Jinfeng Liu received the B.S. and M.S. degrees in Control Science and Engineering in 2003 and 2006, respectively, both from Zhejiang University, and the Ph.D. degree in Chemical Engineering from the University of California, Los Angeles in 2011. Since 2012 he has been with the University of Alberta, where he is currently an Associate Professor in the Department of Chemical and Materials Engineering.

His research interests are in the general areas of process control theory and practice with emphasis on model predictive control, networked and distributed state estimation and control, and fault-tolerant process control and their applications.

Biography- Xiaobo Ji



Prof. Xiaobo Ji is a full professor in the College of Chemistry and Chemical Engineering, Central South University, Changsha, China. He obtained his PhD degree in Electrochemistry in the University of Oxford, UK (2007). After that, he did postdoc fellow in Massachusetts Institute of Technology, USA.

Prof. Ji's research interests are advanced energy conversion and storage devices like lithium/sodium ion batteries and Supercapacitors based on micro/nano structured materials for energy storage application. He has published above 100 journal papers in the high-impact journals. In recent years, Prof. Ji has been awarded as the Fellow of the Royal Society of Chemistry (2014), The Ministry of education "program for New Century Excellent Talents" (2011), Hunan Province Outstanding Youth Fund" Winner (2012), Hunan province "Hundred Talents Program" Expert (2012) and Young Changjiang Scholar of Ministry of Education.

Biography- Qiang Lu



Prof. Qiang Lu is a professor of Renewable Energy Institute in North China Electric Power University and the Director of National Engineering Laboratory for Biomass Power Generation Equipment. Prof. Lu obtained B.S., M.S. and PhD. in the University of Science and Technology of China.

Prof. Lu is the associate editor of IET Renewable Power Generation, editorial board member of Journal of Analytical and Applied Pyrolysis and editorial board member of Heliyon. He was selected as national "10,000 people plan" Young talents and 2017 Beijing Science and Technology Star. He has published more than 200 papers, including above 100 SCI papers. He has been granted more than 60 invention patents, of which more than 30 have been authorized by the first inventor, and 10 patents have been granted permission to implement or transfer.

Biography- Ming Liu



Dr. Ming Liu is currently a professor in School of Energy and Power Engineering in Xi'an Jiaotong University. He received his PhD degree in Power Engineering and Engineering Thermo-Physics from Xi'an Jiaotong University in 2013, and joined Xi'an Jiaotong University in Oct. 2013.

The current focuses of Dr. Ming Liu and his team are fundamentals, advanced technologies of thermal power plants, including optimization and dynamic simulation of power cycles, gas-solid two phase flow, heat and mass transfer, etc. He has developed dynamic models of coal-fired power plants and investigated the characteristics of coal-fired power plants during transient processes including the energy consumption, life management, and methods to improve the flexibility of coal-fired power plants. He received the second class State Award for Progress in Science and Technology of China in 2017, the first class Award of Science and Technology of Shaanxi province in 2016, and hosts over 10 funds supported by the NSFC, power companies, etc. He has authored over 80 peer-reviewed journal papers and holds 25 patents.

Everbright International



China Everbright International Limited (“Everbright International”), established in Hong Kong in 1993, is a backbone enterprise of China Everbright Group. As a state-owned and foreign company, Everbright International operates with better efficiency and vitality than other state-owned enterprises, and demonstrates a stronger responsibility and better capability than its foreign peers. Since Everbright International forayed into the environmental protection industry in 2003, with over a decade’s development, it has grown into a leading player in China and Asia’s environmental protection industries, as well as a world-renowned ecological and environmental management group, with two listed subsidiary companies, namely China Everbright Water Limited (SGX: U9E) and China Everbright Greentech Limited (HKSE: 1257). In 2018, Everbright International recorded a revenue exceeding HKD27 billion and total assets surpassing HKD95 billion, with the number of employees surpassing 10,000.

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