

2018 International Symposium on Clean Energy and Advanced Materials (CEAM2018)

13 – 15 August 2018

Rydgēs Newcastle, Wharf Rd & Merewether St, Newcastle, NSW 2300. Tel: +61-2-40339302

Day 1, Monday, 13 August 2018

8:00 – 8:15	Symposium Opening (Chair: Professor Jianglong Yu)		
8:00 – 8:10	Welcome Speech By Professor Kevin Hall (University of Newcastle, Senior Deputy Vice-Chancellor)		
8:10 – 8:15	Welcome Speech By Professor Terry Wall (University of Newcastle, Conference Chair)		
8:15 – 9:55	Session 1 (Chair: Prof. Behdad Moghtaderi)		
8:15 – 9:05	Gas quality control for carbon capture: experiments at the Callide oxyfuel project (Plenary Lecture)	Terry Wall	Uni of Newcastle
9:05 – 9:55	Directional catalytic hydroconversion of coals based on the coal structural features (Plenary Lecture)	Xian-Yong Wei	China Uni Mining Tech
9:55 – 10:20	Morning Tea		
10:20 – 12:00	Session 2 (Chair: Prof. Zhenyu Liu, Prof Jing-Pei Cao)		
10:20 – 10:40	Rapid synthesis of magnetic zeolite materials from fly ash and iron-containing waste by the supercritical hydrothermal method for mercury removal application	Jiancheng Wang	Taiyuan Uni Tech
10:40 – 11:00	A study on spontaneous combustion between low temperature oxidation and petrographic characteristics of coals	Dae-Gyun Lee	Pusan National Uni
11:00 – 11:20	Pore structure and integrity of a bio-coke under simulated blast furnace conditions	Xing Xing	Uni New South Wales
11:20 – 11:40	An investigation of the molecular changes in coal maceral concentrates prepared under dimensional heating condition	Quang Anh Tran	Uni of Newcastle
11:40 – 12:00	Poisoning effects of quinoline on the hydrodesulfurization of active and refractory sulfur species in light cycle oil	Songdong Yao	Uni Sci Tech Liaoning
12:00 – 13:20	Lunch		
13:20 – 15:40	Session 3 (Chair: Prof. Xian-Yong Wei, Dr. Xing Xing)		
13:20 – 14:10	Fundamental advancements in thermal conversion of heavy organic resources (Plenary Lecture)	Zhenyu Liu	Beijing Uni Chem Tech
14:10 – 15:00	A Study on biomass torrefaction process to achieve HELE thermal power system in Korea (Plenary Lecture)	Chung Hwan Jeon	Pusan National Uni
15:00 – 15:20	Valuable liquid tar produced from Powder River Basin coal through degradation in supercritical CO ₂ -ethanol system and its application	Fang-Jing Liu	China Uni Mining Tech
15:20 – 15:40	Effects of substrate and carbon source on the growth of CNTs by microwave-CVD	Jian Zhang	Uni Sci Tech Liaoning
15:40 – 16:00	Afternoon Tea		
16:00 – 17:40	Session 4 (Chair: Dr. Hai Yu, Dr. Arash Tahmasebi)		
16:00 – 16:20	Evaluation of denitrogenation and deoxygenation on molecules in coal during catalytic treatments by ion-source collision-activated dissociation	Xing Fan	China Uni Mining Tech
16:20 – 16:40	Facile preparation of coal-based porous graphene as high-performance anode materials for lithium-ion batteries	Baolin Xing	Henan Polytechnic Uni
16:40 – 17:00	Environmental Retrofit of 500MW level's thermal power Plant	Sung Kyo Cheong	KOMIPO, Korea
17:00 – 17:20	Denitrification performance of simulated flue gas using Fe(II)TBAB-EG DES	Jinxiao Dou	Uni Sci Tech Liaoning
17:20 – 17:40	A mechanistic study on the characteristics of the plastic layer during the heating of Australian coking coal	Soonho Lee	Uni of Newcastle
17:40 – 18:00	Poster Session (Chair: Prof. Qiubai Sun, Prof. Jianglong Yu)		
18:00	Symposium Dinner (Rydgēs Hotel)		

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Day 2, Tuesday, 14 August 2018

8:00 – 9:40	Session 1 (Chair: Prof. Terry Wall)		
8:00 – 8:50	A State-of-the-Art Report on Chemical Looping Based LET Options for Coal (Plenary Lecture)	Behdad Moghtaderi	Uni of Newcastle
8:50 – 9:40	New understanding and evaluation of coking coal and coke properties (Plenary Lecture)	Qi Wang	Uni Sci Tech Liaoning
9:40 – 10:00	Morning Tea		
10:00 – 12:00	Session 2 (Chair: Prof. Qi Wang, Prof. Jiancheng Wang)		
10:00 – 10:20	CO ₂ sequestration by direct aqueous mineralization of fly ash: Ash screening and kinetic investigation	Hai Yu, Ji Long	CSIRO
10:20 – 10:40	Operational Improvement and Optimize Management of Samcheok CFB Boiler	Seok-Gi Ahn	KOSPO
10:40 – 11:00	Poly-generation of hydrogen-rich gas and fine chemicals during pressurized entrained-flow pyrolysis of lignite	Arash Tahmasebi	Uni of Newcastle
11:00 – 11:20	The formation of carbon nanotubes from microwave pyrolysis of cellulose component isolated from palm kernel shell	Joy Esohe Omoriyekomwan	Uni Sci Tech Liaoning
11:20 – 11:40	SO _x /NO _x co-removal and N ₂ O formation during compression of oxy-fuel flue gas	Rohan Stanger	Uni of Newcastle
11:40 – 12:00	Three-dimensional simulation of gas-solid flow in a CFB boiler	Kang-Min Kim	Pusan National Uni
12:00 – 13:20	Lunch		
13:20 – 15:10	Session 3 (Chair: Prof. Chung Hwan Jeon, Dr. Rohan Stanger)		
13:20 – 14:10	Effects of pressure on pyrolysis of biomass, enhanced production of hydrogen and nitrogen-containing compounds (Plenary Lecture)	Jianglong Yu	Uni of Newcastle
14:10 – 14:30	Post-combustion capture of CO ₂ by diamines bearing one primary and one tertiary amino group: reaction kinetics and mechanism	Bing Yu	CSIRO
14:30 – 14:50	A study of the coal volatile gas related with its chemical structure	Ki Tae Jeon	Pusan National Uni
14:50 – 15:10	Low-temperature microwave graphitization of activated carbon as a renewable carbon material	Salman Khoshk Rish	Uni Sci Tech Liaoning
15:10 – 15:30	Afternoon Tea		
15:30 – 17:10	Session 4 (Chair: Prof. Qiubai Sun, Prof. Jianglong Yu)		
15:30 – 15:50	Channel control of ZSM-5 zeolite and its application in lignite pyrolysis volatiles reforming for light aromatics production	Jing-Pei Cao	China Uni Mining Tech
15:50 – 16:10	Impact of large inertinite particles on thermo-swelling and coke strength of coking coals	Wei Xie	Uni of Newcastle
16:10 – 16:30	Theoretical and experimental study on molecular structure and coking properties of the vitrinite in coking coal	Jieping Wang	North China Uni Sci Tech
16:30 – 16:50	An in-situ study the effect of coal blend on the plastic layer formation in coking coals using a lab-scale test furnace	Yunze Hui	Uni of Newcastle
16:50 – 17:10	Advanced absorbent design and kinetic insights of CO ₂ absorption into aqueous Ammonia (NH ₃) solvent with a new cyclic amine additive - 4-aminomethyltetrahydropyran (4-AMTHP)	Li-Chun Li	CSIRO
17:10	End of Technical Sessions		

Poster Session 17:40 – 18:00, Monday, August 13, 2018
(Chair: Prof. Qiubai Sun, Prof. Jianglong Yu)

No	Poster Title
1	Catalytic Oxidation of NO from Coal Fired Flue Gas over Mn-Co-TiO ₂ , Ashiqur Rahman, Behdad Moghtaderi and Jianglong Yu, University of Newcastle, Australia
2	Simulation of sewage sludge catalytic pyrolysis: Comparison of amino acids with different chemical structures, Fu Wei, Jing-Pei Cao, Xiao-Yan Zhao, Xian-Yong Wei, China University of Mining & Technology
3	SnO ₂ decorated graphene nanoplatelet composites: Synthesized by one-step solid-state method and enhanced ethanol gas-sensing property, Run Zhang, Jianbo Jia, Jianliang Cao, Zhanying Zhang, Yan Wang, Henan Polytechnic University, China
4	The effect of Torrefaction Process on the structure and combustion of Biomass Fuel, Jong-Won Jeong, Gyeong-Min Kim, Yanuar Yudhi Isworo, Chung Hwan Jeon, Pusan National University, Korea
5	Numerical Simulations of Low NO _x Combustion Emissions in a Shaft Furnace, Lili Li, Jianglong Yu, University of Science and Technology Liaoning, China
6	Synthesis of magnetic chitosan nanocomposite and its adsorption property, Qingliang Ma, Weiren Bao, Liping Chang, Min Wu, Hongzhu Ma, Taiyuan University of Technology
7	Nitrogen transformation during in situ upgrading of sewage sludge pyrolysis vapors over metal-loaded HZSM-5, Bo Gu, Jing-Pei Cao, Xiao-Yan Zhao, Xian-Yong Wei, China University of Mining & Technology
8	Microwave-assisted catalytic pyrolysis of lignite and biomass for single-ring aromatic compounds production in a two-stage reactor, Yang An, Arash Tahmasebi, Jianglong Yu, University of Science and Technology Liaoning, China
9	Effects of thermal treatment on the chemical structure of Chinese bituminous coals, Lu Tian, Jianglong Yu, Soonho Lee, Arash Tahmasebi, University of Science and technology Liaoning, China and University of Newcastle, Australia
10	A new way to produce Semi-coke using Microwave pyrolysis, Faridul Islam, Behdad Moghtaderi and Jianglong Yu, University of Newcastle, Australia
11	Lotus Leaf-based Porous Carbons for High Performance Supercapacitor, Huihui Zhao, Chuanxiang Zhnag, Henan Polytechnic University, China
12	Enhanced production of hydrogen-rich bio-gas and fine chemicals during pressurized entrained-flow pyrolysis of Palm Kernel Shell, Tawanda Matamba, Arash Tahmasebi, Jianglong Yu, University of Science and Technology Liaoning, China
13	A study on co-combustion characteristics of coal and pre-treated biomass blends by TG-FTIR analysis, Jong-ho Kim, Chung Hwan Jeon, Pusan National University, Korea
14	Experimental study on the formation of single-ring aromatic compounds via catalytic pyrolysis of water hyacinth, Chunxia Zhang, Junfeng Xie, Xiaohui Zhao, Qiubai Sun, Arash Tahmasebi, Jianglong Yu, University of Science and Technology Liaoning, China
15	Catalytic upgrading of gaseous tar from coal microwave-assisted pyrolysis over Co and Ni-modified lignite char, Nan Wang, Jianglong Yu, Arash Tahmasebi, Chunxia Zhang, University of Science and Technology Liaoning, China
16	In situ reforming of cellulose pyrolysis volatiles over HF and Ni/HF modified HZSM-5 for light aromatics formation, Sheng-Nan Liu, Jing-Pei Cao, Xiao-Yan Zhao, Jing-Xian Wang, Xue-Yu Ren, China University of Mining & Technology
17	Selective cleavage of C-O bond in benzyl phenyl ether over Pd/C at room temperature, Tao Xie, Jing-Pei Cao, Xiao-Yan Zhao, Xian-Yong Wei, China University of Mining & Technology
18	Synthesis and characterization of glass-fiber/silica aerogel composites using coal fly ash, Jing Xu, Arash Tahmasebi, Jianglong Yu, University of Science and Technology Liaoning, China
19	Comparative Study on Changes of Oxidation Products Accompanying Self-heating of Chinese and Indonesian low-rank coals, Huan Zhao, Xin Wang, Jianglong Yu, , Zhongze Jiao, Arash Tahmasebi, Shenyang Aerospace University
20	Mechanistic study on formation of phenolics-rich oil via catalytic co-pyrolysis of lignite and stalk biomass, Feng Huang, Jianglong Yu, University of Science and Technology Liaoning, China
21	Modeling Characteristics of Coal Decomposition in Microwave Pyrolysis Systems, Joshua Oliveira, Jianglong Yu, University of Newcastle