

2-F3: Life Cycle Assessment of Energy Systems

Room: M4

Chairs: Leif Gustavsson, U. Desideri

- | | | |
|-------------|--------|--|
| 13:10-13:30 | 2-F3-1 | <p>LIFE CYCLE PRIMARY ENERGY USE AND CARBON FOOTPRINT OF WOOD-FRAME CONVENTIONAL AND PASSIVE HOUSES WITH BIOMASS-BASED ENERGY SUPPLY</p> <p><i>Leif Gustavsson, Ambrose Dodoo</i></p> |
| 13:30-13:50 | 2-F3-2 | <p>LIFE CYCLE GHG ANALYSIS OF RICE STRAW BIO-DME PRODUCTION AND APPLICATION IN THAILAND</p> <p><i>Thapat Silalertruksa, Shabbir Gheewala, Masayuki Sagisaka, Katsunobu Yamaguchi</i></p> |
| 13:50-14:10 | 2-F3-3 | <p>CARBON AND ENVIRONMENTAL FOOTPRINTS OF GLOBAL BIOFUEL PRODUCTION</p> <p><i>Geoffrey Hammond, Shashank Seth</i></p> |
| 14:10-14:30 | 2-F3-4 | <p>CARBON FOOTPRINT OF A REFLECTIVE FOIL AND COMPARISON WITH OTHER SOLUTIONS FOR THERMAL INSULATION IN BUILDING ENVELOPE</p> <p><i>Proietti Stefania, Umberto Desideri, Paolo Sdringola, Francesco Zepparelli</i></p> |
| 14:30-14:50 | 2-F3-5 | <p>LIFE CYCLE INPUT-OUTPUT ANALYSIS EXTENDED TO USE, DISPOSAL, AND RECYCLING STAGES: CASE STUDY OF A REFRIGERATOR</p> <p><i>Yuki Mizumoto, Yohji Uchiyama, Keiichi Okajima</i></p> |
| 14:50-15:10 | 2-F3-6 | <p>LIFE CYCLE ENERGY ASSESSMENT FOR A COMBINED COOLING, HEATING AND POWER SYSTEM RUNNING WITH METHANOL AND SOLAR ENERGY</p> <p><i>Sheng Li, Jianjiao Zhen, Jun Sui, Hongguang Jin</i></p> |

2-F4: Panel I: Challenges for the Future Energy

Room: M4

Chair: SD Tu

3-A1: Electric Vehicles & Battery

Room: M1

Chairs: Yuh-Yih Wu, SD Tu

- | | | |
|-------------|--------|---|
| 08:30-08:50 | 3-A1-1 | <p>POWER MANAGEMENT ANALYSIS OF RANGE EXTENDED ELECTRIC VEHICLE USING DYNAMIC PROGRAMMING</p> <p><i>Hsien-Chi Tsai, Bo-Chiuan Chen, Yuh-Yih Wu</i></p> |
| 08:50-09:10 | 3-A1-2 | <p>ENERGY MANAGEMENT STRATEGY RESEARCH ON A HYBRID POWER SYSTEM BY HARDWARE-IN-LOOP EXPERIMENTS</p> <p><i>Hongwen He, Shang'An Gao, Rui Xiong, Kai Zhao</i></p> |
| 09:10-09:30 | 3-A1-3 | <p>ULTRA-THIN MINICHANNEL LCP FOR EVS BATTERY THERMAL MANAGEMENT</p> <p><i>L.W. Jin, P.S. Lee, Y. Fan, S.K. Chou</i></p> |
| 09:30-09:50 | 3-A1-4 | <p>ANALYSIS ON EFFECTS OF EJECTOR AND INTERNAL HEAT EXCHANGER ON TRANSCRITICAL CO₂ HEAT PUMP SYSTEM</p> <p><i>Tao Li, Xiaohong Han, Qi Chen, Yang Tong, Guangming Chen, Liming Tang, Daliang Hong</i></p> |
| 14:10-14:30 | 3-A1-5 | <p>MULTI-BUILDING MICROGRIDS FOR A DISTRIBUTED ENERGY FUTURE IN PORTUGAL</p> <p><i>Goncalo Mendes, Paulo Ferrao, Christos Ioakimidis, Chris Marnay, Michael Stadler</i></p> |

3-A2: Energy Storage Materials and Technologies

Room: M1

Chairs: Xiaoxi Yang, Weilong Wang

- | | | |
|-------------|--------|--|
| 10:30-10:50 | 3-A2-1 | <p>NUMERICAL MODELING FOR SOLID-LIQUID PHASE CHANGE PHENOMENA IN POROUS MEDIA</p> <p><i>Zhenyu Liu, Yuanpeng Yao, Huiying Wu</i></p> |
| 10:50-11:10 | 3-A2-2 | <p>EXPERIMENTAL INVESTIGATION OF A GAS FIRED HOT WATER AND SPACE HEATING COMBINE SYSTEM WITH HOT WATER STORAGE TANK</p> <p><i>Bu Qiu, Xiaosong Zhang, Liliang Dou</i></p> |

11:10-11:30	3-A2-3	<p>NUMERICAL SIMULATION OF HEAT DISSIPATION AND FLOW UNIFORMITY ANALYSIS IN RECTANGULAR MICRO-CHANNEL HEAT SINK</p> <p><i>Guiying Zhang, Hongbo Xu, Changqing Tian, Shuangquan Shao, Fei Qin</i></p>
11:30-11:50	3-A2-4	<p>A NEW METHOD TO DETERMINE THERMAL PHYSICAL PROPERTIES OF THE MIXING PCM WITH CONCRETES</p> <p><i>Rui Cheng, Yinping Zhang, Xin Wang</i></p>
11:50-12:10	3-A2-5	<p>ANALYSIS OF THE PERFORMANCE OF CHEMICAL HEAT STORAGE SYSTEMS BASED ON THE ENTRANSY THEORY</p> <p><i>Fang Yuan, Qun Chen</i></p>

3-A3: Engine With Alternative Fuels
Room: M1

Chairs: Changwei Ji, Fu-Jen Wang

13:10-13:30	3-A3-1	<p>LOAD CHARACTERISTICS OF A SPARK-IGNITED ETHANOL ENGINE WITH DME ENRICHMENT</p> <p><i>Chen Liang, Changwei Ji, Binbin Gao</i></p>
13:30-13:50	3-A3-2	<p>EXPERIMENTAL INVESTIGATION OF EFFECT OF COMPRESSION RATIO ON PERFORMANCE AND EMISSIONS OF CI ENGINE OPERATED WITH WASTE FRIED OIL METHYL ESTERS BLEND</p> <p><i>Jagannath Hirkude, Atul Padalkar</i></p>
13:50-14:10	3-A3-3	<p>EFFECT OF SYNGAS ADDITION ON THE PERFORMANCE OF A SPARK-IGNITED GASOLINE ENGINE AT LEAN CONDITIONS</p> <p><i>Xiaoxu Dai, Changwei Ji</i></p>
14:10-14:30	3-A3-4	<p>ESTIMATING THE FLAME SPEED OF GASOLINE/HYDROGEN MIXTURES IN A SPARK-IGNITED ENGINE</p> <p><i>Shuofeng Wang, Changwei Ji</i></p>
14:30-14:50	3-A3-5	<p>IMPACT OF EMULSION FUEL WITH NANO-ORGANIC ADDITIVES ON THE PERFORMANCE OF DIESEL ENGINE</p> <p><i>Wenming Yang, Hui An, Siaw Kiang Chou, S Vedharaji, R Vallinagam, M Balaji, Kian Jon Chua</i></p>
14:50-15:10	3-A3-6	<p>EFFECT OF A HOMOGENEOUS COMBUSTION CHARACTERISTICS AND FUEL EFFICIENCY OF BIODIESEL IN A DIESEL ENGINE</p> <p><i>Mingming Zhu, Yu Ma, Dongke Zhang</i></p>

3-A4: Energy Storage Technologies for Using Phase Change Materials (PCM)
Room: M1

Chairs: Weiming Yang, Weilong Wang

15:30-15:50	3-A4-1	<p>NUMERICAL SIMULATION OF THE DIRECT CONTACT MOBILIZED THERMAL ENERGY STORAGE</p> <p><i>Shaopeng Guo, Hailong Li, Jun Zhao, Xun Li, Jinyue Yan</i></p>
15:50-16:10	3-A4-2	<p>A COMPARATIVE STUDY ON DIFFERENT METHODS FOR THE GENERATION OF TETRABUTYLAMMONIUM BROMIDE CLATHRATE HYDRATE SLURRY IN A COLD STORAGE AIR-CONDITIONING SYSTEM</p> <p><i>Xinjie Shi, Peng Zhang</i></p>
16:10-16:30	3-A4-3	<p>CHARACTERIZATION AND EXPERIMENTAL INVESTIGATION OF PHASE CHANGE MATERIALS FOR CHILLED FOOD APPLICATIONS</p> <p><i>Wei Lu, Savvas Tassou</i></p>
16:30-16:50	3-A4-4	<p>MULTISTAGE LATENT HEAT COLD THERMAL ENERGY STORAGE DESIGN ANALYSIS</p> <p><i>Justin Nw Chiu, Viktoria Martin</i></p>
16:50-17:10	3-A4-5	<p>THERMAL STORAGE AND CHP COUPLING IN A SMART USER CASE STUDY</p> <p><i>Andrea Chesì, Giovanni Ferrara, Lorenzo Ferrari, Sandro Magnani, Fabio Tarani</i></p>

3-B1: Renewable Energy Forecasting
Room: M2

Chairs: Michael K.H. Leung, YT Ge

08:30-08:50	3-B1-1	<p>AERODYNAMIC DESIGN OF A SMALL WIND TURBINE FOR A LOW WIND SITE: A SIMPLE SYSTEMATIC APPROACH</p> <p><i>Umberto Desideri, Carlo Poggesi, Livia Arcioni, Daniela Leonardi</i></p>
08:50-09:10	3-B1-2	<p>APPLICATION OF PROBABILISTIC WIND FORECASTING IN OPTIMIZING WIND GENERATOR'S BIDDING STRATEGY IN ELECTRICITY SPOT MARKETS</p> <p><i>Gong Li, Jing Shi</i></p>

09:10-09:30	3-B1-3	A NOVEL SHORT-TERM WIND POWER FORECASTING METHODOLOGY USING HILBERT-HUANG TRANSFORM AND AUTOREGRESSIVE MODEL <i>Jie Shi, Wei-Jen Lee, Yongqian Liu, Yongping Yang, Peng Wang, L Franklin Quilumba</i>
09:30-09:50	3-B1-4	THE EXPLOITATION OF HIGH WIND POTENTIAL: ESTIMATION OF THE OPTIMAL HEIGHT OF OPERATION ABOVE GROUND. <i>Francesco Castellani, Lorenzo Biondi, Marcello Marconi, Emanuele Piccioni</i>
09:50-10:10	3-B1-5	A COMPARATIVE METHOD BETWEEN LINEAR REGRESSION AND LEAST TRIMMED SQUARES ROBUST REGRESSION ON ESTIMATION THE SOLAR RADIATION IN PERLIS <i>Safwati Ibrahim, Ismail Daut, Mohd Irwan Yusoff, Muhamad Irwanto Misrun, Gomesh Nair</i>

3-B2: Combustion and Emission Characteristics of Biomass and Biofuel
Room: M2

Chairs: K. Yoshikawa, Rebei Bel-Fdhila

10:30-10:50	3-B2-1	PULVERISED WOOD COMBUSTION IN A VERTICAL FURNACE: EXPERIMENTAL AND COMPUTATIONAL ANALYSES <i>Xue-Song Bai, Yingjun Ruan</i>
10:50-11:10	3-B2-2	COMBUSTION CHARACTERISTICS OF CHLORINE-FREE SOLID FUEL PRODUCTION FROM MUNICIPAL SOLID WASTE BY HYDROTHERMAL PROCESS <i>Bayu Indrawan Safril, Pandji Prawisudha, Kunio Yoshikawa</i>
10:50-11:10	3-B2-2	COMBUSTION CHARACTERISTICS OF CHLORINE-FREE SOLID FUEL PRODUCTION FROM MUNICIPAL SOLID WASTE BY HYDROTHERMAL PROCESS <i>Bayu Indrawan Safril, Pandji Prawisudha, Kunio Yoshikawa</i>
11:10-11:30	3-B2-3	EFFECTS OF BLENDING RATIO OF HYDROTHERMALLY TREATED MUNICIPAL SOLID WASTES ON CO-COMBUSTION CHARACTERISTICS WITH COAL IN A BUBBLING FLUIDIZED BED <i>Liang Lu, Yuqi Jin, Xiaojun Ma, Hongmei Liu, Yong Chi, Kunio Yoshikawa</i>

11:30-11:50	3-B2-4	PERFORMANCE, COMBUSTION AND EMISSION CHARACTERISTICS OF BIODIESEL DERIVED FROM WASTE COOKING OILS <i>Hui An, Wenming Yang, Siawkiang Chou, Kianjon Chua</i>
11:50-12:10	3-B2-5	PYROLYSIS CHARACTERISTICS OF THE PONGAMIA WASTE: A THERMOGRAVIMETRIC STUDY <i>Lalta Prasad, P.M.V. Subbarao, J.P. Subrahmanyam</i>

3-B3: Solar PV Technologies and Integrated Systems
Room: M2

Chairs: HX Yang, XY Ji

13:10-13:30	3-B3-1	PERFORMANCE OF A WATER-TYPE HYBRID PHOTOVOLTAIC/THERMAL SOLAR COLLECTOR SYSTEM IN HONG KONG <i>Xin Xu, Hongxing Yang, Shijun You</i>
13:30-13:50	3-B3-2	DYNAMIC MODELING OF A PV PUMPING SYSTEM WITH SPECIAL CONSIDERATION ON WATER DEMAND <i>Pietro Elia Campana, Hailong Li, Jinyue Yan</i>
13:50-14:10	3-B3-3	SYNTHESIS AND PHOTOCATALYTIC ACTIVITY OF BORON AND FLUORINE CODOPED TiO₂ NANOSHEETS WITH REACTIVE FACETS <i>Bin Wang, Michael K.H. Leung, Xiao-Ying Lu, Si-Ying Chen</i>
14:30-14:50	3-B3-4	THE DESIGN OF SiC SCHOTTKY DIODE TERMINATION STRUCTURE <i>Na Ren, Jingjing Cui, Junming Zhang, Tao Wang, Fangzheng Peng, Kuang Sheng</i>
14:30-14:50	3-B3-5	MARKING OFF THE APPROPRIATE PASTURES OF SOLAR IRRIGATION FOR PASTURES CONSERVATION IN XILINGUOLE REGION <i>Yingdong Yu, Jiahong Liu, Hao Wang, Xuerui Gao</i>
14:50-15:10	3-B3-6	GENERIC MODEL OF A COMMUNITY-BASED MICROGRID INTEGRATING WIND TURBINES AND PHOTOVOLTAICS <i>Xiandong Ma, Jianrong Qin</i>

3-B4: Feedstock and Element Trace of Biofuel Production
Room: M2

Chairs: E. Nehrenheim, Wayne Yua

15:30-15:50	3-B4-1	OPTIMIZATION OF FLOCCULATION WITH SELECTED MICROALGAE SPECES <i>Ying Shen, Wenqiao Yuan</i>
15:50-16:10	3-B4-2	CHARACTERISATION OF LOCAL CHLORELLA SP. TOWARD BIOFUEL PRODUCTION <i>Emma Suali, Rosalam Sarbatly, Sitti Raehanah Muhd Shaleh</i>
16:10-16:30	3-B4-3	EMISSIONS OF N2O FROM AGRICULTURAL SOILS AFTER AMENDMENT WITH BIOGAS RESIDUES <i>Monica Odlare, Jamal Abubaker, Pell Mikael, Nehrenheim Emma</i>
16:30-16:50	3-B4-4	THERMODYNAMIC MODELING OF ALGAL CELL-SOLID SUBSTRATE INTERACTIONS <i>Wenqiao Yuan, Yan Cui, Zhijian Pei, Ying Shen</i>
16:50-17:10	3-B4-5	BIOAVAILABILITY OF COBALT AND NICKEL DURING ANAEROBIC DIGESTION OF SULFUR-RICH STILLAGE FOR BIOGAS FORMATION <i>Jenny Gustavsson, Sepehr Yekta, Carina Sundberg, Anna Karlsson, Jorgen Ejlertsson, Bo H. Svensson</i>

3-C1: Energy and China: Past Trends and Prospects for the Future
Room: M3

Chairs: Maria Jesus Herrerias, Roselyne Joyeux

08:30-08:50	3-C1-1	THE SUN AND THE SNOW ACROSS CHINESE REGIONS: NEW EVIDENCE ON SEASONAL ANOMALIES OF ELECTRICITY INTENSITY <i>Maria Jesus Herrerias, Guy Liu, Eric Girardin</i>
08:50-09:10	3-C1-2	ENERGY INTENSITY AND INVESTMENT OWNERSHIP ACROSS CHINESE PROVINCES <i>Ana Cuadros, Maria Jesus Herrerias, Vicente Orts</i>
09:10-09:30	3-C1-3	ENERGY INTENSITY AND ITS DECLINE IN CHINA, 1982-2010: TRADE, POLICY, ECONOMIC, SECTORAL, AND URBANISATION FACTORS <i>Hongyi Lai, Jing Ding</i>
09:30-09:50	3-C1-4	ENERGY SECURITY IN CHINA :AN ANALYSE OF VARIOUS ENERGY SOURCES <i>Shujie Yao, Dan Luo</i>

09:50-10:10	3-C1-5	SHORT- AND LONG-RUN CAUSALITY BETWEEN ENERGY CONSUMPTION AND ECONOMIC GROWTH: EVIDENCE ACROSS REGIONS IN CHINA. <i>Roselyne Joyeux, Maria Jesus Herrerias, Eric Girardin</i>
-------------	--------	--

3-C2: Energy Demand and Consumption Pattern
Room: M3

Chairs: F. Wahllin, Jurgen-Friedrich Hake

10:30-10:50	3-C2-1	SUSTAINABLE DEVELOPMENT AND JUSTICE. MEASURING ENERGY AND INCOME DISTRIBUTION IN GERMANY <i>H. Schloer, W. Fischer, J.-Fr. Hake</i>
10:50-11:10	3-C2-2	IMPLICATIONS OF HOUSEHOLDS BUILDING ENERGY CHARACTERISTICS AND CAR PREFERENCES FOR PRIMARY ENERGY USE AND CARBON DIOXIDE EMISSIONS <i>Ambrose Dadoo, Krushna Mahapatra, Leif Gustavsson</i>
11:10-11:30	3-C2-3	INPUT-OUTPUT MODEL BASED ANALYSIS OF URBAN ENERGY CONSUMPTION OF BEIJING CITY: DYNAMIC AND COMPARISON <i>Lixiao Zhang, QiuHong Hu, Yueyi Feng</i>
11:30-11:50	3-C2-4	GREENING THE POWER GENERATING SYSTEM: LESSONS LEARNED FROM THE JAVA-BALI SYSTEM IN INDONESIA <i>Maxensius Sambodo, Joni Jupesta, Hozumi Morohosi, Tatsuo Oyama</i>
11:50-12:10	3-C2-5	THE ENERGY DEMAND AND CONSUMPTION PATTERN OF TEA-MAKING COMMUNITY TOURISM IN THE TAIPEI WATER PROTECTED AREA <i>Wenli Li, Yue Hwa Yu, Nai Wei Kao</i>

3-C3: Scenarios and Forecasting of Sustainable System
Room: M3

Chairs: Yoshiki Yamagata, Peng Zhou

13:10-13:30	3-C3-1	SIMULATING FUTURE SUSTAINABLE CITY: AN INTEGRATED LAND USE-TRANSPORTATION-ENERGY MODEL <i>Yoshiki Yamagata, Hajime Seya</i>
13:30-13:50	3-C3-2	EXTENDING WIND ENERGY ASSESSMENT TO THE OPERATIONAL STAGE: NUMERICAL AND EXPERIMENTAL POWER PERFORMANCE ANALYSIS <i>Francesco Castellani, Alberto Garinei, Ludovico Terzi, Emanuele Piccioni</i>

13:50-14:10	3-C3-3	MODELING ECONOMIC PERFORMANCE OF INTERPROVINCIAL CO2 EMISSION REDUCTION QUOTA TRADING IN CHINA <i>Peng Zhou, Ling Zhang, Wenjing Xia, Dequn Zhou</i>
14:10-14:30	3-C3-4	BIOENERGY IN MITIGATION PORTFOLIOS: THE ROLE OF UNCERTAINTY <i>Sabine Fuss, Wolf Heinrich Reuter, Petr Havlik, Stefan Frank, Aline Mosnier</i>
14:30-14:50	3-C3-5	DOWNSCALING OF GLOBAL SOCIAL ECONOMIC SCENARIOS: METHODOLOGY AND APPLICATION <i>Yuejiao Ha, Fei Teng</i>
14:50-15:10	3-C3-6	ASSESSMENT OF ENERGY GENERATION TECHNOLOGIES USING DSS AUGMENTED WITH THE DIMENSION OF VALUES <i>Jurate Sliogeriene, Dalia Streimikiene</i>

3-C4: innovation in Energy Policies – Working Around Limitations to Alternative Energy Resources
Room: M3

Chairs: Elspeth Thomson, SK Chou

15:30-15:50	3-C4-1	INNOVATIVE POLICIES & PROGRAMMES FOR REDUCTION OF END-USE ENERGY DEMAND <i>Catrina Yeo, Dongke Zhang</i>
15:50-16:10	3-C4-2	LIBERALIZED ELECTRICITY MARKETS? A CASE STUDY OF SINGAPORE <i>Melissa Low, Ronald Wennersten</i>
16:10-16:30	3-C4-3	SUPPORTING CLEANER TRANSPORT IN SINGAPORE <i>Wen Hao Chua, Ronald Wennersten</i>
16:30-16:50	3-C4-4	WILL FUKUSHIMA IMPEDE THE NUCLEAR RENAISSANCE? <i>Victor Nian, Neil D</i>
16:50-17:10	3-C4-5	INDONESIA ENERGY STRATEGIES POST FUKUSHIMA: “THE EFFECT ON NUCLEAR ENERGY PROGRAM” <i>Sidik Permana, Sidik Permana, Zaki Suud, Ismail .</i>

3-D1: Heat and Mass Transfer in Energy Applications
Room: M7

Chairs: QW Wang, Min Zeng

08:30-08:50	3-D1-1	COMPUTATIONAL MODELING OF HEAT TRANSFER RATES USING HEAT PIPE INTEGRATED CHANNEL SECTION <i>Hassam Chaudhry, Ben Hughes, Saud Ghani</i>
08:50-09:10	3-D1-2	NUMERICAL RESEARCH OF FLOW AND HEAT TRANSFER CHARACTERISTIC IN COMBINED POROUS MATERIAL AND FIN-AND-TUBE SURFACES <i>Zhi-Qiang Yu, Yong-Liang Feng, Wen-Jing Zhou, Yu Jin, Ming-Jie Li, Zeng-Yao Li, Wen-Quan Tao</i>
09:10-09:30	3-D1-3	RADIATIVE HEAT TRANSFER ANALYSIS IN PURE SCATTERING LAYERS TO BE USED IN VACUUM INSULATION PANELS <i>Hoonghyo Jang, Haeyong Jung, Jaehyug Lee, Tae-Ho Song</i>
09:30-09:50	3-D1-4	PREPARATION AND THERMAL CHARACTERIZATION OF COMPOSITE PHASE CHANGE MATERIAL USING METAL FOAM <i>Xin Xiao, Peng Zhang</i>
09:50-10:10	3-D1-5	CFD ANALYSIS OF A HEAT TRANSFER DEVICE INTEGRATED WIND TOWER SYSTEM FOR HOT AND HUMID CLIMATE <i>John Calautit, Ben Hughes, Saud Ghani</i>

3-D2: Gasification and Syngas From Biomass
Room: M7

Chairs: XH Yu, J. Bao

10:30-10:50	3-D2-1	SIMULATION OF A LAB-SCALE METHANATION REACTOR <i>Seyedeh Guilnaz Mirmoshtaghi, Mats Westermark, Farzad Mohseni Tabrizi</i>
10:50-11:10	3-D2-2	BIO-METHANE VIA LOW TEMPERATURE PYROLYSIS FROM BIOMASS <i>Martin Gorling, M. Larsson, Per Alvfors</i>
11:10-11:30	3-D2-3	A THERMODYNAMIC ANALYSIS OF SOLID WASTE GASIFICATION IN THE PLASMA GASIFICATION AND MELTING PROCESS <i>Qinglin Zhang, Liran Dor, Weihong Yang, Wlodzimierz Blasiak</i>
14:10-14:30	3-D2-4	AUTO-THERMAL REFORMING OF BIOMASS RAW FUEL GAS TO SYNGAS IN A NOVEL REFORMER: PROMOTION OF HOT-ELECTRON <i>Wang Tiejun, Yang Yong, Ding Mingyue, Ma Longlong</i>

11:50-12:10 3-D2-5 COMBINED PYROLYSIS AND CATALYTIC REFORMING OF PLASTIC WASTE OVER HY-ZEOLITE CATALYST FOR FUEL OIL AND GAS PRODUCTION
Hu Wu, Mochamad Syamsiro, Shuo Cheng, Kunio Yoshikawa

3-D3: thermoacoustic Generator and Appliations

Room: M7

Chairs: Umberto Desideri, WL Luan

15:30-15:50 3-D3-1 INVESTIGATION ON A 1 KW TRAVELING-WAVE THERMOACOUSTIC ELECTRICAL GENERATOR
Zhanghua Wu, Ercang Luo, Wei Dai, Man Man

15:50-16:10 3-D3-2 INVESTIGATION ON A THREE-CYLINDER THERMOACOUSTIC DOUBLE-ACTING ELECTRIC GENERATOR
Guoyao Yu, Ercang Luo, Zhanghua Wu, Wei Dai, Haibing Li, Bin Liu, Yibing Zhang

16:10-16:30 3-D3-3 A FLAMELESS COMBUSTION-BASED THERMOELECTRIC GENERATOR FOR BATTERY CHARGING
Heng Xiao, Kuanrong Qiu, Xiaolong Gou

16:30-16:50 3-D3-4 SYSTEM EFFICIENCY IMPROVEMENT OF THERMOELECTRIC GENERATION SYSTEM BY INTRODUCING A THERMAL SWITCH
Qiang Ou, Xiaolong Gou, Heng Xiao, Suwen Yang

3-D4: Modeling and Experiential Test of Biogas Processes

Room: M7

Chairs: Erik Dahlquist, Bo Svensson

15:30-15:50 3-D4-1 MODELING OF THE BIOGAS PRODUCTION PROCESS- A REVIEW
Eva Thorin, Eva Nordlander, Johan Lindmark, Erik Dahlquist, Jinyue Yan, Rebei Bel Fdhila, Rebei Bel Fdhila

15:50-16:10 3-D4-2 DIFFERENT MIXING MODES FOR BIOGAS PLANTS
Alexandra Kowalczyk, Eva Harnisch, Sebastian Schwede, Mandy Gerber, Roland Span

16:10-16:30 3-D4-3 PROBLEMS AND POSSIBILITIES WITH THE IMPLEMENTATION OF SIMULATION AND MODELING AT A BIOGAS PLANT
Johan Lindmark, Eva Thorin, Rebei Bel Fdhila, Erik Dahlquist

16:30-16:50 3-D4-4 EXPERIMENTAL TESTS ON BIOGAS PRODUCTION BY ANAEROBIC BIOCELLS DIGESTERS
Alessandro Petrozzi, Valentina Coccia, Sara Rinaldi

16:50-17:10 3-D4-5 RHEOLOGICAL CHARACTERISTICS OF REACTOR LIQUIDS OF 12 FULL-SCALE BIOGAS REACTORS
Annika Bjorn, Anna Karlsson, Jorgen Ejlertsson, Bo H. Svensson

3-E1: Organic Rankine Cycle (ORC)

Room: M8

Chairs: Li Zhao, Gequn Shu

08:30-08:50 3-E1-1 AN INVESTIGATION INTO ORGANIC RANKINE CYCLE (ORC) WITH HEXAMETHYLDISILOXANE (MM) AS WORKING FLUID
Vinayak Hemadri, P.M.V Subbarao

08:50-09:10 3-E1-2 EXPERIMENTAL STUDY OF ROLLING-PISTON EXPANDER WITH ORGANIC RANKINE CYCLE USING R245FA
Nan Zheng, Li Zhao, Xiaodong Wang, Yuting Tan

09:10-09:30 3-E1-3 PROCESS INTEGRATION AND OPTIMIZATION OF A CCHP-ORC SYSTEM
Song Liu, Fang Fang, Tianyu Shan, Jianhua Zhang, Guolian Hou

09:30-09:50 3-E1-4 ANALYSIS OF ORGANIC RANKINE CYCLE (ORC) AT THE FULL-LOAD CONDITIONS FOR DIESEL ENGINE EXHAUST HEAT RECOVERY
Yanqin Zhang, Yan Chen, Hongguang Zhang, Bin Liu, Kai Yang, Jian Zhang, Yuting Wu, Wei Wang

09:50-10:10 3-E1-5 SIMULATION AND OPTIMIZATION OF AN WASTE HEAT RECOVERY (WHR) SYSTEM BASED ON ORGANIC RANKINE CYCLE (ORC) FOR A DIESEL ENGINE
Guopeng Yu, Gequn Shu, Hua Tian, Zhibo Zhao, Jian Zhao

3-E2: Efficiency Improvement and Emission Reduction in Building Sector

Room: M8

Chairs: Zhang Jiangfeng, Hailong Li

10:30-10:50 3-E2-1 A NEW METHOD FOR MODELING DISTRICT HEATING SYSTEMS
Mattias Vesterlund, Jan Dahl, Bo Lindblom, Johan Sandberg

10:50-11:10	3-E2-2	SUPPORT FOR THE INTEGRATION OF GREEN ROOFS WITHIN CHINESE BUILDING ENERGY PERFORMANCE POLICY STRATEGIES <i>Georgios Kokogiannakis, Jo Darkwa</i>
11:10-11:30	3-E2-3	THE CHANGING PATH OF EMISSION INTENSITY IN TAIWAN HOUSING SECTOR <i>Kun-Jung Hsu, Xuerui Gao</i>
11:30-11:50	3-E2-4	THE DESIGN OF A VERY LOW ENERGY CONSUMPTION BUILDING COMPATIBLE TO THE CLIMATE OF THE HOT AND ARID REGIONS OF IRAN <i>Mohsen Mazidi Sharfabad, Yuwen Zhang</i>
11:50-12:10	3-E2-5	LOW TEMPERATURE DISTRICT HEATING NETWORK PLANNING WITH FOCUS ON DISTRIBUTION ENERGY LOSSES

3-E3: Carbon Capture and Storage (CCS) (2)
Room: M8

Chairs: Xi Jiang, Niklas Hedin

13:10-13:30	3-E3-1	A NOVEL METHOD OF REACTIVATION OF SPENT CALCIUM-BASED SORBENTS FOR CO₂ CAPTURE <i>Zhang Mingming, Ji Chao, Li Ping, Sun Ze, Wang Jin, Yu Jianguo</i>
13:30-13:50	3-E3-2	ADSORPTION KINETICS FOR CO₂ ON HIGHLY SELECTIVE ZEOLITE NAKA <i>Ocean Cheung, Zoltán Bascik, Qingling Liu, Niklas Hedin</i>
13:50-14:10	3-E3-3	PEAK AND OFF-PEAK OPERATIONS OF THE AIR SEPARATION UNIT FOR OXY-FUEL COMBUSTION POWER PLANTS <i>Yukun Hu, Xun Li, Hailong Li, Jinyue Yan</i>
14:10-14:30	3-E3-4	ACIDIC GAS ABSORPTION BY METHANOL: SYSTEM MODELING AND SIMULATION <i>Simone Gamba, Laura A. Pellegrini, Giorgio Soave, Paolo Rossi, Stefania Moiola</i>
14:30-14:50	3-E3-5	EFFECT OF STEELMAKING SLAG PROPERTIES TO THE EXTRACTION OF CALCIUM BY USING AMMONIUM SALTS <i>Arshe Said, Hannu-Petteri, Carl-Johan Fogelholm, Ron Zevenhoven</i>

14:50-15:10	3-E3-6	MODELLING AND MONITORING OF GEOLOGICAL CARBON STORAGE: A PERSPECTIVE ON CROSS-VALIDATION <i>I Jiang, Wasim A. Akber Hassan, Jon Gluyas</i>
-------------	--------	--

3-E4: Cogeneration, Trigeneration and Novel Power Generation Systems
Room: M8

Chairs: YD Wang, Hake Juergen-Friedrich

15:30-15:50	3-E4-1	NUMERICAL MODEL AND EXPERIMENTAL VALIDATION OF THERMOELECTRIC GENERATOR WITH GREAT TEMPERATURE DIFFERENCE <i>Lanlan Cai, Peng Li, Pengcheng Zhai, Qingjie Zhang</i>
15:50-16:10	3-E4-2	THERMODYNAMIC ANALYSIS OF CHEMICAL-LOOPING HYDROGEN GENERATION <i>Xiaosong Zhang, Hongguang Jin</i>
16:10-16:30	3-E4-3	PARAMETRIC SENSITIVITY ANALYSIS OF A NEAR ZERO CO₂ EMISSION HYBRID SOLRGT SYSTEM <i>Yuanyuan Li, Na Zhang, Ruixian Cai</i>
16:30-16:50	3-E4-4	ENERGY-CONSUMPTION DISTRIBUTION CHARACTERISTICS OF LARGE COAL-FIRED GENERATING UNITS <i>Yongping Yang, Zhiping Yang, Ningling Wang, Gang Xu</i>
16:50-17:10	3-E4-5	COMBINED HEAT AND POWER GENERATION USING SMART HEAT GRID <i>Christian Johansson, Fredrik Wernstedt, Paul Davidsson</i>

3-F1: Industrial Energy Systems and Heat Recovery
Room: M4

Chairs: Rebei Bel-Fdhila, ABB, Sweden, Mario L. Ferrari

08:30-08:50	3-F1-1	AN EXPERIMENTAL FACILITY FOR TESTS ON DISTRIBUTED GENERATION SYSTEMS <i>Mario L. Ferrari, Matteo Pascenti, Alberto Traverso, Aristide F. Massardo</i>
08:50-09:10	3-F1-2	TECHNO-ECONOMIC ANALYSIS AND OPTIMIZATION OF THE HEAT RECOVERY OF UTILITY BOILERS' FLUE GAS <i>Gang Xu, Shengwei Huang, Yongping Yang, Ying Wu, Kai Zhang</i>

09:10-09:30	3-F1-3	OPTIMAL DESIGN AND OPERATION SIMULATION ANALYSIS OF ABSORPTION CHILL WATER STORAGE AIR CONDITION SYSTEM DRIVEN BY WASTE HEAT <i>Chih-Chung Chang, Ching Hsien Lai, Sih-Li Chen, Wen - Shing Lee</i>
09:30-09:50	3-F1-4	WASTE HEAT RESOURCES AND UTILIZATION OF STEEL INDUSTRY IN CHINA <i>Kai Li, Hong Wang, Yong-Jun Qiu, Hui Zhang, Xun Zhu, Rong Chen, Qiang Liao</i>
09:50-10:10	3-F1-5	INCLUDING ENERGY IN SUPPLY CHAIN PLANNING AT A PULP COMPANY <i>Martin Waldemarsson, Helene Lidestam, Martin Rudberg Yangang Xing, Erin Kennedy</i>

3-F2: Panel II: Clean Technologies Transfer and Diffusion

Room: M4

Chair: SK Chou

3-F3: Analysis of Energy System and Processes

Room: M4

Chairs: Carl-Erik Grip, Bo Lindblom

13:10-13:30	3-F3-1	INVESTIGATION OF EMULSION HEAVY OIL USING EDGE-TONE RESONANT HOMOGENIZER <i>I Yi-Yin, Hong Pei-Zhe, Hou Shuhn-Shyurng, Sheu Wen-Jenn,</i>
13:30-13:50	3-F3-2	EXPERIMENTAL INVESTIGATION ON NOVEL CYLINDRICAL OBLIQUE-FINNED HEAT SINK <i>Yan Fan, Poh Seng Lee, Beng Wah Chua, Li-Wen Jin</i>
13:50-14:10	3-F3-3	DYNAMIC VARIATIONS IN STEEL AND IRONMAKING REST GASES. POTENTIAL EFFECT ON REFINING INTO LIQUID FUEL. <i>Niklas Grip, Carl-Erik Grip, Leif Nilsson</i>
14:10-14:30	3-F3-4	NUMERICAL INVESTIGATIONS ON THE PERFORMANCE OF A SINGLE-STAGE AUTO-CASCADE REFRIGERATOR OPERATING WITH TWO VAPOR-LIQUID SEPARATORS AND ENVIRONMENTALLY BENIGN BINARY REFRIGERANTS <i>Q Wang, D.H. Li, J.P. Wang, T.F. Sun, X.H. Han, G. Chen</i>

14:30-14:50	3-F3-5	ETHANOL ADSORPTION CHARACTERISTICS ON METAL ORGANIC FRAMEWORKS FOR COOLING APPLICATIONS <i>Ahmed Rezk, Raya AL-Dadah, Saad Mahmoud, Baoshing Shi and Ahmed Elsayed</i>
14:50-15:10	3-F3-6	INVESTIGATION ON PERFORMANCE OF FIN-TUBE INTERNALLY HEATING REGENERATOR IN LIQUID DESICCANT AIR CONDITIONING SYSTEM <i>Fei Qin, Shuangquan Shao, Guiying Zhang, Changqing Tian</i>

3-F4: Sustainable Built Environment

Room: M4

Chairs: Yiqun Pan, J. Zhao

15:30-15:50	3-F4-1	ANALYSIS OF DAYLIGHTING AND ENERGY PERFORMANCE IN ATRIUM SPACES USING DAYLIGHT-LINKED LIGHTING CONTROLS <i>Stanley K H Chow, Danny H W Li, Eric W M Lee, Joseph C Lam</i>
15:50-16:10	3-F4-2	IDEAL THERMAL CONDUCTIVITY OF A PASSIVE BUILDING WALL: DETERMINATION METHOD AND UNDERSTANDING <i>Yu Zhang, Yinping Zhang, Xin Wang</i>
16:10-16:30	3-F4-3	MODEL-BASED GENERATION OF FAULT PERFORMANCE METRICS FOR AUTOMATED FDD OF AN AHU <i>Ignacio Torrens, Alberto Venturini, Marcus Keane, Gregory Provan</i>
16:30-16:50	3-F4-4	INDOOR HUMIDITY OPTIMAL CONTROL <i>Nan Wang, Jiangfeng Zhang, Xiaohua Xia</i>
16:50-17:10	3-F4-5	ENERGY CONSUMPTION AND GHG MITIGATION TECHNOLOGIES IN THE BUILDING SECTOR OF INDIA <i>Sohail Ahmad, Kanji Oshima</i>