

# cue

Low-carbon Cities & Urban Energy

**SHANGHAI June 5-7, 2018**

Applied Energy Symposium and Forum



[www.applied-energy.org/cue2018](http://www.applied-energy.org/cue2018)

# *Call For Papers*

*Deadline for draft paper: Jun. 30, 2018*

*Notification of acceptance: Aug. 1, 2018*

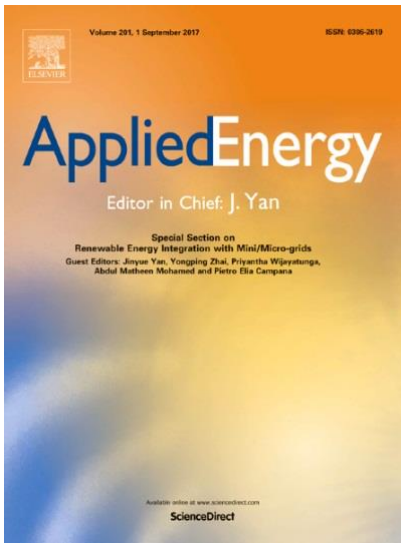
*Deadline for final paper: Sept. 1, 2018*

## **Topics**

- High penetration of renewable energy
- Mini/microgrid
- Technology Innovation
- Implementation
- Commercialization
- Financing & policy

Special Issue of selected papers from REM2018 will be published in prestigious journals including Applied Energy (IF:7.182)

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# Applied Energy

Applied Energy provides a forum for information on innovation, research, development and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, analysis and optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems. The breadth of coverage ranges from innovative technologies and systems of both fossil and renewable energy to the economic industrial and domestic use of energy with no or minor impact on the environment. Applied Energy is also concerned with the attendant problems of modeling and forecasting, conservation strategies, and the environmental, social and economic impacts of energy policies and usage, including climate change mitigation and other environmental pollution reduction.

## SUPPORTS OPEN ACCESS

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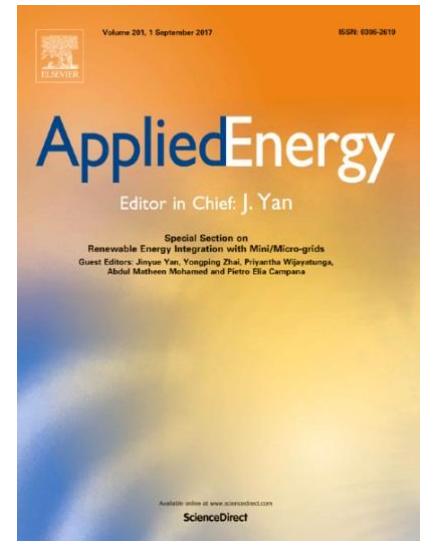
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# Welcome to CUE2018



## Welcome to CUE2018-Applied Energy Symposium and Forum 2018: *Low carbon cities and urban energy systems.*

Cities are responsible for approximately three-quarters of the world's energy consumption and they therefore play a major role in energy issues such as economic security and climate change. The CUE2018, with theme of "*Cleaner Energy for Cleaner City*", is to provide a platform focused on urban energy systems, covering the topics of energy supply, distribution, and end use; smart eco-cities, urban transportation with efficient energy and low emissions; microgrid and smart home; BIPV and renewable applications; urban waste to energy; nexus of energy-water; policy options etc.

The event consists of two-day symposium for sharing the most recent progress of research in urban energy systems and one-day forum to engage all stakeholders for discussing how future urban energy systems can be implemented.

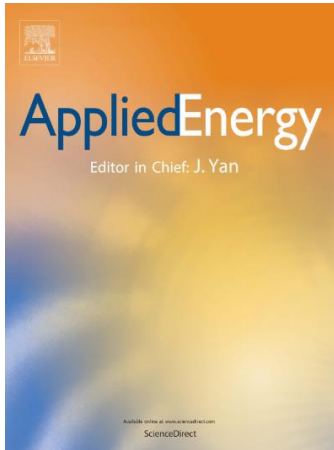
The CUE2018 is organized by the international journal, Applied Energy, Applied Energy Innovation Institute (AEii), Tongji University, China Association for Science and Technology (CAST)/HOME program, and co-organized by Future Energy Profile/Mälardalen University Sweden, Shanghai Key Lab of Urban Regeneration & Spatial Optimization Technology, and MOE Joint Laboratory for International Cooperation on Eco-Urban Design.

We are looking forward to meeting you in Shanghai, China.

Prof. J. Wu  
Vice President of Tongji University

Prof. J. Yan  
Editor-in-chief of Applied Energy

# Acknowledgements



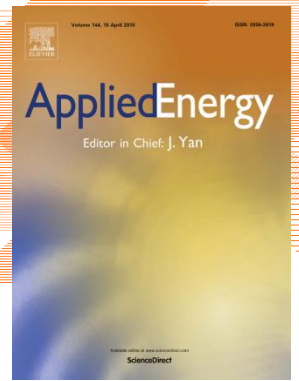
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Shanghai Key Lab of Urban Regeneration  
& Spatial Optimization Technology



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MOE Joint Laboratory for International Cooperation  
on Eco-Urban Design



# Applied Energy

## New Section: Progress in Applied Energy

**Cite Score: 7.78** 

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Editor-in-Chief  
**Professor J. Yan**

The internationally-renowned journal *Applied Energy* is launching a new section - *Progress in Applied Energy*, which will bridge the gap between development and implementation, focusing:

- On fast-paced, cutting-edge research from forward looking aspects of energy innovations
- On renewable energy and clean technology
- From energy efficiency to climate change mitigation

As the world strives to meet the shared targets of combating climate change and providing sustainable energy access for all, there is a critical need for timely and rapid publication of new energy solutions.

*Progress in Applied Energy* is the best platform to address these issues, at a time when there is societal pressure to come up with breakthroughs.

### What are we looking for?

- Papers must present ground-breaking insights to the field, which will have a positive impact on society, and excite and inspire readers
- Review articles will provide a comprehensive view of the latest trends, bridging scientific frontiers

### Why submit to our new section?

Submit and be part of the change in shaping the future of energy research as this new section:

- Provides a home for top scientists and engineers to publish high quality papers
- Fast-tracks papers to reach researchers as quickly as possible
- Offers benefits to authors with articles receiving extra promotion



# Committees

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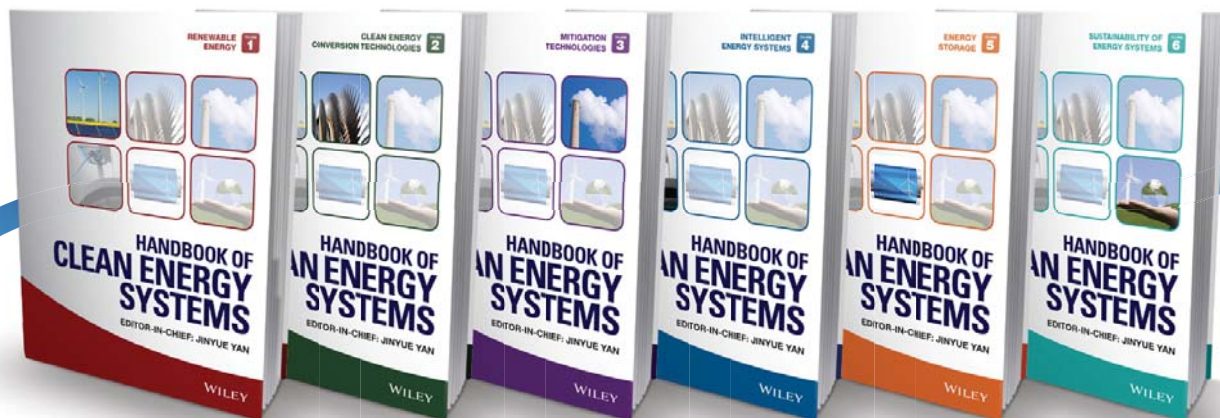
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Are you working  
on the challenging  
issues associated  
with the development  
of our future  
energy systems?



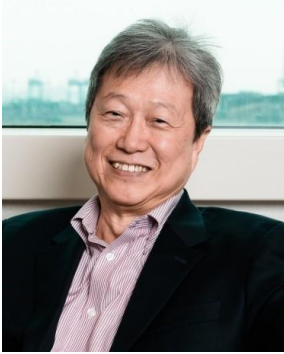
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# Keynote Speakers



**Prof. S.K. Chou**

**National University of  
Singapore, Singapore**

***Keynote: Thermal Performance of Building Envelopes for Improved Energy Efficiency***

Buildings are energy intensive, and the starting point to achieve energy efficiency is to address the thermal performance of their envelopes. In tropical climates, air-conditioned buildings in cities can account for more than 30% of the total electrical energy consumption. A typical air-conditioned building operates with a moderate temperature difference varying from about 6 to 12°C between outdoor and indoor, and air conditioning can account for more than 50% of the energy consumption of the building. In this presentation, we report on the recent effort to develop an enhanced method to credit the energy performance of buildings by accounting more precisely for the heat gain streams through the building envelope. Our study is motivated by new technology and improved fenestration insulation such as the thermally broken window frame. We developed new correlations to account for the thermal performance of improved window components and systems. The methodology enables investigations of the impact on building cooling energy arising heat flows through window components and frames. The enhanced method is incorporated into the existing Envelope Thermal Transfer Value (ETTV) and the Residential Envelope Transmittance Value (RETV) formulations, which are necessary criteria in the Singapore Green Mark mandatory certification scheme. With the enhanced ETTV and RETV criteria, the refreshed envelope energy standard offers opportunities and better incentives for the adoption of “green” and energy efficient technology towards achieving sustainable building energy performance.

***Bio***

Prof. S.K. Chou is a professor at the Department of Mechanical Engineering, National University of Singapore. Between 1992 and 2007, he held consecutive appointments as Director, Industry and Technology Relations Office, Head of the Department of Mechanical Engineering, and Vice-Dean (External and Industry Relations) of the Faculty of Engineering. Professor Chou was the founding executive director of the Energy Studies Institute, established in 2007 at NUS, where he held a joint appointment till June 2017. S.K. Chou is Honorary Fellow and Past President of the Institution of Engineers (IES), Singapore, and a Fellow of the American Society of Heating, Refrigerating and Air-Conditioning Engineers. He is a Fellow of the Singapore Academy of Engineering, the ASEAN Academy of Engineering and Technology, the Energy Institute, UK, and the ASEAN Federation of Engineering Organisations. He is Chairman of the Technical Evaluation Panel on the Grant for Energy Efficiency Technology (GREET) of the National Environment Agency, Singapore. He is the national focal point on the Board of Advisers, ASEAN Committee on Science and Technology (COST). He is presently an Editor of the Elsevier journal, Applied Energy, and serves on the editorial boards of a number of other energy related journals. His research interests are in energy performance of buildings, clean and renewable energy, micro combustion, micro power generation and propulsion systems, and energy efficiency.

# Keynote Speakers



**Prof. Hongguang Jin**

**Academician of Chinese  
Academy of Sciences,  
China**

***Keynote: Complementary Energy Systems for Low Carbon City***

***Bio***

Prof. Hongguang Jin is Academician of Chinese Academy of Sciences, Professor and Director of Laboratory of Distributed Energy System and Renewable Energy, Institute of Engineering Thermophysics, Chinese Academy of Sciences. He serves as Director General of Chinese Society of Engineering Thermophysics. He received his Ph.D. degree from Tokyo Institute of Technology, Japan in 1994. Prof. Jin's research focuses on thermophysics, chemical engineering, energy systems analysis, polygeneration system, demonstration of CCHP, and solar thermal technologies. He is one of the two principal inventors of Chemical-looping Combustion, a revolutionary approach for fossil fuels conversion with near-zero energy penalty of CO<sub>2</sub> capture. He has published more than 300 papers and serves as subject editor of Applied Energy. He is the recipient of numerous awards, such as the second-rank National Natural Science Award of China in 2009, and the Ho Leung Ho Li Science and Technology Progress Award in 2011.



**Ms. Jian Jiao**

**Beijing Engineering  
Research Center of  
Building Energy  
Efficiency and Urban  
Ecology, China**

***Keynote: Several key issues about the Green Building***

Based on the analysis of green buildings with more than 30 years development, discuss several key issues about the Green Building: 1, By reconsidering the substance, redefine the concept and scope of the Green Building. Summarize the main items and coping strategies. 2, In view of the problems in the new period, conclude the core plates of the Green Building. 3, Analyze the misunderstanding and problems of the value oriented practice of the Green Building. 4, Analyze the relationship between the development of green buildings and the overall development direction of architecture. It is hoped that by thinking about the above key issues, we can find new ideas for solving the problems of green building in present-days.

***Bio***

Ms. Jiao received her master's degree of Architect from Architectural Department of Tianjin University. She is a professorate senior engineer, a national first-class registered architect. She mainly focuses on the directions of sustainable city and buildings, including eco-city, green building, accessibility design etc. She has carried out and completed a number of design and research projects, published a number of articles and papers, won multiple design and research awards at national and provincial level.

# Young Scholar Forum

## *Clean Energy Research and Innovation without Borders*

*Clean energy is of importance to guarantee the energy security and sustainable development. Research should be coordinated covering different areas and countries without borders. This panel focuses on the topics of clean energy research and innovation consisting of young panelists with cross-disciplinary background from science and engineering to management and policy.*

**Chair:** Tao Jiang (Northeast Electric Power University)

**Participants:** Jianglong Li (Xi'an Jiaotong University); Jingxiang Lv (Northwestern Polytechnical University); Jun Yin (Zhejiang Gongshang University); Ji Li (Shanghai Jiao Tong University); Taosheng Jin (Nankai University); Wei Li (Tongji University)

# Young Scholar Forum

<i>Name</i>	<i>Title</i>	<i>Affiliation</i>
<b>Jianglong Li</b>	<b>Towards a green world: How do green technology innovations affect total-factor carbon productivity</b>	School of Economics and Finance, Xi'an Jiaotong University, Xi'an, China
<i>Jianglong Li got his Doctorate in Energy Economics at Xiamen University and Bachelor Degree in Hydro-power Engineering at Wuhan University, China. He was selected as a member of international clean energy talent program (iCET) in 2017. His current research focuses on energy and environmental economics with a special emphasis on energy transformation for promoting China's green economic growth, optimal pathway for achieving green energy (electricity) system, and quantitative evaluation for the portfolio of energy policies. In recent three years, he published about 20 academic papers in Chinese top journals and English journals indexed by SSCI and SCI. He is currently leading several projects, including China's National Natural Science Fund.</i>		
<b>Jingxiang Lv</b>	<b>Opportunities and challenges for energy saving and carbon emission reduction of manufacturing enterprises in the era of big data</b>	Department of Mechanical Engineering, Northwestern Polytechnical University, Xi'an, China
<i>Jingxiang Lv is a postdoctoral researcher in the department of Mechanical Engineering of the Northwestern Polytechnical University, China. He received the Bachelor degree in industrial engineering and the Ph.D. degree in Mechanical Engineering from Zhejiang University, Hangzhou, China, in 2008 and 2014, respectively.</i> <i>Jingxiang Lv's main research interests and activities are in the area of green manufacturing, including energy flow analysis, modeling, simulation, experimentation and optimization of manufacturing equipment and manufacturing systems. The research objects involve machine tools, ball mills, 3D printing machines and energy-intensive manufacturing systems. Mechanical and electrical theory, algorithms, internet of things, big data and artificial intelligence were involved in the research. He has published more than 20 papers (7 as first or corresponding author) and obtained 5 state invention patents. He is currently leading and participating several projects funded by the National Natural Science Foundation of China.</i>		
<b>Jun Yin</b>	<b>Resource Recovery from Organic Wastes Based on VFA Platform</b>	School of Environmental Science and Engineering, Zhejiang Gongshang University, Hangzhou, China
<i>Jun Yin's research interests include optimizing and understanding the recovery of value-added chemicals (such as volatile fatty acids) and/or bioenergy from food waste by anaerobic fermentation based on mixed culture biotechnology (MCB), and the biological nitrogen removal from domestic wastewater, simultaneously monitoring the composition of microbial populations to explore the microbiological mechanisms of these biological processes. Her research goal is to improve the resource recovery from the wastes. Dr. Yin is currently leading some projects funded by the Chinese Government and provincial government. In her research team, she has currently 4 Master students.</i>		

# Young Scholar Forum

<b>Name</b>	<b>Title</b>	<b>Affiliation</b>
<b>Ji Li</b>	<b>Offshore wind farms and offshore farming: developing the coupled clean system</b>	Institute of Oceanography, Shanghai Jiao Tong University, Shanghai, China
<i>Ji Li is an oceanographer, and an associate professor at the Institute of Oceanography, Shanghai Jiao Tong University. Dr. Li got his PhD from the Horn Point Laboratory, University of Maryland Center for Environment Sciences, and was a research assistant professor at University of Maryland, College Park. Dr. Li's research interests include marine ecosystem dynamics, algal ecophysiology, and the sustainable usage of marine nature resources. Dr. Li has studied ecosystem the major estuaries in the US and China, and also the primary production and carbon cycle in the southern ocean. Dr. Li is also developing algae cultivation system to produce algal biomass which is valuable feedstock with environmental benefit.</i>		
<b>Taosheng Jin</b>	<b>Innovation in transportation energy</b>	College of Environmental Science and Engineering, Nankai University, Tianjin, China
<i>Taosheng Jin's research focuses on vehicle emission control, air pollution control, etc. Till now as the first author or correspondence author, he has published over 30 papers on journals home and abroad. Major research projects hosted include: 1 ) Study on regional vehicle emission control and green traffic. National Key Research and Development Program of China 2017-2020, PI of Sub-project. 2 ) Driving condition-based study on the influence of fuel quality on the concentration and chemical components of PM2.5 from vehicle emission. National Natural Science Foundation of China 2015-2018, PI.</i>		
<b>Li Wei</b>	<b>Effective Interdisciplinary Cooperation and Talent cultivation in Energy Field</b>	Department of Electrical Engineering, Tongji University, Shanghai, China
<i>Li Wei is an associate professor working at the department of electrical engineering in Tongji University. Her current research interests include the application of supercapacitor for large scale energy storage and the development of high power density DC/DC converter for fuel cell vehicle. She was a winner of "Green Talent Prize 2014", awarded by German Federal Ministry of Education and Research. She has lead 2 projects funded by Natural Science Foundation of China, and several projects from companies. In her research team, she has 3 master students and 3 senior engineers.</i>		
<b>Tao Jiang</b>	<b>Integrated energy systems: innovation on energy saving and flexibility on energy system operation</b>	Department of Electrical Engineering, Northeast Electric Power University, Jilin, China
<i>Tao Jiang received the B.S. and M.S. degrees in electrical engineering from Northeast Electric Power University, Jilin, China, in 2006 and 2011, respectively, and the Ph.D. degree in electrical engineering from Tianjin University, Tianjin, China, in 2015. He is presently an Associate Professor with the Department of Electrical Engineering, Northeast Electric Power University. He was with the Department of Electrical and Computer Engineering, North Carolina State University, Raleigh, NC, USA, as a visiting scholar from 2014 to 2015. His research interests include power system stability analysis and control, renewable energy integration, demand response, and smart grid.</i>		

# Scholarly Publication

## *Scholarly publication: Sharing and communicating*

**Chair:** Professor Jinyue Yan (Royal Institute of Technology, Mälardalen University)

**Participants:** Dr. Yan Sun (Global STM Journals, ELSEVIER); Dr. Rose Zhu (Joule Journal); Dr. Jing-Chun Feng (Sun Yat-sen University)

### *Name*

**Professor Jinyue Yan**



### *Title*

**Publishing? not only ...**

*Dr. Yan is the professor of Energy Engineering, Royal Institute of Technology (KTH) and Mälardalen University, Sweden; Director of Future Energy Profile; Editor-in-Chief of Applied Energy (IF=7.182, Elsevier); Editor-in-Chief of Handbook of Clean Energy Systems (Wiley). He is an academician of European Academy of Sciences and Arts.*

*Prof. Yan received his PhD at KTH in 1991. During 2001 to 2005, Dr. Yan was chair professor and head of Energy Engineering at Luleå University of Technology, Sweden. Prof. Yan's research interests include simulation and optimization of advanced energy systems incl. advanced power generation; renewable energy (bioenergy and solar); carbon capture and storage; clean development mechanism (CDM); and fundamental engineering thermodynamics. Prof. Yan published about 400 papers (70 books, book chapters and proceedings) including the papers in Science, Nature Climate Change, etc. H-index: 46, i10-index 143.*

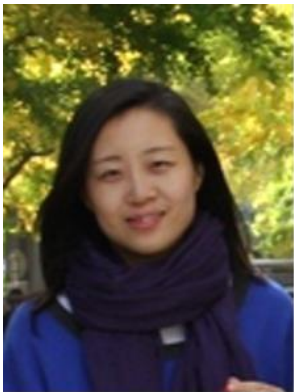


*Prof. Yan is the Conf. Chair of International Conference on Applied Energy, ICAE2009-2018 (Hong Kong, Singapore, Italy, China, South Africa, Taipei, Abu Dhabi, Beijing and Cardiff). He is an editorial board member of several international journals. He also serves as the advisory expert to the United Nation, European Union Commission, and Asian Development Bank, and other international organizations; Overseas Assessor of Chinese Academy of Sciences; and academic adviser to Hong Kong Polytechnic University, Hong Kong City University, Lawrence Berkeley National Laboratory etc.*

### *Affiliation*

Editor in Chief of Applied Energy



# Scholarly Publication

<b>Name</b>	<b>Title</b>	<b>Affiliation</b>
<b>Dr. Yan Sun</b> 	<b>Open data and sharing policy</b>	Global STM Journals, ELSEVIER
	<i>Yan Sun is a graduate from School of Environment of Tsinghua University, and has also studied in UK, Sweden, The Netherlands and Poland on remote sensing and environmental management. Having been working in STM publishing industry for more than 10 years, Yan has taken various positions in Elsevier and Wolters Kluwer including Publisher for environmental sciences journals, health and medical sciences journals, energy journals, Senior Manager of Publishing Content Department, as well as Project Manager for China Journal Collaboration Programme. Currently Yan is the Executive Publisher of well-known Energy and Fuel journals including Fuel, Progress in Energy and Combustion Science, Combustion and Flame, Journal of Energy Chemistry, etc, and also holds general responsibilities for China market development across Elsevier journals.</i>	
<b>Dr. Rose Zhu</b> 	<b>Energy Research &amp; High Impact Publishing in Joule</b>	Joule Journal
	<i>Dr. Rose Zhu (朱昌荣) is the Associate Scientific Editor for Joule based out of Shanghai office. She started her Ph.D. study at Nanyang Technological University (NTU, Singapore) under Prof. Hong Jin FAN in 2012 after received BSc degree in Sichuan University (China). She joined Prof. Shirley MENG's group as a visiting scholar in 2015 at University of California, San Diego. Dr. Zhu worked as Research Fellow successively in NTU under Prof. FAN and National University of Singapore under Prof. John WANG from 2016 to 2017. She has published more than 10 first/co-first-author papers in in the field of Catalysis, Li, Na, Zn ion Batteries, Supercapacitors, to Advanced Materials, Nano Letters, Chemical Society Review, Nature Communications, Material Horizon, Nano Energy etc.</i>	
<b>Dr. Jing-Chun Feng</b> 	<b>Toward effective and high-quality research and writing</b>	Sun Yat-sen University, China
	<i>Dr. Jing-Chun Feng achieved her Ph.D degree at the Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, under the guidance of Prof. Xiao-Sen Li. Her research interest is Natural gas hydrate exploitation technology, mechanism design of carbon trading, as well as strategy and policy management of Low-Carbon and energy. She has published more than 15 first/co-first author SCI Papers in energy and low-carbon field, to Applied Energy, Energy, Energy fuels, Fuel, International Journal of Heat and Mass Transfer, et al.</i>	

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Future Energy Profile/Mälardalen University Sweden

Shanghai Key Lab of Urban Regeneration & Spatial Optimization Technology

MOE Joint Laboratory for International Cooperation on Eco-Urban Design

## Date

June 5-7, 2018

## Time Difference

GMT + 8 hours

## Venue

Zonghe Building, Tongji University

No. 1239 Siping Road, Yangpu District, Shanghai, China

## How to get to Tongji University

### By metro

Follow the direction board of Shanghai Metro and take metro to Tongji University



The timetable of the metro is as follows for your reference:

Line 2	Pudong International Airport To Guanglan Road Station	Guanglan Road Station To East Xujing
The first metro	06:00	05:28
The last metro	22:00	22:50

Line 10	Hongqiao Airport Terminal 1 to Xinjiangwanchen Station	Hongqiao Airport Terminal 2 to Xinjiangwanchen Station
The first metro	05:59	05:56
The last metro	22:34	22:31

### By taxi

You can also take a taxi to Tongji Guest House. However, the taxi fare will be at your cost.

Taxi: Directly from Pudong International Airport to Tongji Guest House

Fare: about 200 RMB Duration: about 80 minutes

Taxi: Directly from Hongqiao International Airport to Tongji Guest House

Fare: about 100 RMB Duration: about 30 minutes

## Hotels



A: Main gate B: Mingjing Building (Venue of the workshop, 4th floor, Seminar Room)

1: Kingswell Hotel (<http://www.kingswelltongji.com/>)

2, 3: Metropolo Jinjiang Hotel (You can contact Ms. Zhou at [1416234286@qq.com](mailto:1416234286@qq.com) for reservation)

4: Tongji Guest House

5: Jitai Hotel (1149 Siping Road, 021-65977779)

## About Shanghai

Shanghai sits at the mouth of the Yangtze River, the longest river in China. It is the largest Chinese city and "a city of skyscrapers". With a history of more than 700 years, Shanghai was once the financial center of the Far East. Its colonial legacy and international character give it a character of its own – a museum of East-meets-West and a mix of modernity and tradition. Today, Shanghai is the largest economic and transportation center in China. As the world third largest city with a population of 25 million, Shanghai is still on track to become the world metropolitan through the development of four international centers of economy, finance, trade and shipping. In April 2016, the State Council has approved Shanghai's development plan to develop into a Science and Technology Innovation Center with Global Influence. The most popular tourist scenes in Shanghai include the Bund, People's Square, Orient Pearl Broadcasting and Television Tower, Jin Mao Tower, Global Finance Center, and Shanghai Xintiandi, etc.



Tongji University, with a history of 110 years, is one of the leading universities directly under the State Ministry of Education in China. Tongji is a top tier university in China with its extraordinary strength in application of scientific findings and new technologies, especially in the field of environment and sustainable development. In 2011, Tongji University initiated China Green University Network (CGUN). In 2012, the Global Universities Partnership on Environment and Sustainability (GUPES), initiated by UN Environment and Tongji University was launched in Shanghai and Tongji has been selected as the Chair of GUPES. Tongji was the first university in Asia-Pacific region honored with "Global Outstanding Sustainable Campus".

# Venues Information

**Opening and keynote speaking:** 129 Hall

**Registration area:** Lobby of Zonghe Building

**Banquet:** 1st floor, Shanghai Jinjiang Magnolia Hotel

**Lunch:** 2nd floor, Xueyuan Canteen

**Drinks reception:** Outside of the conference venue

**Panels and presentations:**

Item	Room
Panel sessions: 1-A3, 2-A3	To be decided.
Oral presentations: 1-B3, 1-B4, 2-B2, 2-B3, 2-B4	401, Zonghe Building
Oral presentations: 1-C3, 1-C4, 2-C2, 2-C3, 2-C4	403, Zonghe Building
Oral presentations: 1-D3, 1-D4, 2-D2, 2-D3, 2-D4	404, Zonghe Building
Oral presentations: 1-E3, 1-E4, 2-E2, 2-E3, 2-E4	408, Zonghe Building
Oral presentations: 1-F3, 1-F4, 2-F2, 2-F3, 2-F4	409, Zonghe Building
Poster presentation	Lobby of Zonghe Building



# Site Visits

## 3 June

13:00 Depart from Planning area

Visit 1: *Lujiazui CBD Central Green, Shanghai Museum*

Visit 2: *BMW New Energy Vehicle Brand Experience Center, the Bund*

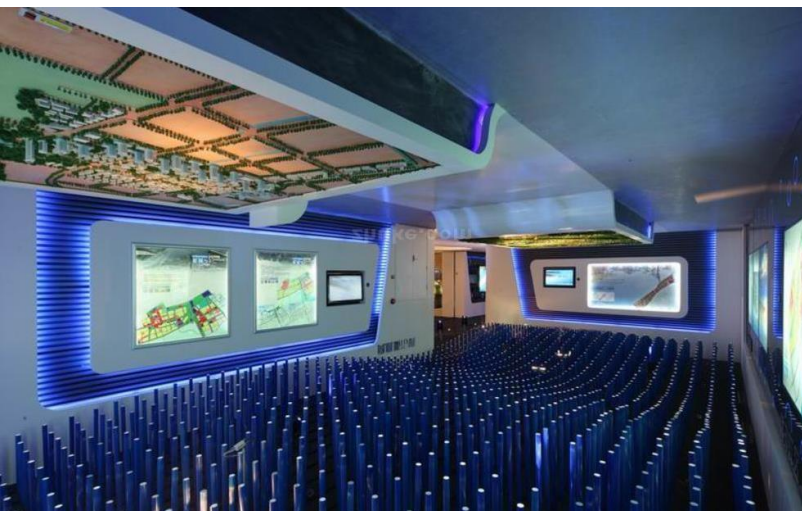
## 4 June

08:30 Depart from Planning area

Visit 1: *Chongming Planning Exhibition Center, National Agricultural Facility Center*

Visit 2: *Xisha National Wetland Park, Chongming Museum*

Maximum number: 20



# Program at a Glance

Registration: 14:00- 16:00 Jun 5; 8:00- 11:00 Jun 6; 8:00-11:00 Jun 7  
 Conference: Jun 6-7

Time	Jun 5					
14:00-16:00	Registration					
Time	Day 1: Jun 6					
09:00-09:10	Opening					
09:10-09:50	Keynote 1					
09:50-10:30	Keynote 2					
10:30-10:45	Tea/Coffee Break					
10:45-11:25	Keynote 3					
11:25-12:05	Keynote 4					
12:05-13:20	Lunch					
Afternoon	1-A3	1-B3	1-C3	1-D3	1-E3	1-F3
13:20-13:40	Panel: Young Scholar Forum	218	79	202	80	156
13:40-14:00		266	57	154	185	285
14:00-14:20		92	64	178	47	43
14:20-14:40		12	37	196	136	281
14:40-15:00		33	69	201	105	273
15:20-15:50	Tea/Coffee Break					
Afternoon	1-A4	1-B4	1-C4	1-D4	1-E4	1-F4
15:50-16:10		83	101	245	125	65
16:10-16:30		11	139	49	44	119
16:30-16:50		85	204	89	195	74
16:50-17:10		84	8	98	165	127
17:10-17:30		219	103	36	184	144
18:00-20:00	Conference Banquet					



# Program at a Glance

Time	Day 2: Jun 7					
Morning	Lobby of Zonghe Building					
08:30-08:50	Poster Session					
08:50-09:10						
09:10-09:30						
09:30-09:50						
09:50-10:20	Tea/Coffee Break					
Morning	2-A2	2-B2	2-C2	2-D2	2-E2	2-F2
10:20-10:40		66	157	45	175	124
10:40-11:00		42	194	50	166	20
11:00-11:20		104	290	110	118	41
11:20-11:40		254	126	5	288	128
11:40-12:00		106	238	46	207	268
12:00-13:20	Lunch					
Afternoon	2-A3	2-B3	2-C3	2-D3	2-E3	2-F3
13:20-13:40	Panel: Scholarly Publication	48	30	152	60	19
13:40-14:00		39	176	120	246	107
14:00-14:20		138	205	158	258	108
14:20-14:40		275	213	123	255	117
14:40-15:00		215	114	220	181	190
15:00-15:30	Tea/Coffee Break					
Afternoon	2-A4	2-B4	2-C4	2-D4	2-E4	2-F4
15:30-15:50		155	129	62	223	173
15:50-16:10		70	211	76	287	137
16:10-16:30		78	230	115	267	141
16:30-16:50		160	180	68	244	269
16:50-17:10		289	82	163	222	86

# Day 1

# Oral Presentations

Room: 1-B3			
Session Name: Policy on climate change mitigation			
Session Chair: Xue Tan			
Time	Paper ID	Author	Paper Title
13:20-13:40	218	Peijun Rong, Yaochen Qin, Lijun Zhang and Yingying Sun	The spatial differences and influencing factors of urban residential embedded carbon emissions
13:40-14:00	266	Nan Wang, Jiufa Chen	Theoretical Analysis of Organic Rankine Cycle Combined Power and Ejector Refrigerator Driven By Solar Energy
14:00-14:20	92	Kaile Zhou, Yiwen Li	Influencing Factors and Fluctuation Characteristics of China's Carbon Emission Trading Price
14:20-14:40	12	Yin Long ,Yoshikuni Yoshida ,Runsen Zhang, Lie Sun	Revealing Monthly Urban Carbon Leakage Generated from Residential Energy Consumption
14:40-15:00	33	Xinghua Fan, Xiangxiang Lv, Jiuli Yin, Jiaochen Liang	Quantifying market efficiency of China's regional carbon market by multifractal detrended analysis
Room: 1-C3			
Session Name: Green buildings			
Session Chair: Jianliang Chen, Fanyue Qian			
Time	Paper ID	Author	Paper Title
13:20-13:40	79	Yat Huang Yau and Jun Hao Tam	A COMPARISON STUDY FOR ACTIVE CHILLED BEAM AND VARIABLE AIR VOLUME SYSTEMS FOR AN OFFICE BUILDING
13:40-14:00	57	Xiaoling Yu, Qian Lv, Yifeng Ding, Shuo Yang, Liming Jiang and Liwen Jin	Simulation of heating loads and heat pump loads of a typical suburban residential building of Beijing, China in wintertime
14:00-14:20	64	Mao Ning, Hao Jingyu, Song Mengjie	Energy saving potential for a TAC system under varying night envelope thermal load
14:20-14:40	37	Mengxiao Xie, Chengyu Li, Ying Wang, Jian Wang	Comprehensive Utilization of Renewable Energy for New Civil Buildings in Shanghai
14:40-15:00	69	Yunxia Liu , Zaisheng Hong, Xunpeng Shi	Antecedents of Residents' Repurchase Intention of Green Housing: Case Study of Sino-Singapore Tianjin Eco-city
Room: 1-D3			
Session Name: Distributed energy systems			
Session Chair: Hongtao Wang			
Time	Paper ID	Author	Paper Title
13:20-13:40	202	Fei Yang, Nianzhi Huang, Qie Sun, Lin Cheng and Ronald Wennersten	Modeling and techno-economic analysis of the heat pump-integrated PEMFC-based micro-CHP system
13:40-14:00	154	Kaile Zhou, Shuyu Wei	Time-of-use price model for user-side micro-grid based on power supply chain management
14:00-14:20	178	Zhiyuan Liu, Hang Yu, Shangyuan Huang, Rui Li and Zishuo Huang	Influence Study of energy configuration based on the primary energy prices in the distributed energy system
14:20-14:40	196	Yu Fu, Haiyang Lin, Kailai Sun, Qie Sun, Ronald Wennersten	A multi-objective optimization of PV/ST-GSHP system based on office buildings
14:40-15:00	201	Tingting Guan, Haiyang Lin, Qie Sun, Ronald Wennersten	Optimal configuration and operation of multi-energy complementary distributed energy systems
Room: 1-E3			
Session Name: Pollutant emission mitigation technologies			
Session Chair: Changshu Tan, Shiming Deng			
Time	Paper ID	Author	Paper Title
13:20-13:40	80	Jing-Chun Feng, Xuelan Zeng, Zhi Yu, Weijia Xu, Wuying Zhang, Weichi Li and Xulei Chen	Toward Low-Carbon Industry: Carbon Emission and Decoupling Status of Industry Sector in a Coastal City of Zhuhai, China
13:40-14:00	185	Shuai Gao, Can Wang	International market mechanism under Paris Agreement: Insights from China
14:00-14:20	47	Li Yaoguang, Zhang Yan	Embodied CO2 transfer in global trade based on ecological network analysis
14:20-14:40	136	Qingren Cao, Wei Kang, M. Jawad Sajida, Ming Cao	Measuring China's carbon emissions based on final consumption
14:40-15:00	105	Xiangguo Cheng, Nan Li, Hailin Mu*, Yuanhao Guo, Yuqing Jiang	Study on Total Factor Energy Efficiency in three provinces of northeast China based on SBM model

# Day 1

# Oral Presentations

Room: 1-F3			
Session Name: Green transport & EV			
Session Chair: Xunmin Ou, Rui Xiong, Zheming Tong			
Time	Paper ID	Author	Paper Title
13:20-13:40	156	Danhua Ouyang, Qian Zhang and Xunmin Ou	Review of Market Surveys on Consumer Behavior of Purchasing and Using Electric Vehicle in China
13:40-14:00	285	Jun Yuan and Victor Nian	Ship Energy Consumption Prediction with Gaussian Process Metamodel
14:00-14:20	43	Wei Wu,Su-Bo Yang, Bo-Neng Chuang,Bin Shi	Optimization of a Multi-tube Annular Membrane Methanol Reformer for Fuel Cell-Powered Vehicles
14:20-14:40	281	Yuxiang He,Huicui Chen,Bingwang Qu, Tong Zhang,Pucheng Pei,Chen Liang	Analysis of Proton Exchange Membrane Fuel Cell reactant gas dynamic response and distribution quality
14:40-15:00	273	Kampanart Theinnoi, Warirat Temwutthikun and Thawatchai Wongchang	Application of Exhaust Gas Fuel Reforming in Diesel Engines Towards the Improvement Urban Air Qualities
13:20-15:00	<b>PANEL SESSION: Clean Energy Research and Innovation without Borders: Young Scholar Forum</b>		
15:00-15:30	<b>TEA/COFFEE BREAK</b>		

Room: 1-B4			
Session Name: Policy on climate change mitigations			
Session Chair: Xue Tan, Ke Wang			
Time	Paper ID	Author	Paper Title
15:30-15:50	83	Ayyoob Sharifi,Yihan Wu,Dararat Khamchiangta,Takahiro Yoshida,Yoshiki Yamagata	Urban carbon mapping: Towards a standardized framework
15:50-16:10	11	Zaili Zhen, Lixin Tian, Qian Ye	A simple estimate for the social cost of carbon
16:10-16:30	85	Yihan Wua, Ayyoob Sharifi, Perry Yang, Habura Borjigin, Daisuke Murakami, Yoshiki Yamagata	Mapping building carbon emissions within local climate zones in Shanghai
16:30-16:50	84	Wuxia Bi, Baisha Weng, Juan Chen, Denghua Yan	Evolution Characteristics of Groundwater Level and its Relation to Low-Carbon Development in Southern Horqin Sandy Land, China
16:50-17:10	219	Tao Cao, Saige Wang, Bin Chen	The energy-water nexus in interregional economic trade from both consumption and production perspective

Room: 1-C4			
Session Name: Green buildings			
Session Chair: Jianliang Chen, Fanyue Qian			
Time	Paper ID	Author	Paper Title
15:30-15:50	101	Yang He, Hang Yu, Pengda Chen, Mei Zhao	Thermal performance evaluation of a new type of green roof system
15:50-16:10	139	Zhang Yongming, Yan Zhe, Fu Weidong, Ding Bao.	A novel elevator energy conservation method based on DC micro-grid
16:10-16:30	204	Tiantian Zhang, Hongxing Yang	Optimal thickness determination of insulating air layers in building envelopes
16:30-16:50	8	Shunian Qiu, Weijie Zhang, Jiajie Li, Jialiang Chen, Zhenhai Li, Zhengwei Li	A chiller operation strategy based on multiple-objective optimization
16:50-17:10	103	Chaoen Li, Hang Yu and Yuan Song	Synthesis of microencapsulated stearic acid with amorphous TiO <sub>2</sub> as shape-stabilized PCMs for thermal energy storage

Room: 1-D4			
Session Name: Distributed energy system			
Session Chair: Jingxiang Lv, Li Wei			
Time	Paper ID	Author	Paper Title
15:30-15:50	245	Habiba Khalid, Farrukh Amin and Chang Chen	Demand-Side Management in China's Power Sector Reform: Status, Challenges, and Countermeasures
15:50-16:10	49	Fadhel Ayachi, Lizhong Yang, Jia Yin Sze, Alessandro Romagnoli	Cryogenic polygeneration for green data centre
16:10-16:30	89	Jialiang Chen, Xin Wang, Zhengwei Li, Shunian Qiu, Jiang Wu	Deploying residential rooftop PV units for office building use: a case study in Shanghai
16:30-16:50	98	Changhui Yang and Zhixiang Ge	Dynamic feed-in tariff pricing model of distributed photovoltaic generation in China
16:50-17:10	36	Wei Wang, Xiaodong Xu, Hsi-Hsien Wei, Bin Ren and Jiayu Chen	Modeling occupancy distribution in large building spaces for HVAC energy efficiency

# Day 1

# Oral Presentations

<b>Room: 1-E4</b> <b>Session Name: Renewable energy</b> <b>Session Chair: Yilai Ding, Zhang Bai, Bai Tao</b>			
Time	Paper ID	Author	Paper Title
15:30-15:50	125	Boyan Meng, Thomas Vienken, Olaf Kolditz and Haibing Shao	Modeling the local temperature response to intensive operation of ground source heat pump systems: A case study in Germany
15:50-16:10	44	Fan Ying Jie, Li Yaowu, Zonyu Sun, Wu Zhiqiang and Yang Bolun	Kinetic analysis on gaseous products during co-pyrolysis of low-rank coal with lignocellulosic biomass model compound: Effect of lignin
16:10-16:30	195	Bin Cai, Yusheng Xue, Xinxin Yang, Shumin Wang, Zhenlong Chen, Yalin Mao, Wei Chai and Rui Hu	Quantitative Analysis of Clean Transition Strategy of Traditional Coal-dominated Power Generation Company
16:30-16:50	165	Jiabang Yu, Ying Yang, Xiaohu Yang, Qiongxiang Kong and Jinyue Yan	Effect of porous media on the heat transfer enhancement for a thermal energy storage unit
16:50-17:10	184	Lumbumba Taty-Etienne Nyamayoka, Lijun Zhang, Xiaohua Xia	Potential feasibility study of embedded piezoelectric generator system on a roadway
<b>Room: 1-F4</b> <b>Session Name: Green transport &amp; EV</b> <b>Session Chair: Xunmin Ou, Rui Xiong, Zheming Tong</b>			
Time	Paper ID	Author	Paper Title
15:30-15:50	65	Lingfei Qi, Hongye Pan, Yan Feng, Miankuan Zhu, Tingsheng Zhang and Zutao Zhang	A mechanical and electrical dual-pathway braking energy recovery system based on coil springs for energy saving application in electric vehicle.
15:50-16:10	119	Jun-qiu Li, Danni Sun	Lithium-ion Batteries Modeling and Optimization Strategies for Sinusoidal Alternating Current Heating at Low Temperature
16:10-16:30	74	Jianlin Wang, Dan Xua, Guangliang Ma, Le Zhang, Jiahui Zhou	A Simple Multimode Hybrid Energy Storage System and fractional order control strategy
16:30-16:50	127	Yu Fang, Rui Xiong, Jun Wang	Estimation of Lithium-Ion Battery State of Charge for Electric Vehicles Based on Dual Extended Kalman Filter
16:50-17:10	144	Runsen Zhang, Yin Long, Wenchao Wu and Gen Li	How do transport policies contribute to a low carbon city? An integrated assessment using an urban computable general equilibrium model
18:00-20:00	<b>CONFERENCE BANQUET</b> <b>1st floor, Shanghai Jinjiang Magnolia Hotel</b>		

08:30-09:50			
<b>Location: Lobby of Zonghe Building POSTER SESSION</b>			
09:50-10:20			
<b>TEA/COFFEE BREAK</b>			
<b>Room: 2-B2</b>			
<b>Session Name: Waste to energy</b>			
<b>Session Chair: Hongtao Wang, Yu Nan</b>			
Time	Paper ID	Author	Paper Title
10:20-10:40	66	Kreangkrai Maneeintr, Thun Leewisuttikul, Supachai Kerdsuk, Tawatchai Charinpanitkul	Hydrothermal and enzymatic treatments of pineapple waste for energy production
10:40-11:00	177	Alaa Wazeri, Mohamed Elsamadony, and Ahmed Tawfik	Carbon emissions reduction by catalyzing H <sub>2</sub> gas harvested from water hyacinth fermentation process using metallic salts
11:00-11:20	104	Zhouchao Weng, Jie Lin, Mi Yan, Hongcai Su, Sicheng Zhang, Guobin Wang, Ekkachai Kanchanatip	Investigation of Sludge Gasification under Flue Gas
11:20-11:40	254	Wenchao Ma, Terrence Wenga , Guanyi Chen	Kinetic modelling and experimental validation on the effect of KCl and SO <sub>2</sub> concentration on corrosion of pure Fe under simulated municipal solid waste combustion
11:40-12:00	106	Dwi Hantoko, Ekkachai Kanchanatip, Mi Yan , Jie Lin, Zhouchao Weng	Co-gasification of sewage sludge and lignite coal in supercritical water for H <sub>2</sub> production: a thermodynamic modelling approach
<b>Room: 2-C2</b>			
<b>Session Name: Green buildings</b>			
<b>Session Chair: Jianliang Chen, Fanyue Qian</b>			
Time	Paper ID	Author	Paper Title
10:20-10:40	157	Qian Lv, Xiaoling Yu, Yifeng Ding, Shuo Yang, Liming Jiang, Xiaofei Jia and Liwen Jin	A novel numerical method of transient temperature simulation for a HVAC room
10:40-11:00	194	Song Mengjie, Mao Ning	Defrosting start control strategy for air source heat pump
11:00-11:20	290	Yu Wang, Haiyang Lin, Luyao Liu, Ronald Wennersten and Qie Sun	High-rise building peak load shaving using rooftop attached PV
11:20-11:40	126	Teguh P. Adinugroho, Mohamed B. Gadi	Investigation on thermal performance of diverse innovative prismatic building models and establishment of the form indicator
11:40-12:00	238	Dongmei Sun	Research and Application of Energy Consumption Benchmarking Method for Public Buildings Based on Actual Energy Consumption
<b>Room: 2-D2</b>			
<b>Session Name: Technologies on CO<sub>2</sub> capture, storage and utilizations</b>			
<b>Session Chair: Tao Jiang, Kun Li</b>			
Time	Paper ID	Author	Paper Title
10:20-10:40	45	Zhan Liu, Longhui Liang and Zhenya Duan	A non-linear reciprocating compressor model representing the interaction between thermodynamic process and unsteady flow
10:40-11:00	50	Xianglong Liu, zhenghua Rao Liping Zeng Xiaohua Li Xiao Chen Wenbin Li	The measurement and calculation of flue gas flow for gas turbines of offshore oil production facilities
11:00-11:20	110	Xin Cui, Xiaohu Yang, Qiongxiang Kong, Liwen Jin	Experimental study on a cross-flow regenerative indirect evaporative cooling system
11:20-11:40	5	Yi Huang, Qun Yi, Wei Wang, Guo-Sheng Wu, Jing-Xian Kang, Ke-Chang Xie, Wen-Ying Li and Jie Feng	A nonlinear programming approach to strategic planning of coal chemical industry with CO <sub>2</sub> emissions restriction in China
11:40-12:00	46	Wen Xu	Heat integration of new IGCC power plants with CO <sub>2</sub> capture
<b>Room: 2-E2</b>			
<b>Session Name: Renewable energy</b>			
<b>Session Chair: Zhang Bai, Xiaohu Yang, Bai Tao</b>			
Time	Paper ID	Author	Paper Title
10:20-10:40	175	Dwi Hantoko, Mi Yan, Bayu Prabowo and Herri Susanto	Preparation of empty fruit bunch as a feedstock for gasification process by employing hydrothermal treatment
10:40-11:00	166	Haonan Cheng, Tao Luo, Jiabang Yu, Xiaohu Yang, Yanhua Liu, Zhaolin Gu and Liwen Jin	Experimental study of vertical tube PCM storage with or without circular fins during charge

# Day 2

# Oral Presentations

11:00-11:20	118	Nan Zhang, Yujie Lu, and Jiayu Chen	Development of An Innovation Diffusion Model for Renewable Energy Deployment
11:20-11:40	288	Luyao Liu, Qie Sun, Yu Wang, Ronald Wennersten and Yiling Liu	Research on Short-term Optimization for Integrated Hydro-PV Power System Based on Genetic Algorithm
11:40-12:00	207	Nan Zhang, Yujie Lu, and Jiayu Chen	Assessment of Power System Low-carbon Transition Pathways Based on China's Energy Revolution Strategy
<b>Room: 2-F2</b>			
<b>Session Name: Green transport &amp; EV</b>			
<b>Session Chair: Xunmin Ou, Rui Xiong, Zheming Tong</b>			
Time	Paper ID	Author	Paper Title
10:20-10:40	124	Mingjie Zhao, Junhui Shi, Cheng Lin	Energy Management Strategy Design for Dual-motor Coaxial Coupling Propulsion Electric City-buses
10:40-11:00	20	Ying Yang, Qing Zhang, Zhen Wang, Xue Cai	Markov chain-based approach of the driving cycle development for electric vehicle application
11:00-11:20	41	Guodong Yang, Junqiu Li, Zijian Fu, Lin Guo	Adaptive state of charge estimation of Lithium-ion battery based on battery capacity degradation model
11:20-11:40	128	Qi Jin, Rui Xiong, Hao Mu, Jun Wang	A novel method of parameter identification based on set-membership algorithm for lithium-ion batteries
11:40-12:00	268	Min Ye and Yining Xu	The Structure Optimization of Lithium-ion Battery Pack Based on Fluid-solid Conjugate Thermodynamic Analysis
12:00-13:20	<b>LUNCH</b>		

<b>Room: 2-B3</b>			
<b>Session Name: Smart and sustainable urban design</b>			
<b>Session Chair: Yu Nan, Teguh Adinugroho</b>			
Time	Paper ID	Author	Paper Title
13:20-13:40	48	Zhang Menghui and Zhang Yan	Analysis of energy metabolism process in Beijing-Tianjin-Hebei urban agglomeration
13:40-14:00	39	Jonathan Natanian and Thomas Auer	Balancing urban density, energy performance and environmental quality in the Mediterranean: a typological evaluation based on photovoltaic potential
14:00-14:20	138	Yiqun Wu, Xiaoqing Zhu, Weijun Gao and Fanyue Qian	The spatial characteristics of coupling relationship between urbanization and eco-environment in the Pan Yangtze River Delta
14:20-14:40	275	Yiqun Wu, Xiaoqing Zhu, Weijun Gao and Fanyue Qian	Thermalscape of Ecological City and its Visualized Evaluation
14:40-15:00	215	Ye Hai and Qian Feng	Travel pattern and spatial heterogeneous characteristics of ridesharing in Beijing-Tianjin-Hebei region, China
<b>Room: 2-C3</b>			
<b>Session Name: Green buildings</b>			
<b>Session Chair: Jianliang Chen, Fanyue Qian</b>			
Time	Paper ID	Author	Paper Title
13:20-13:40	30	Shiming Deng and Jing Du	The Development of the Bed-Based Task/Ambient Air Conditioning System Applied to Sleeping Environments
13:40-14:00	176	Huijie Gao, Wenjing He	Effect of a new solar air collector system on the indoor living environment and air quality for the kindergarten building
14:00-14:20	205	Ruta Vanaga, Andra Blumberga, Julija Gusca, Dagnija Blumberga	Choosing the best nature's strategy with the highest thermodynamical potential for application in building thermal envelope using MCA analysis
14:20-14:40	213		Design of a two-medium solar collector in residential buildings
14:40-15:00	114	Li Zhu, Yujiao Huo, Wei Tian and Yong Sun	Relationships between design parameters of see-through thin film photovoltaic facade and energy performance of office building in China cold zone
<b>Room: 2-D3</b>			
<b>Session Name: Energy water nexus</b>			
<b>Session Chair: Changshu Tan, Shiming Deng</b>			
Time	Paper ID	Author	Paper Title
13:20-13:40	152	Jin Xu, Pengzhou Luo, Bowen Lu, Hongtao Wang, Xin Wang, Jiang Wu, Jinyue Yan	Energy-water nexus analysis of wastewater treatment plants (WWTPs) in China based on statistical methodologies
13:40-14:00	120	Jiake Fang, Saige Wang, Yiyi Zhang and Bin Chen	The electricity-water nexus in Chinese electric trade system

# Day 2

# Oral Presentations

14:00-14:20	158	Chenfan Huang, Yue Li, Xuyao Li, Hongtao Wang, Jinyue Yan, Xin Wang, Jiang Wu and Fengting Li	Understanding the water-energy nexus in urban water supply system with city features
14:20-14:40	123	Changyi Liao, Saige Wang, Jiake Fang and Yiyi Zhang	The impacts of interprovincial agricultural trade on water resources in China: from perspective of grey water footprint
14:40-15:00	220	Yating Liu, Saige Wang and Bin Chen	Blue, green and grey water embodied in food supply chain in China

**Room: 2-E3**  
**Session Name: Renewable energy**  
**Session Chair: Zhang Bai, Xiaohu Yang, Bai Tao**

Time	Paper ID	Author	Paper Title
13:20-13:40	60	Alaa Alhamwi, Wided Medjroubi, Thomas Vogt and Carsten Agert	FlexiGIS: an open source GIS-based platform for the optimization of flexibility options in urban energy systems
13:40-14:00	246	Juan Fang, Qibin Liu, Shaopeng Guo, Jing Lei	A full-spectrum solar chemical energy storage system with photochemical and thermochemical processes
14:00-14:20	258	Tianyue HUANG	A GIS-based assessment of PV potential in China
14:20-14:40	255	Yong Lei, Hongwei Tan and Yue Li	Technical-economic evaluation of ground source heat pump for office buildings in China
14:40-15:00	181	Dace Lauka, Kamel Haine, Julija Gusca and Dagnija Blumberga	Solar energy integration in future urban plans of the South and Nordic cities

**Room: 2-F3**  
**Session Name: Green transport & EV**  
**Session Chair: Xunmin Ou, Rui Xiong, Zheming Tong**

Time	Paper ID	Author	Paper Title
13:20-13:40	19	Liang Zhang, Xue Cai	Control strategy of regenerative braking system in electric vehicles
13:40-14:00	107	Yanxiang Lei, Caiping Zhang, Yang Gao and Tong Li	Charging Optimization of Lithium-ion Batteries Based on Capacity Degradation Speed and Energy Loss
14:00-14:20	108	Xiaofeng Shen, Bingxiang Sun, Hongfeng Qi, Xiaobo Shen and Xiaojia Su	Research on peak power test method for Lithium Ion battery
14:20-14:40	117	Jian Wu, Tong Li, Hao Zhang, Yanxiang Lei and Guangquan Zhou	Research on Modeling and SOC Estimation of Lithium Iron Phosphate Battery at Low Temperature
14:40-15:00	190	Liang Zhang, Xue Cai	The technology convergence of electric vehicles: Exploring the promising and potential convergence relations

**13:20-15:00** **PANEL SESSION: Scholarly Publication: Sharing and Communicating**

**15:00-15:30** **TEA/COFFEE BREAK**

**Room: 2-B4**  
**Session Name: Smart energy networks**  
**Session Chair: Tao Jiang, Fang Liu**

Time	Paper ID	Author	Paper Title
15:30-15:50	155	Kaile Zhou, Fang Wang	Recommendation of personalized electricity consumption strategies for residents in smart grid environments
15:50-16:10	70	Jie Xiao, Xiangyu Kong and Jin Qiang	Demand-responsive virtual power plant optimization scheduling method based on competitive bidding equilibrium
16:10-16:30	78	Qiwen Jiang, Jianbo Chen, Jialin Hou and Yanhua Liu	Research on building energy management in HVAC control system for university library
16:30-16:50	160	Fanyue Qian, Yao Liu, Yongwen Yang, Weijun Gao and Yiqun Wu	Research on Equipment Operation and Maintenance Management Based on Shanghai Power Distribution Network After Power System Reform
16:50-17:10	289	Jiaqi Zhong, Luyao Liu, Qie Sun, Xinyu Wang	Prediction of Photovoltaic Power Generation Based on General Regression and Back Propagation Neural Network

**Room: 2-C4**  
**Session Name: Low carbon economy**  
**Session Chair: Teguh Adinugroho, Jingchun Feng**

Time	Paper ID	Author	Paper Title
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# Day 2

# Oral Presentations

15:30-15:50	129	Hao Yu, Jing-Li Fan, Yang Wang and Jianda Wang	Research on the new-generation urban energy system in China
15:50-16:10	211	Lijun Zhang, Peijun Rong, Yaochen Qin and Yongyue Ji	Does Industrial Agglomeration Mitigate Fossil CO2 Emissions? An Empirical Study with Spatial Panel Regression Model
16:10-16:30	230	Fanxin Meng, Gengyuan Liu, Yuanchao Hu, Meirong Su and Zhifeng Yang	From production to consumption: A multi-city comparative study of cross-regional carbon emissions
16:30-16:50	180	Jakapong Pongthanaisawan, Weerin Wangjiraniran, Kannaphat Chuenwong and Luethaipat Pimonsree	Scenario Planning for Low Carbon Tourism City: A Case Study of Nan
16:50-17:10	82	Weerin Wangjiraniran	Accelerated Discovery of 2D TMDCs Materials via CVR Method in Big Data for the Potential Urban Airborne Hg0 Sensor Application

### Room: 2-D4

#### Session Name: Energy storage

Session Chair: Xiaohu Yang, Kun Li

Time	Paper ID	Author	Paper Title
15:30-15:50	62	Zhiyuan JIang; Zhiguo Qu	Comprehensive study of lithium ion battery thermal management using heat pipe and phase change material during charge-discharge cycle
15:50-16:10	76	Xiaoqin Sun, Youhong Chu, Yajing Mo, Siyuan Fan	Experimental investigations on the heat transfer of melting phase change material (PCM)
16:10-16:30	115	Jia Yin Sze, Chenzhong Mu, Fadhel Ayachi, Lizhong Yang, Alessandro Romagnoli, Beng Kang Tay	Highly efficient nanofiler based on carboxylated graphene oxide in phase change materials for cold thermal energy storage
16:30-16:50	68	Geng Shuai , Yin Yu, Xu Chongqing, Yan Guihuan	Selection Framework of Electrochemical Storage Power Station from Bank's Perspective
16:50-17:10	163	Zengxu Guo , Qingsong Bai , Jialin Hou, Xiaohu Yang, Yanjun Sun and Yanhua Liu	Experimental investigation on the melting behavior of phase change materials in open-cell metal foams in an inclined rectangular enclosure

### Room: 2-E4

#### Session Name: Renewable energy

Session Chair: Zhang Bai, Bai Tao

Time	Paper ID	Author	Paper Title
15:30-15:50	223	Essam Mohamed, Shinichi Ookawara, Ali Radwan, Ahmed Elshazly and Marwa El-Kady,	Numerical Analyses of High Concentrator Triple-Junction Solar Cell Under Jet Impingement Cooling
15:50-16:10	287	Meng Wang, Jinqing Peng, Hongxing Yang and Yimo Luo	Performance evaluation of semi-transparent CdTe thin film PV window applying on commercial buildings in Hong Kong
16:10-16:30	267	Nan Wang and Jiufa Chen	Theoretical analysis of Organic Rankine cycle driven by solar energy combined power and ejector refrigeration
16:30-16:50	244	Haifeng Wu, Qibin Liu, Zhang Bai, Gengxin Xie, Jie Zheng	A distributed cogeneration system with solar biomass two-stage gasifier for hydrogen, power and heating in Northern China
16:50-17:10	222	Nuttapol Lerkkasemsan, Prakob Kitchaiya, Apinan Namkanisorn, Boonchai Chotiviriyavanich, Ruenruedee Benjangkprasert	Thermodynamic and economic analysis of a solar-biomass gasification system with the production of methanol and electricity

### Room: 2-F4

#### Session Name: Distributed energy systems

Session Chair: Jingxiang Lv

Time	Paper ID	Author	Paper Title
15:30-15:50	173	Hongwen He, Chen Wang and Hui Jia	A single-pedal regenerative braking control strategy of accelerator pedal for electric vehicles based on adaptive fuzzy control algorithm
15:50-16:10	137	Yuan Gao, Qianying Liu, Shuxia Wang and Yingjun Ruan	Impact of typical demand day selection on CCHP operational optimization
16:10-16:30	141	Chengkuan Fang, Qiang Xu, Shuxia Wang and Yingjun Ruan	Operation optimization of heat pump in compound heating system
16:30-16:50	269	Peipei Jiang, Zhikai Peng and Yi Wang	The application potential of solar energy sources in Shanghai's existing workers' village
16:50-17:10	86	Yidian Zhang, Yawen Zhao and Yong Hao	A Study On Methanol Steam Reforming Over A Novel Nanocatalyst Of Compound Metal Oxides



Day 2

Oral Presentations

# Poster Presentations

**Location: Lobby of Zonghe Building**

**June 7, 08:30-09:50**

Poster ID	Track	Paper ID	Paper Title	Authors
P-1	Distributed energy systems	21	Operation Simulation and Optimization of Distributed Energy System Based on TRNSYS	Hongbo Ren, Yinlong Lu, Yong Zhang, Fang Chen, Xiu Yang
P-2	Distributed energy systems	22	Research on distributed energy system based on spatial structure analysis	Yong Zhang, Chen Fang, Hongbo Ren, Yinlong Lu, Xiu Yang
P-3	Distributed energy systems	49	Cryogenic polygeneration for green data centre	Fadhel Ayachi, Lizhong Yang, Jia Yin Sze and Alessandro Romagnoli
P-4	Distributed energy systems	94	The Research on Natural Gas Distributed Energy System Scheme of Large Hospitals in Xi'an	Ai Jian, Liang Nan, Li Guoqing, Kong Qiongxiang and Cui Xin
P-5	Distributed energy systems	132	Study on Optimization Strategy of Ground-Source Heat Pump System Based on Multi-Unit	Qingrong Liu, Haikui Jin, Yingjun Ruan
P-6	Distributed energy systems	187	Switch sequence optimization of heat pumps for micro-grid peak clipping	Zishuo Huang
P-7	Distributed energy systems	217	Optimal Operation of Park-based Integrated Energy System	Bingqi Jiao, Ke Xu, Shengyu Wu, Yaohua Wang, Jing Xu and Shiju Wang
P-8	Distributed energy systems	221	An energy efficiency evaluation method of distributed CCHP system based on attribute theory for optimal investment strategy	Jing Wang , Xin Ye, Ya Li, Xiaoqiang Gui, Hailin Guo
P-9	Energy Efficiency in Industrial Processes	164	Improvement of one-dimensional gas dynamic model for pulsation prediction in reciprocating compressor systems	Zhan Liu, Enle Xu, Wenguang Jia and Xing Cao
P-10	Energy Efficiency in Industrial Processes	261	Densities and excess molar volumes of methanol with three fatty acid methyl esters from 283.15 to 318.15 K	YanJun Sun, Gaolei Di, Juan Xia, Xiaopo Wang, Xiaohu Yang and Siyuan He
P-11	Energy storage	9	Consideration of reliability and economy to Capacity Configuration of energy storage system: Case Study of a large scale wind power plant in the Northwest China	WANG Yongli , YU Haiyang, WANG Xiaohai, ZHANG Fuli, HUANG Yujing
P-12	Energy storage	35	Comparison Analysis of Different Compressed Air Energy Storage Systems	Shengni Zhou, Jianjun Zhang, Wenji Song and Ziping Feng
P-13	Energy storage	38	Performance analysis of a compressed liquid carbon dioxide energy storage system	Jianjun Zhang, Shengni Zhou, Wenji Song and Ziping Feng
P-14	Energy storage	51	Optimization Control of SOFC Based on Bond Graph Model	Ding Zhang, Shujun Mu, C.C. Chan and George You Zhou
P-15	Energy storage	86	A Study On Methanol Steam Reforming Over A Novel Nanocatalyst Of Compound Metal Oxides	Yidian Zhang, Yawen Zhao, Yong Hao
P-16	Energy storage	116	Research on a New Three-port Converter Operating Principle and Control Strategy	Jian WU, Baobao LIU, Xuezhi WU, Hongfeng QI
P-17	Energy storage	162	Experimental investigation on the solidification rate of water in open-cell metal foam with copper fins	Qingsong Bai, Zengxu Guo, Xin Cui, Xiaohu Yang and Liwen Jin
P-18	Energy storage	167	A Hybrid Thermochemical–electrochemical Cycle For Efficient Solar Fuel Production	Kun Li, Yawen Zhao, Yong Hao and Jitian Han
P-19	Energy storage	188	Equivalent Peak Load Regulation of Nuclear Power Plant Considering Benefits of Different Power Generation Groups	Feixiang Peng, Wei Zhou, Xin Sui, Shubo Hu, Hui Sun and Peng Yu
P-20	Energy storage	212	Chemical Looping Steam Methane Reforming for Solar Thermochemical Energy Storage	Xinhe Wang, Xuancheng Du, Wenbo Yu, Junshe Zhang, Jinjia Wei*
P-21	Energy storage	231	The control strategy of energy storage externality for reducing wind curtailment from wind farm cluster	Gang Mu, Gan Guo, Junhui Li ,Gangui Yan

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P-23	Energy Water Nexus	169	Assessment of the Energy Use for Water Supply in Beijing	Jiahong Liu, Dong Wang, Chenyao Xiang and Weiwei Shao
P-24	Energy Water Nexus	224	Impact of virtual water flow with the energy product transfer on sustainable water resources utilization in the main coal-fired power energy bases of Northern China	Xuerui Gao, Qianyun Chen, Shibao Lu, Yubao Wang, Tingli An, La Zhuo
P-25	Energy Water Nexus	239	The estimation and effect of anthropogenic heat flux in Beijing	Yingdong Yu, Jiahong Liu and Weiwei Shao
P-26	Energy Water Nexus	247	Energy-water nexus in value chain within China based on linkage analysis	Delin Fang, Saige Wang, Huihui Zheng and Bin Chen
P-27	Energy Water Nexus	250	Spatial energy-water nexus through economic trade network	Saige Wang, Delin Fang, Bin Chen
P-28	Green Buildings	6	Renewable Energy Systems to Enhance Buildings Thermal Performance and Decrease Construction Costs	Aiman Albatayneh
P-29	Green Buildings	24	Heat and Moisture Transfer Characteristics of Multilayer Walls	Rong Liu and Yuewu Huang
P-30	Green Buildings	40	An optical fiber daylighting system with large Fresnel lens	Lei Li, Juntao Wang, Zhuodong Yang, Geng Luo, Kai Tong, Jin Zhao and Jifeng Song
P-31	Green Buildings	59	Further Study on Permeability of Outdoor Particles in Temperature Difference into Indoor Air	Yuxin Lu, Jiayi Qiu, Qiwen Jiang and Yanhua Liu
P-32	Green Buildings	71	The Significance of the Orientation on the Overall buildings Thermal Performance	Shengni Zhou, Jianjun Zhang, Wenji Song and Ziping Feng
P-33	Green Buildings	140	A review of ground-source heat pump systems with heat pipes for energy efficiency in buildings	Siyuan Wu, Yuchao Dai, Francis Oppong, Xiaolu Li and Cangsu Xu
P-34	Green Buildings	179	Experimental Study on the indoor air exhausted energy recycling fresh air unit	Fengxia Han, Zhongbin Zhang, Hu Huang and Zemin Chen
P-35	Green Buildings	236	Lighting and Ventilation-based Building Sun-Shading Design and Simulation Case in Cold Regions	Nan Sun, Yanqiu Cui, Yi Jiang, Shuting Li
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P-38	Green transport & EV	31	Optimization of logic threshold control strategy for electric vehicles with hybrid energy storage system by pseudo-spectral method	Guodong Yang, Junqiu Li, Zijian Fu, Linlin Fang
P-39	Green transport & EV	54	Evaluation of SOC Estimation Method Based on EKF/AEKF under Noise Interference	Dong Xile, Zhang Caiping, Jiang Jiuchun
P-40	Green transport & EV	58	A Real-time MPC-based Energy Management of Hybrid Energy Storage System in Urban Rail	Zhidong Jia, Jiuchun Jiang, Hongtao Lin, Long Cheng
P-41	Green transport & EV	90	Battery remaining useful life prediction under coupling stress based on support vector regression	Jingcai Du, Weige Zhang, Caiping Zhang and Xingzhen Zhou
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P-43	Green transport & EV	143	Modeling charging demand of electric vehicles in multi-locations using agent-based method	Haiyang Lin
P-44	Green transport & EV	174	Influence of the Electric vehicle battery size and EV penetration rate on the potential capacity of Vehicle-to-grid	Yiling Liu, Haiyang Lin, Wang Yu, Liu Luyao, Qie Sun, Ronald Wennersten
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P-48	Low Carbon Economy	112	DEA on eco-efficiency evaluation of industrial parks in Taiwan	Jen-Te Pai*, Di Hu, Wan-Wen Liao
P-49	Low Carbon Economy	171	Maturity evaluation in China's low carbon energy industry	Xudong Sun , Xufan Jia, Yafei Rong
P-50	Low Carbon Economy	193	Unequal transports of black carbon driven by multi-regional trade	Huihui Zheng, Delin Fang and Bin Chen
P-51	Low Carbon Economy	259	Analysis of global energy consumption inequality by using Lorenz curve	Cuncun Duan, Bin Chen
P-52	Low Carbon Economy	280	Dynamics and Heterogeneity of Total Factor Carbon Emission Performance in Chinese Cities	Sheng Liu, X.H. Xia,Feng Tao, X.Y.Chen
P-53	Policy on Climate Change Mitigation	32	Applying support vector machines to predict building energy consumption in China	Ma Zhitong, Ye Cantao, Li Huashan and Ma Weibin
P-54	Policy on Climate Change Mitigation	33	Quantifying market efficiency of China's regional carbon market by multifractal detrended analysis	Xinghua Fan, Xiangxiang Lv, Jiuli Yin, Jiaochen Liang
P-55	Policy on Climate Change Mitigation	191	Identifying the cascading influential paths and sectors in an inter-regional embodied carbon dioxide flow network	Nan Fei Jia, Xiang Yun Gao and Xiao Qi Sun
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P-58	Pollutant Emission Mitigation Technologies	102	Routes and clustering features of PM2.5 spillover within the Jing-jin-ji cities under multi-timescales based on complex network methods	Huajiao Li, Yajie Qi, Chao Li and Xueyong Liu
P-59	Pollutant Emission Mitigation Technologies	256	Performance analysis of a mechanical vapor recompression zero-emission system with water-injected compressor	Hanzhi Wang, Shuaiqi Li, Chong Huang, Shihui He, Wenji Song and Ziping Feng
P-60	Pollutant Emission Mitigation Technologies	262	Volumetric properties of binary mixtures of methanol with ethyl caprylate, ethyl caprate, and ethyl laurate from 283.15 to 318.15 K	Juan Xia, Gaolei Di, Yanjun Sun, Xiaopo Wang, Xiaohu Yang and Siyuan He
P-61	Renewable energy	4	Quantifying variabilities and impacts of massive photovoltaic integration in public power systems with PHS based on real measured data of Kyushu, Japan	Yanxue Li, Weijun Gao, Yingjun Ruan*
P-62	Renewable energy	17	Experimental study of an Adsorption Refrigeration Test Unit	Lingbao Wang, Xianbiao Bu and Weibin Ma
P-63	Renewable energy	25	Multi-Objective Optimization of Molten Carbonate Fuel Cell and Absorption Refrigerator Hybrid System	Chengzhuang MIAO, Yuewu HUANG
P-64	Renewable energy	27	Product distribution and heating performance of lignocellulosic biomass pyrolysis using microwave heating	Yu-Fong Huang, Pei-Te Chiueh, Wen-Hui Kuan, Shang-Lien Lo*
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P-78	Renewable energy	287	Performance evaluation of semi-transparent CdTe thin film PV window applying on commercial buildings in Hong Kong	Meng Wang, Jinqing Peng, Hongxing Yang and Yimo Luo
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P-91	Smart energy networks	253	Smart Micro-grid System with Wind/PV/Battery	Wenzhou Liu, Ning Li, Zhihong Jiang, Zhe Chen, Siyuan Wang, Jian Han, Xiao Zhang, Chang Liu
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