



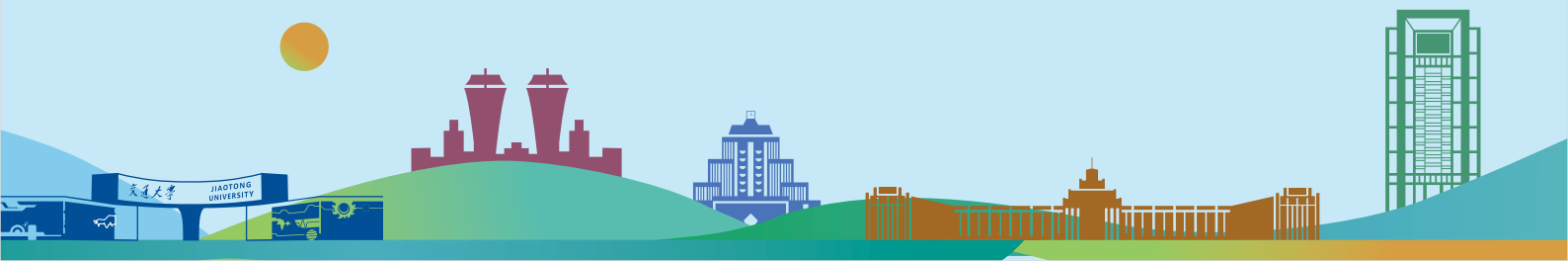
2024

生物质基精细化学品合成 与应用新技术国际研讨会

International Symposium on New Technologies
for the Synthesis and Application
of Biomass Based Fine Chemicals

会议日程 Meeting schedule

西安交通大学 · 创新港校区 2024.8.31-9.4



WELCOME LETTER

It is our great honor to welcome you to Xi'an Jiaotong University, China, for the "*International Symposium on New Technologies for the Synthesis and Application of Biomass Based Fine Chemicals*" to be held in Xi'an, China, from August 31st to September 4th, 2024.

The aim of this focused and targeted conference is to bring together relevant experts and talented young scientists from Chinese and international sectors (Australia, Belgium, France, Germany, India, Italy, Japan, Netherlands, Saudi Arabia, Spain, United Kingdom) in biomass, green chemistry and sustainable development. The main objective of the "*International Symposium on New Technologies for the Synthesis and Application of Biomass Based Fine Chemicals*" is to identify breakthrough chemical and technological project ideas and establish competitive consortia that can lead to collaborative projects, potential applications and innovations in the biorefinery sector.

During these five days, the symposium will promote innovative biomass valorization with the aim of building a better world. With an emphasis on interdisciplinarity, the topics covered will include:

- ✓ novel catalytic reactions (homogeneous, heterogeneous and enzymatic as well as their combinations) applied to bio-based compounds or using bio-based reagents, either sequentially or in a combined one-pot manner;
- ✓ novel catalytic reactions (homogeneous, heterogeneous and enzymatic as well as their combinations) using green solvents (e.g. water, ionic liquids...);
- ✓ ambitious new technologies using flow chemistry, critical fluids, enzymes, microwaves, microreactors, nanocatalysts and, above all, innovative combinations of these technologies;
- ✓ environmental sustainability by developing cleaner and more efficient catalytic processes that reduce greenhouse gas emissions, reduce waste production and protect natural ecosystems;
- ✓ energy by contributing to the production of biofuels, improving energy efficiency and implementing renewable energy sources to address global energy challenges;
- ✓ mobility by playing a critical role in the development of clean and efficient transportation fuels, facilitating the transition to more sustainable and less polluting modes of transportation;
- ✓ circular economy by integrating catalytic processes into production chains and maximizing the valorization of waste and by-products.

Zhicheng ZHANG
Chairman of the conference



Christophe Len
Co-chairman of the conference



PROGRAM

30 August 2024

- 14:00-20:00 Arrival / Diner in MoMc
14:00-20:00 Registration / Materials pick-up

31 August 2024

- 09:00-10:20 Opening Ceremony
10:20-10:50 Group photo + Mid-Morning Coffee Break and Networking in the Exhibit Hall

Session 1 / Chairman Christophe Len

- 10:50-11:25 P1/ **Keiichi Tomishige**
Development of heterogeneous catalysts for C-O hydrogenolysis and H₂-driven deoxydehydration
11:25-12:00 P2/ **Yingwei Li**
Metal-organic frameworks-based materials for biomass transformations
12:00-12:30 P3/ **Changlei Xia**
Biomass Mediated Functionalized Composite for Environmental Application
12:30-14:00 Lunch and open discussion (Restaurant self-service)

Session 2 / Chairman Yingwei Li

- 14:00-14:35 P4/ **Aurore Richel** (*visio*)
Lignin, an innovative biomolecule: case studies focused on a circular economy approach in Northwestern Europe
14:35-15:10 P5/ **Jun Yue**
Continuous flow microreactors for catalytic biomass conversion
15:10-15:45 P6/ **Deyang Zhao**
Anderson-type polyoxometalates support on orange peel activated carbon for efficient ethyl levulinate production
15:45-16:20 P7/ **Rafael Luque** (*visio*)
Benign-by-design nanomaterials for a more sustainable future: present and outlook
16:20-16:50 Mid-Afternoon Coffee Break and Networking in the Exhibit Hall

Session 3 / Chairman Weiyi Ouyang

- 16:50-17:25 P8/ **Changwei Hu**
Tetraethyl orthosilicate (TEOS) production from biomass
17:25-18:00 P9/ **Bimlesh Lochab**
Sustainable polymers: Waste- and bio-feedstocks are goldmines for innovative applications
18:45-... Free time and diner (Restaurant self-service)

01 September 2024

Session 4 / Chairman Keiichi Tomishige

- 09:00-09:35 P10/ **Tao Zhang** (*visio*)
Catalytic valorization of lignocellulose to low-molecular oxygen- and nitrogen-containing compounds
09:35-10:10 P11/ **Grahame Mackenzie**
Versatile sporopollenin exine microcapsules (SpECs) from *Lycopodium clavatum* L.spores as protection and delivery vehicles and building blocks for new bio-composites
10:10-10:40 Mid-Morning Coffee Break and Networking in the Exhibit Hall

Session 5 / Chairman Sunil Sharma

- 10:40-11:15 P12/ **Adam Lee**
Catalysing sustainable chemical manufacturing from biomass

- 11:15-11:50 P13/ **Carol Lin**
Development of waste biorefineries towards a circular bioeconomy
- 11:50-12:25 P14/ **Catherine Pinel**
Selective transformation of biomass in the presence of heterogeneous catalysts
- 11:50-12:30 Lunch and open discussion (Restaurant self-service)
- 13:00-21:00 Cultural event

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Session 6 / Chairman Adam Lee

- 09:00-09:35 P15/ **Tierui Zhang**
Defective layered double hydroxide based nanostructured photocatalysts
- 09:35-10:10 P16/ **Francesco Mauriello**
Advancing global sustainable technologies through the unified conversion of biomass and plastics by heterogeneous catalysis
- 10:10-10:40 Mid-Morning Coffee Break and Networking in the Exhibit Hall

Session 7 / Chairman Yang Sun

- 10:40-11:15 P17/ **Sudarsanam Putla**
Carbon-carbon condensation of biomass-based furans using shape-controlled metal oxide-based catalysts
- 11:15-11:50 P18/ **Huiying Zeng**
Cleavage/cross-coupling strategy for converting lignin into high value-added compounds
- 11:50-12:25 P19/ **Qi Liu**
Application of biomass materials in improving the performance of biodegradable mulching films
- 12:25-14:00 Lunch and open discussion (Restaurant self-service)

Session 8 / Chairman Tierui Zhang

- 14:00-14:35 P20/ **Mario Pagliaro** (*visio*)
Reshoring fine chemical and pharmaceutical productions
- 14:35-15:10 P21/ **Sunil Sharma**
Glycerol and carbohydrate based amphiphilic architectures for biomedical applications
- 15:10-15:45 P22/ **Ting Su**
Design and Energy Application of Photocatalysts Based on Polyoxometalates
- 15:45-16:20 P23/ **Christ Stevens** (*visio*)
Combining fermentation technology and green chemistry the chemical modification of sphorolipids
- 16:20-16:50 Mid-Afternoon Coffee Break and Networking in the Exhibit Hall

Session 9 / Chairman Gianvito Vile

- 16:50-17:25 P24/ **Jincai Wu**
Ring-opening polymerization of aromatic cyclic esters derived from biomass
- 17:25-18:00 P25/ **Thomas Len**
Breaking boundaries: ultradispersed early transition metals supported on TiO₂ for efficient CO₂ hydrogenation
- 18:00-19:00 Free time
- 19:00-20:30 Gala Dinner in Hotel MoMc

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Session 10 / Chairman Yuhe Liao

- 09:00-09:35 P26/ **Roberto Rinaldi**
To break or not to break? Spectroscopic fingerprints for rapid screening of lignin's potential as a raw material to produce chemicals or materials

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09:35-10:10 P27/ **Sho Yamaguchi**
Development of nickel carbide nanoparticle catalysts for the liquid-phase hydrogenation of biomass-derived carbon resources into valuable chemicals

10:10-10:40 Mid-Morning Coffee Break and Networking in the Exhibit Hall

Session 11 / Chairman Carol Lin

10:40-11:15 P28/ **Shunmugavel Saravanamurugan**
Catalytic biomass valorisation to chemicals: an indispensable future direction

11:15-11:50 P29/ **Jie Chen**
Designing semiconductor structures for solar fuel synthesis

11:50-12:25 P30/ **Prince Nana Amaniampong**
Cavitation bubble as microreactor: performing chemistry in a bubble

12:25-14:00 Lunch and open discussion (Restaurant self-service)

Session 12 / Chairman Qinxian Jia

14:00-14:35 P31/ **Yuhe Liao**
Catalytic Fractionation and Valorization of Lignocellulosic Biomass

14:35-15:10 P32/ **Weiran Yang**
Strategies for biobased dicarboxylic acid production

15:10-15:45 P33/ **Majd Al-Naji** (*visio*)
Catalyzing sustainability: heterogeneous catalysis as one of the main cornerstones

15:45-16:20 P34/ **Junjian Xie**
Accurate design and synthesis of high-density biofuels

16:20-16:50 Mid-Afternoon Coffee Break and Networking in the Exhibit Hall

Session 13 / Chairman Roberto Rinaldi

16:50-17:25 P35/ **Andrew Marr** (*visio*)
Combining biocatalysis, organometallic catalysis and ionic liquids for biomimetic biomass conversion

17:25-18:00 P36/ **Yanlong Gu**
Minimizing the use of non-green polar aprotic solvents by rational design of catalytic systems

18:45-... Free time and diner (Restaurant self-service)

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Session 14 / Chairman Yanlong Gu

09:00-09:35 P37/ **Gianvito Vile**
Single-atom catalysts for light-driven C-X coupling methods

09:35-10:10 P38/ **Shengda Qi**
Capillary electrophoresis-mass spectrometry and their application in bioanalysis

10:10-10:40 Coffee break

Session 15 / Chairman Grahame Mackenzie

10:40-11:15 P39/ **Giancarlo Cravotto**
Semi-industrial cascade protocols for the valorization of agri-food waste: highly efficient extraction and conversion of residual biomass

11:15-11:50 P40/ **Christophe Len**
Continuous flow synthesis: an innovative approach for upgrading selected biobased chemicals
11:50-12:00 Closing session

12:00-13:00 Lunch (Restaurant self-service)

GUIDELINES

Registration

Location & time: Lobby of Hotel MoMc, August 30th, 2024

Conference venue: Hanying Building 5-E107, iHarbour campus, Xi'an Jiaotong University
西安交通大学创新港校区涵英楼5-E107

Conference materials

Please collect the conference material bags (including conference badge, conference manuals, USB key, and pen) at registration desk. Please enter the venue with your own conference badge and keep the badge properly during the conference.

Conference catering

Gala dinner: Hotel MoMc, 19:00-20:30, September 2nd, 2024

We offer self-service buffet in the university canteen (4th floor of Tonghe Canteen) from August 31st, 2024 to September 4th, 2024.

Note

We will organize stream the event online to external audiences. To facilitate the streaming, please send your presentation slides to weiyi.ouyang@xjtu.edu.cn one day before your presentation.

Organizing committee

Chairman: Zhicheng ZHANG, Christophe LEN

Secretary: Yang SUN

Member: Weiyi OUYANG, Xiaoyong LI, Qinxiang JIA, Yong WU, Wanqin WANG, AiZhao PAN

Contact: Weiyi OUYANG (Phone: +8613196307830; Email: weiyi.ouyang@xjtu.edu.cn)

Route from hotel to conference venue

