

2018 IOPC INVITATION



Dear Colleague,

The Chemical Industry and Engineering Society of China (CIESC), Townsend Solutions (TS), and Ningbo science and Technology Association are co-organizing the 2018 International Olefin and Polyolefin Conference (IOPC) held in Ningbo China, March 20-23, 2018. The conference is hosted by Ningbo University of Technology. This invitation to participate is extended to you and your colleagues. In addition, there will be a separate one-day specially designed polyolefin technology workshop on March 20.

The theme of the conference is "Technology Convergence of Feedstock, Polymerization, and Fabrication."



2018 International Olefin and Polyolefin Conference (IOPC) - Ningbo China

There is an upheaval in the supply/demand dynamics of the global polyolefin industry, due to a complex interplay of products derived from the boom of North American shale gas with fluctuating oil prices, regional supply and demand imbalances, and price volatility along the chain. There will be a shift in the global order, perhaps more remarkable since the inception of linear polyethylenes and polypropylenes from the 1950s. Key players are putting plans in place to cope with these changes.

These changes are occurring across the entire polyolefin value chain, from feedstock, to polymerization, and fabrication. The conference will focus on the critical role of technology in the differentiation of first-tier suppliers from the rest of the pack. These technological advancements ultimately will determine profitability.

The 2018 International Olefin and Polyolefin Conference is designed as a forum to discuss the significant technological advancements. The first day is a general session, where industry leaders will address key issues, including a "new order" that is emerging. The second day has three concurrent tracks or sessions; namely, feedstock, polymerization, and differentiated products.

Topics covered will include: conversion of methane to ethylene, methanol-to-olefins (MTO),

propylene dehydrogenation (PDH), alpha-olefin catalysts, polyolefin catalysts, catalysts business, new polymerization process developments, specialty product development, and bioplastics.

Our speakers are internationally-renowned experts from both academia and petrochemical industry, hailing from domestic and overseas locations. It is a sterling cast.

W.R. Grace, USA	University of Science and Technology of China
Univation, USA	Townsend Solutions, USA
Sinopec Zhenhai Refining & Chemical Company (ZRCC)	Sinopec Ningbo Engineering Co., Ltd
Sinopec Group	Sinopec Economics & Development Research Institute
Sinopec Catalyst Co., Ltd. Beijing AUDA Division	Sinopec Beijing Yanshan Company
Sinopec Beijing Research Institute of Chemical Industry	Shenhua (Beijing) New Materials Company
Shanghai Research Institute of Chemical Industry	Shandong Longzhong Information Technology Co., Ltd.
Shandong Dawn Polymer	Novolen, GERMANY
Ningbo University of Technology	Maire Tecnimont SpA, Italy
LyondellBasell, USA	Korean Bioplastics Association, Korea
KBR, USA	JPP, JAPAN
HORIZON SPECIALTY MATERIAL CO,LTD	ExxonMobil R&D, Baytown, Texas, USA
ExxonMobil AP R&D	East China University of Science and Technology
Dow Chemical, USA	Dalian Institute of Chemical Physics (DICP)
CNPC Petrochemical Research Institute	Clariant Corporation, Switzerland
Chinese Academy of Sciences Changchun Institute o	f
Applied Chemistry	CBI Lummus, USA
Beijing University of Chemical Technology	

Please do not miss this great opportunity. We look forward to seeing you in Ningbo.

CONTACT

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2018 International Olefin and Polyolefin Conference

20-23th March , 2018

Sheraton Ningbo Hotel, Zhejiang, China

Hosts The Chemical Industry and Engineering Society of China (CIESC) Townsend Solutions Ningbo science and Technology Association

Organizer

Ningbo University of Technology

Co-Organizers

Sinopec Zhenhai Refining & Chemical Company (ZRCC) Ningbo Petrochemical Economic and Technological Development Zone

Support Media

China Synthetic Resin and Plastics Petrochemical Industry Technology

Arrangement

(updated to Feb.8)

DATE	TIME	DETAIL	VENUE	
MONDAY	14:00-22:00	Workshop Registration	Sheraton Ningbo	
MARCH 19	14.00-22.00		Hotel	
TUESDAY	10:00-22:00	Conference Registration	Sheraton Ningbo	
MARCH 20	10.00-22.00	Conference Registration	Hotel	
TUESDAY	08:30-17:00	Polyolefin Technology	Sheraton Ningbo	
MARCH 20	08.30-17.00	Workshop	Hotel	
WEDNESDAY	08:30-18:00	Plenary Session	Sheraton Ningbo	
MARCH 21	08.30-18.00	Plendly Session	Hotel	
THURSDAY	08:30-18:00	3 Parallel Technical	Sheraton Ningbo	
MARCH 22	08.30-18.00	Sessions	Hotel	
FRIDAY	08:30-12:00	Corporate Visit	Ningbo	
MARCH 23	08.30-12.00		NIIIgoo	

HOTEL

Sheraton Ningbo Hotel

Website: http://www.sheraton.com/ningbo

Address: 50 North Caihong Road, Ningbo, China

Hotel phone: 86- 574- 8768 8688

Price: Deluxe King/Twin Room: 500 RMB/day (including breakfast)

Traffic (by car):

In Ningbo city center;

Ningbo Lishe International Airport 16.3 kilometers (about 26 minutes);

Ningbo Railway Station 4.2 kilometers (about 15 minutes);

TUESDAY, MARCH 20, 2018

POLYOLEFIN TECHNOLOGY WORKSHOP



TOPIC



Moderator: Dr. Clifford Lee,

Vice President Technology/Market Studies/Conferences, Townsend Solutions, USA

A.8:30-12:00 Polyethylene Technology Workshop

8:30-10:00 Section 1: Conducted by Dr. LinFeng Chen, R&D Leader, The Dow Chemical Company, USA

Theme	Industry Overview, The History and	The 2017 global capacities of HDPE, LLDPE, LDPE, and		
	Evolution of Polyethylene Catalysts	EVA along with regional consumptions are presented.		
	and Processes	The growth rate and annual revenue for global		
		polyethylene industry are estimated. The top 15		
		highest capacity players are reviewed. Major		
		commercial PE catalyst systems will be reviewed and		
		compared: Cr catalysts (supported), ZN catalysts		
		(supported and non-supported), gas phase catalysts,		
		single modal and bimodal catalysts, metallocene		
		catalysts (bisCP and Uni-Cp), and post metallocene		
		(early transition metal catalysts and later transitio catalysts). Processes reviewed are Hyperzone, Unipol		
		and II, MarTECH SL, MarTECH ADL, Innovene S, Mitsui		
		CX, LBI's ACP (Hostalen), Nova's Sclairtech and		
		Advanced Sclairtech Technology (AST), and Dow		
		Dowlex solution process etc. A correlation will be		
		established between catalyst features, polymerization		
		processes, polymer characteristics, polymer rheology,		
		and the markets and applications.		
		PE technology trends and drivers will be presented.		
10:00-10:3	30 Coffee break			
10:30-12:0	00 Section 2: Conducted by Dr. Sha	otian Wang, PO Catalyst Specialist, formerly with		
Lyondellba	asell, USA	1		
Theme	Special Topic-Polyolefin Catalyst	An overview of polyethylene polymerization processes		
	Support Technology	and the importance of PO catalyst support technology		
		are presented. The experimental details as well as		
		the elucidation of the supporting technology will be		
		shared with the class. Illustrating examples will be		
		included.		

13:30-15:00 S	ection 1: Conducted by Dr	. CP Cheng, Product Manager PO Catalysts, Clariant		
Corporation, S	witzerland			
Theme	Industry Overview, the	The 2017 global capacities of HPP, RCP, ICP, and TPO along		
	History and Evolution of	with regional consumptions are presented. The growth		
	Polypropylene Catalysts.	rate and annual revenue for global polyethylene industry		
		are estimated. The top 10 highest capacity players are		
		reviewed.		
		Highlights include work by Paul Hogan and Bob Banks of		
		Phillips Petroleum, G. Natta of Milan, Italy. The six		
		generations of PP catalysts and the Phthalate-free PP		
		Catalysts.		
15:00-15:30	Coffee break			
15:30-17:00 S	15:30-17:00 Section 2: Conducted by Dr. CP Cheng, Product Manager PO Catalysts, Clariant			
Corporation, S	Corporation, Switzerland			
Theme	PP Polymerization	Processes reviewed are Spheripol, Spherizone, Unipol PP,		
	Processes and Special	Innovene PP, Horizone , Hypol II, Borstar PP, Sumitomo,		
	topics on feedstock	Catalloy, Vistamaxx, Versify, and Intune etc.		
	technology such as PDH	A correlation will be established to correlate catalyst		
	and metathesis.	features, polymerization processes, polymer		
		characteristics, polymer rheology, and the markets and		
		applications. Special topics such as feedstock		
		technologies will be discussed. Trends and Drivers for PP		
		technologies are stated at the end of this session.		

B.13:30-17:00 Polypropylene Technology Workshop

DAY 1 –WEDNESDAY, MARCH 21, 2018

PLENARY SESSION

- **1.** Syngas with high selectivity and one step reaction to obtain low carbon olefin Prof. Xinhe BAO, President of University of Science and Technology of China, Academician of Chinese Academy of Sciences
- 2. Technical development trend and economic analysis for light quality of ethylene raw materials

Prof. Zizong WANG, Deputy Chief Engineer of Sinopec Group

- **3.** CNPC olefin and polyolefin outlook and technology development Shengbao HE, President of CNPC Petrochemical Research Institute
- 4. New prospective of global PO license business Mr. Frank Noeltgen, VP Technology Business, LYB USA

- Polyolefin catalysts in W.R. Grace
 Dr. John Oskam, R&D Director, W.R. Grace, USA
- 6. The Present Situation and Outlook for China Ethylene Industry Prof. Yansong QU, Deputy Chief Economist of Sinopec Economics & Development Research Institute
- **7.** Basic research promotes original innovation of polyolefin resin Prof. Jinliang QIAO, Chief scientist of SINOPEC Group
- 8. The Route from Coal to Chemicals to High Value Polyolefin Products Dr. Shih-Yaw Lai, Shenhua (Beijing) New Materials Company
- 9. Shale Gas and Ethane Dehydrogenation: The Status and Path Forward Dr. Clifford Lee, Vice President Technology/Market Studies/Conferences, Townsend Solutions, USA

DAY 2-THURSDAY, MARCH 22, 2018

3 PARALLEL TECHNICAL SESSIONS

Session 1: Olefin and Polyolefin Feedstock and Petrochemical

- 1. On -purpose propylene via CATOFIN dehydrogenation technology Mr. Nicholas Kinnis, Manager, CBI Lummus, USA
- 2. Catalytic olefins process Michael Tallman, Senior Scientist, KBR, USA
- 3. Propane Dehydrogenation and polyolefin project implementation experience introduction

Qiyun ZHANG, Senior Engineer, Sinopec Ningbo Engineering Co., Ltd (SNEC)

- 4. Production of Ethylene from Refinery Dry Gas and Light Hydrocarbons Dongfeng LI, Director of Production Technology Department, SINOPEC Beijing Research Institute of Chemical Industry
- 5. **Methane to propylene** Valerio Coppini, Maire Tecnimont SpA, Italy
- 6. Optimization of ethylene downstream route Sinopec Zhenhai Refining & Chemical Company (ZRCC)
- 7. Metathesis of C4 olefin to value-added products over heterogeneous catalysts

Dr. Xiujie LI, Research Associate, The Dalian Institute of Chemical Physics (DICP)

Session 2: Polyolefin Polymerization and Catalysts

- 1. New Development in Gas Phase PE Process Duane Thompson, Licensing Manager, Univation, USA
- 2. New Development in Phthalate-Free PP Catalysts Dr. CP Cheng, Product Manager PO Catalysts, Clariant Corporation, SWITZERLAND
- 3. Polyolefin catalysts at Dow: High Throughput Experimentation as an Enabler Dr. LinFeng Chen, R&D Leader, The Dow Chemical Company, USA
- 4. JPP mPP Catalyst and Polymerization Process Dr. Arita Shigeyuki, PP Licensing Manager, JPP, JAPAN
- 5. Study on the Relationship between the Progress in Polyolefin Catalytic Technology and the Development of New Polyolefin Products Prof. Xiaofeng YE, Deputy Chief Engineer, President, Organic Chemistry Division of Shanghai Research Institute of Chemical Industry
- 6. Novel monometallic and bimetallic catalysts for value-added polyolefin Professor Boping LIU, East China University of Science and Technology
- 7. New Materials of Polyolefin with High Performance and Green Technology Prof. Qigu HUANG, Beijing University of Chemical Technology
- 8. High Performance Polyolefin Catalysts Promote High Value-added Product Development

Ziqiang WANG, International Marketing Manager, Sinopec Catalyst Co., Ltd. Beijing AUDA Division

Session 3: Polyolefin Products and Applications

- Requirement of feedstock for polyolefin downstream application Prof. Shijun ZHANG, Deputy Chief Engineer, Sinopec Beijing Research Institute of Chemical Industry
- 2. Novolen technology and products Dr. Xiaolong Liang, Manager, CBI Novolen

3. Nanoscale Spectroscopic and Thermal Analysis of Composition of Impact Copolymer

Dr. Yaxian Wang and Dr. Robert J. Wittenbrink, ExxonMobil AP R&D Dr. Bao Peite, ExxonMobil R&D, Baytown, Texas, USA

4. Crystallization study of propylene/ethylene random copolymers

Dr. Sun Ying Ying ExxonMobil AP R&D JiaYi Zhao, Yongfeng Men, Chinese Academy of Sciences Changchun Institute of Applied Chemistry

5. Bioplastics properties and Processing

Dr. In-Joo Chin, President of Korean Bioplastics Association, Korea

6. Polyolefin Downstream Competitiveness Analysis And Future Petrochemicals Re search Trend

Yueying WANG, Polyolefin Products Head of Rubber and Plastic Department, Shandong Longzhong Information Technology Co., Ltd.

7. TPV Elastomer technology

By Hongchi TIAN, Chief Engineer of Shandong Dawn Polymer

8. Research and Development of new polyolefin application materials -Polypropylene Terpolymer & XLPE Cables

Cheng ZHANG, General Manager and Executive Director, Beijing Yanshan Petrochemical High-Tech Co. Ltd.

9. Polyolefin downstream packaging materials development and application Shaohua ZHENG, President of HORIZON SPECIALTY MATERIAL CO,LTD

10. Structure development in ultra-high molecular weight polyethylene fiber processing

Dr. Jian YANG, Ningbo University of Technology

11. Application and synthesis of polymer processing additives Dr. Jingkuan DUAN, Ningbo University of Technology

DAY 3-FRIDAY, MARCH 23, 2018

Corporate Visit

Sinopec Zhenhai Refining & Chemical Company (ZRCC)

REGISTRATION

Registration Website: <u>http://www.ciesc.cn/meeting/en/2018IOPC/home/signup.php</u>

Note: All participants need to sign up by online registration.

REGISTRATION FEE

Item	Fee		
March 20	US\$400		
Polyolefin Technology Workshop			
	Time	Charge	
March 21-22 (2 days)	By Jan. 31	US\$1,200	
Olefin and Polyolefin Conference	From Feb. 1	US\$1,500	

Note:

1. Registration fees include: delegates payment, conference materials and caterings. Travel and accommodation expenses are not included in the registration fee.

2. Different countries have different remittance routes.

Remittance Account Information:

Please refer to the foreign currency remittance path, <u>you can click to download from website</u>. For credit to

Industrial and Commercial Bank of China

Beijing Municipal Branch, Beijing, PRC

SWIFT Address: ICBKCNBJBJM

For further credit to Beneficiary

Account Number: 0200253809014450629

Name: The Chemical Industry and Engineering Society of China

Address: Andingmen Wai, 53 Xiaoguanjie, Beijing 100029, China

Telephone: +86-10-64438491 / 64440548

Please mark "2018 IOPC" in the remittance form.

ROOM RESERVATION

- 1. You could book the room by yourself through the hotel website. The reservation link: https://www.starwoodmeeting.com/events/start.action?id=1801238786&key=E984B3E
- 2. You could fill in the Room Reservation Form below and send to the email boxes: huqin@ciesc.net.cn

Hotel bank account:

Bank Name: HSBC Bank(China) Company Limited Ningbo Branch SWIFT #: HSBCCNSHNGB A/C Name: Portman Ningbo Hotel Co., Ltd CNY Account: 640000063011

Room Reservation Form						
Company Name			Hotel		Sheraton Ningbo Hotel	
Guest Name			Room Reserv	ation	Reservation	
Tel No.			Tel No.		0574-87688688-预订部	
Email Address			Email Addres	s	rsvn.ningbo@sheraton.com	
Arrival Date	(YY/MM/DD)	/MM/DD) Departure Date		(YY/MM/DD)	
Room Type	S	SUPERIOR KING BED ROOM			SUPERIOR TWIN BED ROOM	
No. of RM						
Breakfast	1/2 份		1/2 份			
Room Rate		RMB500net Per Room /Night (Incl 1/2 BBK)				
Confirmation Letto	onfirmation Letter (Yes/No) Conf		Confirm	Confirmation letter will be send to your email address		
A/C Name		Portman Ningbo Hotel Co., Ltd				
Bank Name		HSBC Bank(China) Company Limited Ningbo Branch				
CNY Account No.		640000063011				

CONTACT

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Review of 2017 International Olefin and Polyolefin Conference

Conference Overview

2017 International Olefin and Polyolefin Conference was held in Ningbo on March 20-22, 2017. It was the second time that it be held. The conference was hosted by Chemical Industry and Engineering Society of China and Townsend Solutions. More than 300 people from the United States, Japan, Korea, Italy, Netherlands, China and other domestic and foreign institutions of higher learning, research institutes and large enterprises attended the meeting, who discussed deeply the upgrading strategy of the olefin industry in the world under the challenge of low oil price.

Conference Focus

- Upgrade and Optimization Road Map of Olefin and Polyolefin Industry Chain;
- Olefin and Polyolefin Process Optimization;
- Polyolefin Processing Technology and Product Innovation

Participating Composition

- Participating composition structure : Enterprise 73%; Universities and research institutes 12%; Government, associations and industry organizations 15%
- Participating enterprise structure: state-owned enterprises 49%; private enterprises 40%; foreign enterprises 11%
- Service type structure: Production type enterprises 73%; Technology / product suppliers 15%; Engineering service providers s8%, Matching equipment enterprises 7%; trading company 5%; Consulting research service providers 2%
- Participant structure: R & D technical personnel 57%; Marketing personnel 14%; managerial staff 12%; Others17% (Vice president and above level accounted for 42%)

Industry in Ningbo:

Ningbo is China's national petrochemical industry base and the petrochemical industry is an important pillar industry in Ningbo. Ningbo olefin industry realized a total profit of nearly 7 billion RMB in 2015. Ningbo will become an important growth center in the domestic and bal production of olefins.



