

Formula IX

*Multiscale Structures and Functionalities
for Future Formulation*

Conference Program



October 15-18, 2017 Beijing, China

WELCOME LETTER.....	1
ORGANIZATION.....	2
CONFERENCE VENUE.....	3
ADMINISTRATION INSTRUCTOR.....	4
GENERAL INFORMATION.....	5
PROGRAM AT A GLANCE	7
CONFERENCE PROGRAM.....	8
PLENARY LECTURES	19
KEYNOTE LECTURES	27
ORAL COMMUNICATIONS.....	69
POSTER PROGRAM.....	205
POSTERS.....	209

WELCOME LETTER

Dear Colleagues,

We are pleased to announce that Formula IX will be held in Beijing, China on October 15-18, 2017. Formula conference series has long history since 1987 and become an important high-level forum for formulation science and technology. This is a very wide field, highly multidisciplinary, with much interest from both academia and industry, considering that advances produce a great impact in daily life.

Formula IX, as previous Formula conferences, aims to highlight recent important progress in all aspects of formula with multiple functionalities such as battery materials, printing inks, catalysts, cosmetics, food or pharmaceuticals formulations. The conference theme of Formula IX is “Multiscale Structures and Functionalities for Future Formulation”, covering multiple scales across molecules, particles, and reactors and facilities as well as plants and systems. To ensure a high level and high quality forum, international leaders in a number of fields will be invited to present lectures on the state-of-the-art and cutting edge of formulation science and technology. We believe that Formula IX will provide a great opportunity for you to hear about the latest exciting trends and new application areas in all aspects of formula.

Autumn is the season of harvest in a year and the most beautiful season of Beijing. We wish to extend our welcome to all participants and sponsors in Formula IX and look forward to seeing you in Beijing!

Ning Yang, Guanghui Ma, Frank Kleine Jager, Bernd Sachweh

(Conference chairs of Formula IX)

ORGANIZATION

Chairs of Formula IX

Ning Yang, Chinese Academy of Sciences

Guanghui Ma, Chinese Academy of Sciences

Frank Kleine Jager, BASF

Bernd Sachweh, BASF

Chairs of International Advisory Board

Bernd Sachweh, BASF

Jinghai Li, Chinese Academy of Sciences

International Advisory Board

Petra Allef, Evonik

Alain Durand, SCF / Groupe Formulation / U. Lorraine

Ulla Elofsson, SP

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Jinghai Li, Chinese Academy of Sciences

Claudi Mans, U. Barcelona / CED / GECI

Cécile Pagnoux, SCF/U. Limoges / ENSCI-CNRS

Frank Runge, BASF

Bernd Sachweh, BASF

Gordon Tiddy, Univ. Manchester / RSC

Local Organizing Committee

Yunfa Chen, Institute of Process Engineering, Chinese Academy of Sciences

Jianfeng Chen, Beijing University of Chemical Technology

Xiaodong Chen, Soochow University

Liangyin Chu, Sichuan University

Chunzhong Li, East China University of Science and Technology

Guangsheng Luo, Tsinghua University

Yanling Song, Institute of Chemistry, Chinese Academy of Sciences

Dan Wang, Institute of Process Engineering, Chinese Academy of Sciences

Fei Wei, Tsinghua University

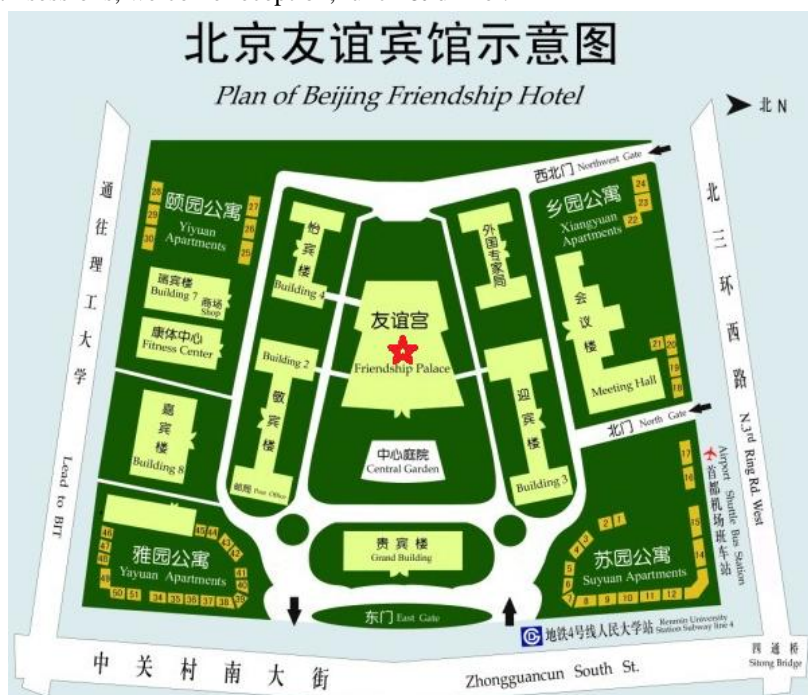
Chuanfang Yang, Institute of Process Engineering, Chinese Academy of Sciences

Suojiang Zhang, Institute of Process Engineering, Chinese Academy of Sciences

Qingshan Zhu, Institute of Process Engineering, Chinese Academy of Sciences

CONFERENCE VENUE

All the activities of Formula IX are arranged in the Friendship Palace (★) of Beijing Friend Hotel, including registration, opening ceremony & all sessions, welcome reception, lunch & dinner.



2nd Floor of Friendship Palace

友谊宫二层平面图



ADMINISTRATION INSTRUCTOR

Registration

The secretariat and registration desk will be located at the hall (1st floor) of the Friendship Palace.

Open every day at the following times:

15/10/2017: from 8:00 to 20:00 hours.

16/10/2017: from 7:00 to 18:00 hours.

17/10/2017: from 9:00 to 18:00 hours.

18/10/2017: from 9:00 to 14:00 hours.

Exhibition

The exhibition will be located in Juying Hall (2nd floor) of the Friendship Palace.

Open every day at the following times:

16/10/2017: from 9:00 to 19:00 hours.

17/10/2017: from 9:00 to 19:00 hours.

18/10/2017: from 9:00 to 14:00 hours.

Instructions for presenters

The Congress working language is English. Participants are kindly requested to turn off their cell phones or keep the cell phones in vibration state when entering the Conference rooms and in the poster areas.

Speaker Check-In Procedures: It is strongly recommended that all speakers visit the session room 1 hour in advance of their presentation. Speakers can view their presentation(s) in order to avoid compatibility issues with computers supplied in the session room. Volunteers will also be available to assist speakers with uploading their presentation. All electronic files must be in either PowerPoint or PDF format.

Presenters should bring their files on a PC Formatted USB drive. The standard audiovisual equipment provided for technical sessions will consist of a computer (with a mouse), a computer projector, switcher, screen, microphone, and a laser pointer. Mac users can connect to the computer- aided projectors if they bring their own computer and connecting cord.

Plenary talks: 40 minutes for presentation, and then 5 minutes for discussion.

Keynote talks: 25 minutes for presentation, and then 5 minutes for discussion.

Other oral talks: 15 minutes for presentation, and then 5 minutes for discussion.

All poster sessions will be located at Juying Hall. The poster will be displayed on 1.2 m (high) and 0.9 m (wide) board. Presenters are responsible for mounting their materials on the poster boards prior to the opening of the poster sessions. Boards will be numbered with designated poster numbers and pushpins will be provided to mount posters. Formula IX cannot assume responsibility for materials beyond these time limits. Authors must be present by their posters during poster presentation.

Best poster awards

Best poster awards will be issued in the afternoon of 18th Oct. at room 1. All the posters in the poster session will participate in the poster competition.

Special issue

After the conference, outstanding presentations will be invited by the conference committee to publish their work to the special issue of *Particuology*.

Special events

The **welcome reception** will be held on Sunday, 15th Oct., 18:00-20:00, restaurant on 1st floor of Friendship Palace. All delegates are welcome.

The **banquet** will be held on Tuesday, 17th Oct., 19:30-21:00, restaurant on 1st floor of Friendship Palace. All delegates are welcome.

GENERAL INFORMATION

Arrival in Beijing

Taxi service is available at Capital International Airport the whole day. The cost from the airport to the conference venue is about 25 USD, or RMB 150-180 Yuan enclosed the extra highway fee 10 Yuan/car. Please do ask for the receipt from the driver. Payment should be made in RMB cash. You can use the ATM's or bank offices at the airport to get change.

Airport shuttle will be available to Beijing Friendship Hotel. You could take line 4 and drop off at Beijing Friendship Hotel. It leaves every 15 minutes.

First bus: 7:00

Final bus: 23:00



Weather

October is the best month for weather conditions in Beijing. Typically, it is neither hot nor cold - just the perfect time to stay and visit in Beijing and elsewhere in China. The average temperature in Beijing in October is mild at 12.7 °C. Afternoons can be somewhat warm with average high temperatures reaching 19 °C. Overnight temperatures are generally a little cool with an average low of 7.3 °C.

Insurance

The Congress Organizers recommend participants to possess travel property medical or other necessary insurances before coming to China. The Formula IX Conference Organizers cannot be held responsible for the costs resulting from personal accidents or property loss during the Congress.

Currency Exchange

The currency in circulation in China is the Chinese yuan, or RMB yuan, whose international standard abbreviation sign is CNY. 1 CNY consists of 10 jiao (dimes) or 100 fen (cents). The denominations of the Chinese yuan in bank notes are 1, 5, 10, 50 and 100 CNY. Participants can exchange their currencies at airports, major hotels and banks in China. The exchange rate will be given daily by the Bank of China. Currently, 1 USD can be exchanged for about 6.6 CNY, and 1 EUR can be exchanged for about 7.8 CNY. All currency exchange receipts should be saved in case participants want to exchange RMB back to their own currency. Banks may demand to see the original exchange receipt.

Credit Cards & ATM

Visa, MasterCard, American Express, Diners Club and JCB are accepted in many department stores and hotels. ATMs may be of use in obtaining RMB with your credit card. The amount debited from your account will vary due to fluctuations in the exchange rate. There is normally a 4% additional bank charge.

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Food and Drink

Dining-rooms with different styles are located in the Beijing Friendship Hotel. These restaurants provide Chinese food, Western food 24 hours a day. Coffee houses and Bars in the hotel will also serve attendees. Participants can taste many kinds of Beijing style food at restaurants in the vicinity of the hotel.

Smoking Policy

Please note that smoking is prohibited within the conference premises.

Voltage, Socket and Plugs

The electric current used in China is 220V 50Hz. Hotels provide 220V and 110V (shavers only) power outlets. Please note that plug adapters and converters might be required.

Hotlines

Phone Number

110 Police	114 Local Telephone Number	116 Domestic Long Distance Inquiry
117 Time Inquiry	119 Fire	120 Ambulance
121 Weather Forecast	122 Traffic Police	

PROGRAM AT A GLANCE

	Monday 16th		Tuesday 17th		Wednesday 18th	
	Room 1	Room 2	Room 1	Room 2	Room 1	Room 2
8:00-9:00	Plenary lecture Lei Jiang		Plenary lecture Ta-Jo Liu		Plenary lecture Yuhan Sun	
9:00-10:30	KN-01	KN-03	KN-07	KN-08	KN-15	KN-17
	OC-01	OC-07	OC-27	OC-34	OC-51	KN-18
	OC-02	OC-08	OC-28	OC-35	OC-52	OC-56
	OC-03	OC-09	OC-29	OC-36	OC-53	OC-57
10:30-10:50	Coffee Break		Coffee Break		Coffee Break	
10:50-12:20	KN-02	OC-10	OC-30	KN-09	KN-16	KN-19
	OC-04	OC-11	OC-31	OC-37	OC-54	OC-58
	OC-05	OC-12	OC-32	OC-38	OC-55	OC-59
	OC-06	OC-13	OC-33	OC-39		OC-60
12:20-14:00	Lunch		Lunch		Lunch	
14:00-15:00	Plenary lecture Wolfgang Peukert		Tandem talk Cathrin Corten Rafael Bautista Mester		KN-20	OC-68
					KN-21	OC-69
15:00-16:20	KN-04	OC-20	KN-10	KN-13	OC-61	OC-70
	KN-05	OC-21	KN-11	KN-14	OC-62	OC-71
	OC-14	OC-22	OC-40	OC-45	OC-63	OC-72
		OC-23				OC-73
16:20-16:40	Coffee Break		Coffee Break		Coffee Break	
16:40-18:10	OC-15	KN-06	KN-12	OC-46	KN-22	KN-23
	OC-16	OC-24	OC-41	OC-47	OC-64	OC-74
	OC-17	OC-25	OC-42	OC-48	OC-65	OC-75
	OC-18	OC-26	OC-43	OC-49	OC-66	OC-76
	OC-19		OC-44	OC-50	OC-67	OC-77
18:10-19:00	Poster Session		Poster Session		Closing Ceremony	
19:00-20:30	Dinner		Banquet		Dinner	

Color codes

	Plenary lecture, Tandem talk
	Keynote lecture
	Oral communications
	Poster session, Closing ceremony
	Coffee break, Lunch, Dinner

CONFERENCE PROGRAM

Sunday 15th October 2017

8:00-20:00	Registration and Delivery of Documentation Lobby of Friendship Hotel
18:00-20:00	Welcome Ceremony and Reception Restaurant on the 1st Floor of Friendship Palace

Monday 16th October 2017

Room 1

Chair: Bernd Sachweh

8:00-8:10	Opening Ceremony			
8:10-8:55	PL-01	Lei Jiang	Technical Institute of Physics and Chemistry, Chinese Academy of Sciences; Beihang University, China	Smart Interfacial Materials from Super-wettability to Binary Cooperative Complementary Systems

Room 1 DESIGN AND ENGINEERING OF FORMULATIONS

Chair: Zhibing Zhang, Meng Wai Woo

9:00-9:30	KN-01	Zhibing Zhang	University of Birmingham, UK	Microencapsulation as a Platform Technology for Developing Formulated Products
9:30-9:50	OC-01	Wei Wei	Institute of Process Engineering, Chinese Academy of Sciences	Potential Pharmaceutical Applications of Uniform-sized Chitosan Micro/Nanoparticles with Autofluorescent Property
9:50-10:10	OC-02	Kerstin Mülheims-Frank Runge	BASF SE, Germany	Design and Engineering of Formulations for Sensitive Materials
10:10-10:30	OC-03	Like Mao	China Agricultural University, China	Effect of emulsifier types on stability of β -carotene emulsions determined by analytical centrifugation
10:30-10:50	Coffee Break			
10:50-11:20	KN-02	Meng Wai Woo	Monash University, Australia	Particle Design by Antisolvent Vapour Precipitation
11:20-11:40	OC-04	Frederic Marchal	Bluestar Silicones France	New Challenges in Silicone Emulsion Design
11:40-12:00	OC-05	Oliveira Adriano	OXITENO (Shanghai) Ltd.	Alternative Methodology for Dispersing System Development
12:00-12:20	OC-06	Niall Rae Thomson	Syngenta	Improving Agrochemical Formulation Performance through Surfactant Science

Room 2 STRUCTURE-PROPERTY-RELATIONSHIP

Chair: Hidehiro Kamiya, Carsten Schilde

9:00-9:30	KN-03	Hidehiro Kamiya	Tokyo University of Agriculture and Technology, Japan	Interface Structure Design for Inorganic Nanoparticles Dispersion Behavior Control in Organic Solvents and Polymer
9:30-9:50	OC-07	Warren Zhou	Unilever Research & Development Shanghai	Super-stable Colloidal Systems and Their Applications
9:50-10:10	OC-08	Mariana B. T. Cardoso	University of Birmingham, UK	Encapsulation and Trigger Release of Hydrophobic and Hydrophilic Actives Using Novel Silica Colloidosomes
10:10-10:30	OC-09	Florian Laubé	IFMAS / Université	Structure/Properties Relationships of Nail

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			de Lille, France	Varnish Polyesters Using Oligomers: a Physicochemical and Modeling Approach
10:30-10:50	Coffee Break			
10:50-11:10	OC-10	Mingyang Chen	Tianjin University, China	Spherical Crystallization for Direct Tableting and the Mechanism of Clopidogrel Hydrogen Sulfate
11:10-11:30	OC-11	Songgu Wu	Tianjin University, China	An Agglomeration Caused by Macroscopic Defects in Phase Transformation
11:30-11:50	OC-12	Roland Hass	University of Potsdam, Germany	Particle and droplet sizing in concentrated liquid dispersions by Photon Density Wave spectroscopy
11:50-12:10	OC-13	Baohong Hao	Beijing Institute of Petrochemical Technology, China	Self - assembly Mechanism and Micro - crystal Structure Analysis of Nanometer Rare Earth Oxides

12:20-14:00	Lunch Restaurant on the 1st floor of Friendship Palace			
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Room 1

Chair: Cathrin Corten

14:00-14:45	PL-02	Wolfgang Peukert	Friedrich-Alexander University of Erlangen-Nuremberg, Germany	Formulation of Functional Particles Beyond Size – From Formulation Characteristics to Surface Properties
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Room 1 PROCESSING AND SCALE-UP

Chair: Guanghui Ma, Alain Durand

15:00-15:30	KN-04	Guanghui Ma	Institute of Process Engineering, Chinese Academy of Sciences, China	From Lab to Industry: Membrane Emulsification Technique Enables Preparation of Various Uniform Biocompatible Microspheres and Their Successful Applications
15:30-16:00	KN-05	Alain Durand	Université de Lorraine, CNRS, France	Nano- and Microparticles for Encapsulation and Release of Active Molecules. Physicochemical and Engineering Aspects.
16:00-16:20	OC-14	Jing Bian	China University of Petroleum, China	Revised Calculating Formula of Feed Jet Concentration in the Catalyst—Feed Countercurrent Contacting Injection Zone of a FCC Riser
16:20-16:40	Coffee Break			
16:40-17:00	OC-15	Toni-Bianca Di Paolo	University of Birmingham, UK	The Formulation of a Novel Suspending Vehicle for Use in Pharmaceutical Specials
17:00-17:20	OC-16	Min Lv	Shanghai Advanced Research Institute, Chinese Academy of Sciences	Fractal Inspired Continuous-flow Microreactor for Process Intensification
17:20-17:40	OC-17	Guijin Liu	Honz Pharmaceutical Co., Ltd.	Particle Design of Itraconazole by Modified Supercritical Antisolvent Method for Dissolution Enhancement
17:40-18:00	OC-18	Yingcheng Li	Sinopec Shanghai Research Institute of Petrochemical Technology, China	Research and Application of Mixtures of Anionic-cationic Surfactants for Chemical Enhanced Oil Recovery
18:00-18:20	OC-19	Chenxi Zhang	Tsinghua University, China	Effect of Mal-distribution on Catalytic Hydrogenation of Nitro-toluene in a Fluidized Bed Reactor

Room 2 FUNDAMENTAL SCIENCE, PHYSICO-CHEMICAL PRINCIPLES AND MECHANISMS IN FORMULATION; CHALLENGES IN FORMULATION OF TRADITIONAL CHINESE MEDICINE

Chair: Xing Tang, Jie Wu

15:00-15:20	OC-20	Emily Summerton	University of Birmingham, Procter and Gamble	Understanding Crystallisation Behaviour in Dish Liquid Systems and the Corresponding Effect of Agitation on its Mechanism
15:20-15:40	OC-21	Weiqing Zhou	Institute of Process Engineering, Chinese Academy of Sciences	Development of a Konjac Glucomannan-based Microcarrier for Adhesive Cell Cultivation
15:40-16:00	OC-22	Yongsheng Han	Institute of Process Engineering, Chinese Academy of Sciences	Formulation of Particles by a Compromise Concept
16:00-16:20	OC-23	Doris Segets	Friedrich-Alexander-Universität Erlangen-Nürnberg, LUM GmbH, Germany	A Standardized Routine for Hansen Parameters Based on Analytical Centrifugation: Bridging the Scales Between Nanoparticles' Surface Chemistry and Dispersibility
16:20-16:40	Coffee Break			
16:40-17:10	KN-06	Xing Tang	Shenyang Pharmaceutical University, China	Pharmacokinetics and Pharmacodynamics of Bufadienolides Delivered by Oral Emulsion, Lipid Microspheres, Nano Lipid Carriers and Lipid-albumin Nanoparticles
17:10-17:30	OC-24	Ting Cai	China Pharmaceutical University, China	The Surface-facilitated Crystal Growth in Amorphous Pharmaceutical Formulation
17:30-17:50	OC-25	Ying Zheng	University of Macau, China	Pluronic P85/F68 Micelles of Baicalein could Interfere with Mitochondria to Overcome MRP2-Mediated Efflux and Offer Improved Anti-parkinsonian Activity
17:50-18:10	OC-26	Thomas Querette	Ingénierie des Matériaux Polymères, UMR CNRS, France	Non-isocyanate Polyurethane Synthesis and Nanoprecipitation: Toward an Optimized Preparation of Polymer Nanoparticles for Drug Delivery
18:10-19:00	Poster Session + Coffee Break			
19:00-20:30	Dinner Restaurant on the 1st floor of Friendship Palace			

Tuesday 17th October 2017

Room 1

Chair: Frank Runge

8:10-8:55	PL-03	Ta-Jo Liu	Tsing Hua University, Taiwan, China	Precision Coating for Suspensions
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Room 1 BIOMEDICAL, HEALTH AND ENVIRONMENTAL ASPECTS

Chair: Xiao Dong Chen, Frank Runge

9:00-9:30	KN-07	Xiaodong Chen	Soochow University, China	Chemical Engineering in Food Ingestion: From Molecules to Molecules but in Between Structure Matters
9:30-9:50	OC-27	Michel Grisel	Normandie Univ, CNRS, France	Predicting Sensory Properties of Cosmetic Ingredients and Emulsions on the Basis of Instrumental Analysis
9:50-10:10	OC-28	Bingbo Zhang	Tongji University, China	Protein-Mediated Biomimetic Nanoparticles for Cancer Theranostics
10:10-10:30	OC-29	Feng Zhang	Nanopolis Suzhou, China	Nanotech Ecosystem for Innovation & Commercialization
10:30-10:50	Coffee Break			
10:50-11:10	OC-30	Ergang Liu	Tianjin University, China	Combining Tissue Penetration with Magnetic Targeting for High Efficient Delivery of Cancer Therapeutics in a Mouse Model
11:10-11:30	OC-31	Lan Zhao	Institute of Process Engineering, Chinese Academy of Sciences	Uniform Agarose Microspheres Prepared Using Membrane Emulsification Technique for Efficient Antibiotic Purification
11:30-11:50	OC-32	Guo Gao	Shanghai Jiao Tong University, China	Targeted Therapy of Gastric Tumor Based on Structure and Size Effect of Nanoparticles
11:50-12:10	OC-33	Despoina Zympeloudi	University of Birmingham, Procter & Gamble New Chinese Academy of Science Innovation Centre	Visualizing the Removal of Food Fat Based Soils from Single Cotton Yarns Using Anionic Surfactants.

Room 2 SPECAIL TOPIC-COATING

Chair: Frank Kleine Jäger, Yanlin Song

9:00-9:30	KN-08	Yanlin Song	Institute of Chemistry, Chinese Academy of Sciences	Green Printing Technology for Manufacturing Functional Devices
9:30-9:50	OC-34	Marcel Schmitt	BASF Advanced Chemicals Co., Ltd, Germany	Process Requirements in the Formulation Development of Coating Products
9:50-10:10	OC-35	Ralf Diehm	Karlsruhe Institute of Technology, Germany	Intermittent Slot Die Coating for Li-ion Battery Electrodes
10:10-10:30	OC-36	Jana Kumberg	Karlsruhe Institute of Technology, Germany	Cryo Sem Morphology Characterization and Drying Research on Li-ion Battery Electrodes
10:30-10:50	Coffee Break			
10:50-11:20	KN-09	Carsten Schilde	Institute of Particle Technology, TU Braunschweig, Germany	Effect of the Formulation on the Properties of Thin Nanoparticulate Coatings
11:20-11:40	OC-37	Eva Hoffmann	Institute of Particle Technology, Fau	Formulation of Carbon Black-ionomer Dispersions for Thin Film Formation in

			Erlangen-Nuremberg, Germany	Fuel Cells
11:40-12:00	OC-38	Shengxi Jin	Evonik (SEA) Pte Ltd.	Challenges in the Formulation of Low Polarity Coatings
12:00-12:20	OC-39	Linus Froboese	Institute of Particle Technology, TU Braunschweig, Germany	Process Induced Electrode Design for Lithium Ion Batteries – How Production Processes Influence Their Physical and Electrochemical Properties

12:20-14:00	Lunch Restaurant on the 1st floor of Friendship Palace			
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Room 1

Chair: Jordi Esquena

14:00-14:45	Tandem Talk	Cathrin Corten – Rafael Bautista Mester	BASF, Germany	New Path forwards to Overcome Future Challenges in Coatings
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Room 1 PRODUCTION, APPLICATION AND CUSTOMER NEEDS; FORMULATION AT THE INTERFACE AND SURFACE DESIGN

Chair: To Ngai, Sergiy Antonyuk

15:00-15:30	KN-10	To Ngai	The Chinese University of Hong Kong	Pickering Emulsions: the Benefits and Challenges in Industrial Applications
15:30-16:00	KN-11	Jie Wu	Institute of Process Engineering, Chinese Academy of Sciences	Pickering Emulsions in Biomedical Field: Particles Decide the Difference
16:00-16:20	OC-40	Arthur Werner	Laboratoire de Chimie des Polymères Organiques (LCPO), France	Pickering Emulsions Stabilized by Modified Cellulose Nanocrystals: From Emulsions to Latexes.
16:20-16:40	Coffee Break			
16:40-17:10	KN-12	Sergiy Antonyuk-Bernd Sachweh	University of Kaiserslautern, BASF SE, Germany	Microstructured Component Surfaces by Cold Spraying with Plasma- modified Particles
17:10-17:30	OC-41	Marie-Charlotte Tatry	Centre de Recherche Paul Pascal, CNRS, France	Spontaneous Adsorption of Microgels at Model Liquid Interfaces and Link with Pickering Emulsion Stabilized Thereof
17:30-17:50	OC-42			To be determined
17:50-18:10	OC-43	Xiaodong Quan	Tianjin University, China	Antifouling and Corrosion Protective Performance of Epoxy Coatings with Polyaniline Derivatives
18:10-18:30	OC-44	Weixin Zhang	Hefei University of Technology, China	Sequential Precipitation Induced Interdiffusion to the Synthesis of Tubular Electrode Materials for High Performance Lithium-ion Batteries

Room 2 MODELING AND SIMULATION ON MULTIPLE SCALES

Chair: Flor R. Siperstein, Shuangliang Zhao

15:00-15:30	KN-13	Flor R. Siperstein	University of Manchester, UK	Molecular Simulations: a Tool to Aid Formulations
15:30-16:00	KN-14	Shuangliang Zhao	East China University of Science and	Effect and Regulation of Surface Wettability on Molecular Morphology, Transport and Reaction

FORMULA IX – Multiscale structures and functionalities for future formulation. Beijing Oct. 15th to 18th 2017

			Technology, China	
16:00-16:20	OC-45	Shanshan Wang	Nanjing Tech University, China	Molecular Dynamics Simulations of the Effect of H ₂ O ₂ -TiO ₂ (B)/Anatase Interaction on the Selectivity for Direct Synthesis of H ₂ O ₂ Using a Reactive Force Field
16:20-16:40	Coffee Break			
16:40-17:00	OC-46	Dali Cai	Tsinghua University, China	Establishing Discrete Ising Model for Zeolite Deactivation: Inspiration from the Game of Go01010
17:00-17:20	OC-47	Wei Chen	Institute of Process Engineering, Chinese Academy of Sciences	Theoretical Study of Hard-Sphere Fluid Mixtures Confined in Porous Media
17:20-17:40	OC-48	Wenlai Huang	Institute of Process Engineering, Chinese Academy of Sciences	Mesoscale Modeling the Adsorbate Distribution in Heterogeneous Catalysis Based on the Principle of Compromise in Competition
17:40-18:00	OC-49	Chengxiang Li	Institute of Process Engineering, Chinese Academy of Sciences	Modeling and Simulation of the Reaction-diffusion Coupling Processes in Simple Pore Structures
18:00-18:20	OC-50	Weizhong Zheng	East China University of Science and Technology, China	Interfacial Behaviors Modeling of Brønsted Acidic Ionic Liquid Enhanced Alkylation of Isobutene/2-Butene Catalyzed by Sulfuric Acid
18:20-19:00	Poster Session + Coffee Break			
19:00-20:30	Banquet Restaurant on the 1st floor of Friendship Palace			

Wednesday 18th October 2017

Room 1

Chair: Bernd Sachweh

8:10-8:55	PL-04	Yuhan Sun	Shanghai Advanced Research Institute, CAS, China	CO and CO ₂ Conversion via Bifunctional Catalysis at Mesoscale
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Room 1 CHARACTERIZATION

Chair: Shuhong Yu, Dietmar Lerche

9:00-9:30	KN-15	Shuhong Yu	University of Science and Technology of China, China	Macroscopic Nanoparticle Assemblies: Integration, Functionalization and Applications
9:30-9:50	OC-51	Fengyu Li,	Institute of Chemistry, Chinese Academy of Sciences	Flexible Multi-analysis Electronics: Perception of Human Self
9:50-10:10	OC-52	Xuan Hu	Formulation SAS	Evaluation of the Thermal Stability of Cosmetic Formulations with Rheolaser Crystal
10:10-10:30	OC-53	Pascal Bru	Formulation SAS	Evaluation of New Vegetable Emulsifiers Efficiency by Multiple Light Scattering
10:30-10:50	Coffee Break			
10:50-11:20	KN-16	Dietmar Lerche	Lum Gmbh, Germany	From Real Time and Accelerated Stability Studies towards Shelf Life Prediction
11:20-11:40	OC-54	Doris Segets	Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany.	Accelerated Characterization of Complex Flocc Size Distribution during Size Selective Precipitation of Nanoparticles Using Analytical Centrifugation
11:40-12:00	OC-55	Shining Deng	LUM, China	Evaluation of Dispersion Stability by Combined Acceleration Procedures: High Gravity and Temperature.

Room 2 MODELING AND SIMULATION ON MULTIPLE SCALES

Chair: Xiaojun Bao, Xizhong An

9:00-9:30	KN-17	Xiaojun Bao	Fuzhou University, China	Template-free Synthesis and Catalytic Application of Hierarchical ZSM-5 Zeolite from Natural Aluminosilicate Mineral: A Multi-scale Approach
9:30-10:00	KN-18	Charley Wu	University of Surrey, UK	The Development of Advanced Dem-based Hybrid Models for Manufacturing Formulated Particulate Products
10:00-10:20	OC-56	Dominik Weis	Institute of Particle Process Engineering / University of Kaiserslautern, Germany	Formulation of Pharmaceutical Pellets by Spheronization – Determination of Suitable Process Parameters on the Basis of DEM Simulations
10:20-10:40	OC-57	Zongyan Zhou	Monash University	Shape-Induced Radial Segregation of Ellipsoids in a Rotating Drum
10:40-11:00	Coffee Break			
11:00-11:30	KN-19	Xizhong An	Northeastern University, China	DEM Simulation of Icosahedral Particle Packing under Mechanical Vibration
11:30-11:50	OC-58	Lufeng Liu	Peking University, China	Maximally Dense Random Packings of Superellipsoids
11:50-12:10	OC-59	Liangwan Rong	South China University of Technology, China	A Linkage between Particle- and Cell-scale Drag Correlations for Packed Beds of Multi-sized Particle

FORMULA IX – Multiscale structures and functionalities for future formulation. Beijing Oct. 15th to 18th 2017

12:10-12:30	OC-60	Ye Yuan	Peking University, China	Disordered Jammed Packings of Binary Particle Shapes
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12:20-14:00	Lunch Restaurant on the 1st floor of Friendship Palace			
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Room 1 PRODUCTION, APPLICATION AND CUSTOMER NEEDS; ALL TYPES OF COLLOIDS, SOFT MATTER SYSTEMS AND/OR STRUCTURED LIQUIDS

Chair: Ah-Hyung A. Park, Dan Wang

14:00-14:30	KN-20	Jordi Esquena	Institute of Advanced Chemistry of Catalonia, Consejo Superior de Investigaciones Científicas, and Networking Research Center on Bioengineering, Biomaterials and Nanomedicine, Spain	Design, Properties and Applications of Highly Concentrated Emulsions and PolyHI Institute of Process Engineering Highly Porous Materials
14:30-15:00	KN-21	Dan Wang	Institute of Process Engineering, Chinese Academy of Sciences	Multi-shelled Metal Oxides Hollow Spheres: Synthesis and Applications
15:00-15:20	OC-61	Yiteng Liu	Tsinghua University, China	Preparation of SiC@Al ₂ O ₃ Core-shell Nanoparticles by a Slow Precipitation Method
15:20-15:40	OC-62	Xuan Hu	Formulation SAS	Fast Temperature Screening for Viscosity Determination of Thermoresponsive Polymers by Microfluidics
15:40-16:00	OC-63	Lionel Petton	Agfa-Gevaert NV	UV-Curable Inkjet Inks
16:00-16:20	Coffee Break			
16:20-16:50	KN-22	Ah-Hyung A. Park	Columbia University, US	Novel Liquid-like Nano-Scale Hybrid Materials for CO₂ Capture and Conversion
16:50-17:10	OC-64	Yanping He	Kunming University of Science and Technology, China	A Method of Large-scale Preparation of Porous Polymeric Microspheres in Foam Phase
17:10-17:30	OC-65	Cai Liu	Tianjin University, China	Dynamics of Water-ionic Liquid Two-phase Flow in a Flow-focusing Device: Droplet Formation and Wavy Interface
17:30-17:50	OC-66	Patricia Andreu	University of Birmingham, UK	Spray Dried Particles with Hollow Spherical Structure: Image Analyses and Morphological Characterization Using X-Ray Microtomography
17:50-18:10	OC-67	Dietmar Lerche	LUM	In Situ Visualization of Tracer Particle Movement to Study Continuous Phase Rheology, Structuring Processes and Aging

Room 2 MODELING AND SIMULATION ON MULTIPLE SCALES

Chair: Charley Wu, Kerstin Mülheims

14:00-14:20	OC-68	Faqi Zhou	China University of Petroleum, Beijing, China	Study of the Influence of Secondary Wind on Flow Field and Performance in a Cyclone Separator
14:20-14:40	OC-69	Haotong Wang	Zhejiang University, China	Particle Vortex Characterization of Geldart D Particles in the Fluidized Bed - the Effect of Side Wall Liquid

				Injection
14:40-15:00	OC-70	Shuli Shu	Polytechnique Montreal, Canada	Compartmental Modelling of Bubble Column Reactor Based on Computational Fluid Dynamics
15:00-15:20	OC-71	Yong Jin	East China University of Science and Technology, China	Application of CPFD Method in the Simulation of Pneumatic Conveying of Pulverized Coal
15:20-15:40	OC-72	Qianli Zou	Institute of Process Engineering, Chinese Academy of Sciences	Supramolecular Fabrication of Photofunctional Nanomaterials Based on Peptide Self-assembly toward Biomedical Applications
15:40-16:00	OC-73	Ke Wang	BASF Advanced Chemical Co. Ltd	BASF Innovation Campus Asia Pacific (Shanghai) Formulation Research and Processing Technology Joint Lab
16:00-16:20	Coffee Break			
16:20-16:50	KN-23	Kerstin Mülheims	BASF SE, Germany	EMMS-model Approach to Describe Multi-phase Fluidic Flows in Rotor-stator Systems
16:50-17:10	OC-74	Ying Ren	Institute of Process Engineering, Chinese Academy of Sciences	Mesoscale Modeling of Droplet Size Distribution in Rotor-stator Mixing Devices: Development of Surfactant Adsorption Kinetic Model
17:10-17:30	OC-75	Chao Chen	Institute of Process Engineering, Chinese Academy of Sciences	Mesoscale Modeling of Droplet Size Distribution in Rotor-stator Mixing Devices: a Population Balance Model with the Energy-minimization Multi-scale (EMMS) Concept
17:30-17:50	OC-76	Xiaoping Guan	Institute of Process Engineering, Chinese Academy of Sciences	Mesoscale Modeling of Droplet Size Distribution in Rotor-stator Mixing Devices during Emulsification: Integration of the Effects of Turbulence and Emulsifier Adsorption
17:50-18:10	OC-77	Ziyi Xu	Tianjin University, China	Dynamics of Partly Obstructed Breakup in a Microfluidic Y Junction
18:10-18:30	Closing Ceremony			
18:30-20:00	Dinner Restaurant on the 1st floor of Friendship Palace			

POSTER PROGRAM

Fundamental science, physico-chemical principles and mechanisms in formulation

P-01	Zhaoyang Ju ^{1,2} , Tingting Zhao ² , Suojiang Zhang ¹ , Xiaoqian Yao ^{1*} , Weihua Xiao ^{2*}	¹ Institute of Process Engineering, Chinese Academy of Sciences, China. ² China Agricultural University, China	The mechanism of conversion of bio-based furanics into aromatics catalyzed by brønsted Acid ionic liquids
P-02	Jing Bian, Fengjing Zhao, Yiping Fan, Chunxi Lu*	China University of Petroleum, Beijing, China	Revised calculating formula of feed jet concentration in the catalyst-feed countercurrent contacting injection zone of a FCC riser
P-03	Tongkai Chen ¹ , Ye Li ¹ , Chuwen Li ¹ , Xiang Yi ² , Ruibing Wang ¹ , Simon Ming-Yuen Lee ¹ , Ying Zheng ^{1*}	¹ University of Macau, China ² University of North Carolina at Chapel Hill, USA	Pluronic P85/F68 micelles of baicalein could interfere with mitochondria to overcome MRP2-mediated efflux and offer improved anti-parkinsonian activity

Design and engineering of formulations

P-04	Lijun Zhang, Wei Wei, Guanghui Ma*	Institute of Process Engineering, Chinese Academy of Sciences, China.	HSA induced HCPT nanocrystal for high-performance antitumor therapy
P-05	Jiachao Xiao ^{1,2} , Xi Yang ^{1,2} , Jianxu Sun ^{1,2} , Ying Li ^{1,2} , Jing Gao ^{1,2} , Hui Zhang ^{1,2} , Aiping Zheng ^{1,2,*}	¹ State Key Laboratory of Toxicology and Medical Countermeasures, China ² Institute of Pharmacology and Toxicology of Academy of Military Medical Sciences, China	Development and comparison of intramuscularly long-acting testosterone undecanoate nanocrystal with different particle size
P-06	Jian Guan ¹ , Yeli Zhang ² , Qiaoyu Liu ¹ , Xiaofei Zhang ¹ , Shirui Mao ¹	¹ Shenyang Pharmaceutical University, China ² FMC Corporation, USA	Alginate as a potential solid dispersion carrier prepared by kneading method
P-07	Xiaofei Zhang, Xiangqin Gu, Jian Guan, Shirui Mao	Shenyang Pharmaceutical University, China	Tunable release characteristics of highly soluble drug from chitosan-carbomer matrix tablets based on in-situ formed polyelectrolyte complex (PEC) film coating
P-08	Lin Cong, Xiaohui She, Guanghui Leng, Yulong Ding*	University of Birmingham, UK	Formulation and characterisation of ternary salt based solutions as a phase change materials for cold chain applications
P-09	A. Ligot*, L. Petton, L. Decoster, J. Loccufier	Agfa-Gevart N.V., Belgium	Aqueous resin based inkjet inks

Structure-property-relationship

P-10	Hongwu Zhang ^{1,2} , Lan Zhao ¹ , Yongdong Huang ^{1,*} , Kai Zhu ¹ , Xuexing Wu ¹ , Wei Wei ^{1,3} , Qiang Li ¹ , Qibao Wang ² , Zhiguo Su ¹ , Guanghui Ma ^{1,*}	¹ Institute of Process Engineering, Chinese Academy of Sciences, China ² China University of Mining & Technology, China ³ Beijing Institute of Petro-chemical Technology, China	Uniform polysaccharide composite microspheres prepared by membrane emulsification technique for high-resolution chromatography
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Processing and Scale-up

P-11	Kai Yang, Fangling Gong*, Guanghui Ma	Institute of Process Engineering, Chinese Academy of Sciences, China	Preparation of high performance flawless white day-cream by the fast membrane emulsification technique
P-12	Xiangyang Li ¹ , Fangyuan Chen ¹ , Chao Yang ^{1,2,*} , Zaisha Mao ¹	¹ Institute of Process Engineering, Chinese Academy of Sciences, China ² University of Chinese Academy of Sciences, China	Signal analysis of optical fiber probe for bubble and solid particle measurement and applicability in a gas-liquid-solid System

Production, application and customer needs

P-13	E. Illous, T. Lukowicz, C. Pierlot, V.Nardello-Rataj, J.M. Aubry*	Univ. Lille, CNRS, ENSCL, UMR 8181 - UCCS - Equipe Colloïdes Catalyse et Oxydation, France	Prediction of the most effective C ₁₂ E ₈ surfactants to solubilize oils in water using the Normalized - Hydrophilic - Lipophilic - Deviation (HLD)
P-14	Aoning Wang, Fandong Liu, Zhoulu Wang, Xiang Liu*	KLOFE, IAM, SICAM, Nanjing Tech University, China	Preparation of Silicon/Carbon/Graphite Spherical Composites for Lithium-ion Batteries

Formulation at the interface and surface design

P-15	Bin Zhang ^{1,2} , Xiaoyan Guo ^{1,2} , Guangxiang He ^{1,2,*} , Haibo Jin ^{1,2,*}	¹ Beijing Institute of Petrochemical Technology, China ² Beijing Key Laboratory of Fuels Cleaning and Advanced Catalytic Emission Reduction Technology, China	Synthesis of controllable carboxylated monodisperse polystyrene microspheres by two-steps dispersion polymerization with hydrocarbon alcohols
P-16	Valentin Goussard ^{1*} , Arthur Duprat ² , Vincent Gerbaud ³ , Véronique Nardello-Rataj ¹ , Jean-Marie Aubry ¹	¹ Université de Lille, CNRS, ENSCL, France ² Laboratoire de Chimie Organique, CNRS, ESPCI Paris, PSL Research University, ³ Université de Toulouse, INP, CNRS, Laboratoire de Génie Chimique, ENSIACET, France	Understanding how cosmetic oils spread on the skin surface: oil/skin interface design using theoretical approaches
P-17	Huimin Ruan, Xiaoxia Wu, Zheyu Shen*, Aiguo Wu*	Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, China.	Preparation of composite gold nanoparticles and their application in direct detection of circulating tumor cells in blood

Biomedical, health and environmental aspects

FORMULA IX – Multiscale structures and functionalities for future formulation. Beijing Oct. 15th to 18th 2017

P-18	Lingxiao Zhang ^{1,2} , Dongqun Liu ^{1,2} , Shaowei Wang ¹ , Ruitian Liu ^{1,*}	¹ Institute of Process Engineering, Chinese Academy of Sciences, China. ² University of Chinese Academy of Sciences, China.	Layered double hydroxides complex nanoparticles: breaking immune tolerance and promoting CTL responses in melanoma mouse model
P-19	Yanli Yang, Zhiguo Su, Guanghui Ma, Songping Zhang ^{1,*}	Institute of Process Engineering, Chinese Academy of Sciences, China ¹ Institute of Process Engineering, Chinese Academy of Sciences, China	Stabilization study of inactivated foot and mouth disease virus antigen
P-20	Wei Wei ^{1,2} , Lan Zhao ¹ , Yongdong Huang ^{1,*} , Kai Zhu ¹ , Xingxue Wu ¹ , Hongwu Zhang ^{1,3} , Qiang Li ¹ , Rongyue Zhang ² , Zhiguo Su ¹ , Guanghui Ma ^{1,*}	¹ Institute of Process Engineering, Chinese Academy of Sciences, China ² Beijing Institute of Petro-chemical Technology, China ³ China University of Mining & Technology, China	Strategy for preparation of alkali-stable protein a affinity chromatographic media
P-21	Xiangming Na, Weiqing Zhou, Guanghui Ma [*]	Institute of Process Engineering, Chinese Academy of Science, China	Preparation of double emulsion templated macroporous microspheres by premix membrane emulsification: a candidate for trapping virus like particles
P-22	Kai Zhu [*] , Lan Zhao, Yongdong Huang, Qiang Li, Zhiguo Su, Guanghui Ma	Institute of Process Engineering, Chinese Academy of Sciences, China	Preparation and performance improvement of dextran-grafted protein a affinity medium
P-23	Yi Wei, Guanghui Ma	Institute of Process Engineering, Chinese Academy of Sciences, China	Uniformed size porous mPEG-PLGA microspheres for SCT sustained release
P-24	Xun Li, Yi Wei, Bijing Shi, Guanghui Ma [*]	Institute of Process Engineering, Chinese Academy of Sciences, China	Preparation and characterization of uniform-sized ropivacaine-loaded PLGA microspheres
P-25	Ye Dong ^{1,2} , Hui ^{1,2} Zhang, Jianxu Sun ^{1,2} , Ying Li ^{1,2} , Jing Gao ^{1,2} , Xi Yang ^{1,2} , Aiping Zheng ^{1,*}	¹ Institute of Pharmacology and Toxicology, Academy of military medical sciences PLA, China ² Academy of military medical sciences PLA, China	Preparation and in vitro characterization of intramuscularly long-acting paliperidone palmitate suspension
Modeling and simulation on multiple scales (micro, meso, macro)			
P-26	Shengan Deng ¹ , Guofeng Lou ^{1,2,*} , Zhi Wen ^{1,2} , Xunliang Liu ^{1,2} , Ruifeng Dou ^{1,2} , Fuyong Su ^{1,2}	¹ University of Science and Technology Beijing, Beijing, China; ² University of Science and Technology Beijing, China	The study of particles flowing process around tubes in moving bed
P-27	Fei Sun ^{1,2} , Wen Lai Huang ^{1,*} and Jinghai Li ¹	¹ Institute of Process Engineering, Chinese Academy of Sciences, China ² University of Chinese Academy of Sciences, China	Mesoscale structures in the adlayer in heterogeneous catalysis
P-28	Chaofeng Hou	Institute of Process Engineering, Chinese Academy of Sciences, China	Reactive molecular dynamics simulation of early-stage chemical vapor deposition of crystalline silicon
P-29	Xiaoping Guan [*] , Ning Yang [*]	Institute of Process Engineering, Chinese Academy of Sciences, China	CFD simulation of bubble columns with internals
P-30	Dali Cai, Yunhai Ma, Yilin Hou, Yu Cui, Zhao Jia, Chenxi Zhang, Yao Wang, Fei Wei [*]	Tsinghua University, China	Establishing discrete ising model for zeolite deactivation: inspiration from the game of go
P-31	Chenggong Li, Mao Ye [*] , Zhongmin Liu	Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China	Moderate reynolds number flows around and through circular porous particles
P-32	Qian Jia, Xizhong An [*] , Xiaohong Yang, Haitao Fu, Hao Zhang	Northeastern University, China	MPFEM simulation on 2D compaction and solid sintering of multi-dimensional tungsten powders
P-33	Zhouzun Xie, Xizhong An [*] , Xiaohong Yang	Northeastern University, China	DEM dynamic modeling on the vibrated packing densification of cuboid particles with different aspect ratios
P-34	Haiyang Zhao ¹ , Xizhong An ^{1*} , Yongli Wu ² , Quan Qian ¹	¹ Northeastern University, China ² Monash University, Australia	DEM modeling on the stress behavior in granular matter
Special topic – coating			
P-35	Shengxi Jin ¹ , Vernon Sze ¹ , Frank Kleinsteinberg ² , Thorsten Schierle ² , Christoph J. Duerr ^{1,*}	¹ Evonik(SEA) Pte Ltd, Singapore ² Evonik Resource Efficiency GmbH, Germany	Challenges in the formulation of low polarity coatings
P-36	Yang Zhang [*] , Marcel Schmitt, Kristina Wang	BASF Advanced Chemicals Co. Ltd, Germany	Formulation design and process technologies of UV curable hybrid materials