

5th Blue Sky Conference
on Catalytic Olefin Polymerization

Naples & Sorrento (Italy), 24-28 June 2019

co-organized by

Laboratory of Stereoselective Polymerizations (*LSP*)
Federico II University of Naples (Italy)

Dutch Polymer Institute (DPI)
Eindhoven (The Netherlands)



Web: www.bluesky.unina.it
E-mail: info.bluesky@unina.it



2ND CIRCULAR

March 2019

Preliminary Platinum Sponsors List

ExxonMobil



Preliminary Gold Sponsors List



ORGANIZATION

Chairpersons

Prof. Vincenzo Busico (*LSP*), Prof. Roberta Cipullo (*LSP*), Dr. Jacques Joosten (*DPI*), Prof. Minoru Terano (*JAIST*)

Secretary

Dr. Andrea Correa (*LSP*)

INTRO

Following the great success of the previous editions, the **5th Blue Sky Conference on Catalytic Olefin Polymerization**, organized in collaboration by the Laboratory of Stereoselective Polymerizations (*LSP*) of the Federico II University and the Dutch Polymer Institute (*DPI*), will be held on **24-28 June 2019 in Naples and Sorrento (Italy)**.

As usual, **the main venue will be the Hilton Sorrento Palace Conference Center**. The scientific program from Tuesday June 25 until Friday June 28 will focus on the latest achievements in molecular and heterogeneous olefin polymerization catalysis, including catalyst design, precatalyst activation and speciation, molecular kinetics, as well as polymer microstructure and architecture, materials structure and physical properties.

On Monday June 24, though, the Conference will start in Naples, at the new Complex of the Federico II University in San Giovanni, **with a special session on sustainable polymers in a circular economy**. Leading experts from industry and academia will address the various facets of this important and partly controversial issue. The session will also provide the opportunity to announce the foundation of the **'High Throughput Polymer Hub'** of the Federico II University, a new R&D facility aimed to implement and apply High Throughput Experimentation (*HTE*) and Computation (*HTC*) tools and methodologies spanning the entire polymer knowledge and value chains, with a holistic approach able to address the ever growing complexity of advanced polymeric materials.

The conference format has been revisited so as to be even more stimulating and interactive. Some Keynote Lecture slots will be shared by two or more scientists highlighting their collaboration efforts on specially complicated and challenging topics. **In addition to Contributed Oral and Poster presentations, a certain number of posters (up to 25) will be selected by the Conference Chairpersons for 'Elevated Pitches'**, i.e. 15-min/10-slide oral presentations with discussion deferred to the poster session.

In the tradition of the conference, we have set no deadlines to apply for oral and poster contributions. **However, we recommend to move up, because the number of residual open slots for Contributed Lectures is very thin. Moreover, accommodation at the Hilton Sorrento Palace Hotel is already at stake; as of 31 March 2019 we have more than 150 registered participants (and over 80 accepted posters)**.

Given these numbers and looking at the scientific quality of the preliminary program (included in the present Circular), **we expect a great event!**

GETTING THERE

This year's event has a dual venue, i.e. Naples and Sorrento. The main reason is that the Opening Session in Naples on Monday 24 June, focusing on sustainability in a circular economy, is also meant for the students enrolled in the Degrees of Chemical Sciences and Engineering of the Federico II University. **For practical and logistic reasons, all Blue Sky participants will be received and accommodated in Sorrento. The main Registration session will be held in the Lobby of the Hilton Sorrento Palace Hotel on Sunday 23 June, from 4:00 pm until 7:30 pm, and from 21.30 to 22.30 for late arrivals.** The drawback of a rather early wake-up on the following day will be compensated by one single hotel check-in and a straightforward luggage handling.

Sorrento can be easily reached by coach from Naples International Airport (Curreri Line; www.curreriviaggi.it), or by train from Naples Central Railway Station. Hydrofoils and ferries also operate to Sorrento from Naples Harbor. In all cases, travel time is about one hour.

Driving to Sorrento from Naples normally also takes approximately one hour, along a spectacular but narrow and winding road (continuing to Positano and Amalfi). In the Summer week-ends, though, the road is often congested, and the drive time may easily double.

Special Conference shuttle buses will operate from Naples International Airport to the Hilton Sorrento Palace Hotel on Sunday 23 June (for booking, see the Accommodation Form).

In the morning of Monday 24 June, transfer to Naples will take place by hydrofoil. Participants will receive detailed instructions upon registration. Indicatively, departure from the Hilton to Sorrento Harbor will be at 7.45 am by vans. The hydrofoil will depart at 8:10 am, and arrive at Naples Harbor at 8:50 am. From there, the Federico II University Complex of San Giovanni will be reached in less than 30 min by coach. The Opening Session will start at 9.45 am. Return to Sorrento in the afternoon will be by coach; the first Conference dinner in the garden of the Hilton should be a good way to relax after a busy day.

REGISTRATION (Form downloadable at www.bluesky.unina.it)

The **Registration Fees** are as follows:

- Academic Participant € 600.00
- Company Participant € 1100.00
- PhD Student € 300.00
- Accompanying Person € 250.00

The Fees include three dinners at the Hilton Sorrento Palace (on 24, 25 and 26 June) for all Participants and Accompanying Persons, and free bar at the after-dinner Poster Sessions for all Participants on 25 and 26 June (and for DPI Participants on 27 June as well).

ACCOMMODATION (Form downloadable at www.bluesky.unina.it)

Participants are invited to lodge at the **Hilton Sorrento Palace Hotel**, in order to facilitate personal meetings and discussions. The following discounted rates (including a rich continental buffet breakfast and access to a number of hotel services and facilities, starting with the outdoor and indoor swimming pools) have been agreed upon:

- Double room for single occupancy € 200.00
- Double room € 230.00
- Second person supplement € 40.00

Conference Program

A constantly updated program is available on-line at www.bluesky.unina.it. The abstracts of all Keynote and Invited Lectures, and the preliminary Poster Presentation list, will be published on-line at the same URL on 15 April 2019.

Preliminary Program as of 31 March 2019

(Legenda: KN = Keynote Lecture ; IL = Invited Lecture; CL = Contributed Lecture; EP = Elevated Pitch)

Monday, 24 June 2019 – Naples

(Aula Magna, Complex of San Giovanni, Federico II University)

Time	Session
8.10	Transfer by hydrofoil from Sorrento to Naples
09.45-10.30	Opening Addresses - Gaetano Manfredi (Rector, Federico II U-Naples, I) - Jacques Joosten (Managing Director, Dutch Polymer Institute, NL) - Minoru Terano (VP, Japan Advanced Institute of Science&Technology, J)
10.30-11.15	1. Sustainable Polymers for a Circular Economy - KN1: Just Jansz (Expertise Beyond Borders, NL) <i>Sustainability: a new paradigm for plastics</i>
11.15-11.30	Coffee break
11.30-12.15	- KN2: Rolf Mülhaupt (U-Freiburg, D) <i>Is the future of plastics green?</i>
12.15-13.00	- KN3: Markus Gahleitner (Borealis, Linz, A) <i>Polyolefins as building blocks for a circular economy</i>
13.00-14.30	Lunch
14.30-15.00	- IL1: Frank Kuijpers (SABIC, Sittard, NL) <i>Plastics: from waste to building block for a sustainable world</i>
15.00-15.30	- IL2: Bob Maughon (Dow Chemical, Lake Jackson, TX, USA) <i>Dow Packaging and Specialty Plastics Innovation: Delivering Sustainable Solutions Across the Value Chain</i>
15.30-16.00	- IL3: Gus Hutras (Braskem S.A., Philadelphia, PA, USA) <i>Chemical Recycling: Solving a Plastic Problem</i>
16.00-16.15	Coffee break
16.15-17.30	- Brainstorming and Open Discussion (Industry&Academia)
17.45	Transfer by coach to Sorrento
20.00-21.45	Dinner

Tuesday, 25 June 2019 – Sorrento
(Hilton Sorrento Palace Conference Center)

Time	Session
08.45-09.00	Opening Remarks (Vincenzo Busico, Federico II U-Naples, I)
09.00-10.30	2. Catalyst Design - KN4: Jean-Francois Carpentier (U-Rennes, F) & Laurent Maron (U-Toulouse, F) <i>Design of Lanthanidocene Catalysts for Syndioselective Styrene–Ethylene Homo and Copolymerization: a Joint Experimental and Computational Effort</i>
10.30-10.45	- EP1: Christian Ehm (Federico II U-Naples, I) <i>Catalyst Design Using HTE Tools and DFT QSAR Modeling: A Case Study on C₂-symmetric Bis-indenyl Type Zirconocenes in Olefin Polymerization</i>
10.45-11.00	- EP2: Open Slot
11.00-11.15	- EP3: Mostafa Khoshsefat (U-Alberta, Edmonton, CDN) <i>Selectivity of SCB formation in PE microstructure through dinuclear Ni based catalysts</i>
11.15-11.30	Coffee break
11.30-11.50	- CL1: Peter H. M. Budzelaar (Federico II U-Naples, I) <i>Structure-activity relationships for bisphenolate ether catalysts</i>
11.50-12.10	- CL2: Shixuan (Bruce) Xin (Petrochina, Beijing, CP) <i>Neutral Nickel Complexes Catalyzed Ethylene Polymerization and Olefin-Polar Monomer Copolymerization</i>
12.10-12.30	- CL3: Victor Quiroga (Arlanxeo, Geleen, NL) <i>Controlled production of bimodal copolymers using guanidinato catalysts</i>
12.30-12.45	- EP4: Open Slot
12.45-13.00	- EP5: Laura Falivene (KAUST, Jeddah, KSA) <i>Control of chain walking by tailoring the strength of neighboring group interactions switches polymerization to dimerization catalysis</i>
	Lunch break
16.00-17.00	3. Reaction Kinetics and Mechanistic Studies - KN5: Clark Landis (U-Wisconsin at Madison, USA) <i>Practical, Information-Rich Kinetic Methods for Understanding Catalytic Alkene Polymerization</i>
17.00-17.20	- CL4: Joao Soares (U-Alberta, Edmonton, CDN) <i>A Tale of Two Sites</i>
17.20-17.40	- CL5: Timothy McKenna (CPE, U-Lyon, F) <i>Condensed Mode Cooling: The Impact of Induced Condensing Agents on Gas Phase Polymerisation of Ethylene</i>
17.40-18.00	Coffee break
18.00-18.15	- EP6: Yue Yu (CPE, U-Lyon, F) <i>Employing alkynyl ether labeling to count active sites of olefin polymerization catalysts: Methodology and application</i>
18.15-18.30	- EP7: Mikhail Matsko (Boreskov Institute of Catalysis, Novosibirsk, RUS) <i>Design of bimodal polyethylene on the base of bis(imino)pyridine Fe(II) complexes</i>
18.30-18.45	- EP8: Yi Luo (Dalian-U, CP) <i>C–H...π Interaction” Regulates Stereoselectivity in Olefin Polymerization</i>
18.45-19.00	- EP9: Francesco Zaccaria (Federico II U-Naples and U-Perugia, I) <i>Insights into the structure and reactivity of BHT-modified MAO by NMR spectroscopy</i>
19.00-19.30	- IL4: Cristiano Zuccaccia (U-Perugia, I) <i>Ionic aggregation, in-situ modification and interaction with chain transfer agents of molecular catalysts for olefin polymerization</i>
19.45-21.00	Dinner
21.00-...	Poster Session 1 (with Open Bar)

Wednesday, 26 June 2019 – Sorrento
(Hilton Sorrento Palace Conference Center)

Time	Session
08.45-10.45	4. Heterogeneous Catalysts - KN6: Christophe Copéret (ETH-Zurich, CH), Florian Meirer (U-Utrecht, NL), Elena Groppo (U-Turin, I), and Toshiaki Taniike (JAIST, J) <i>Ziegler-Natta (and related) catalysts from up and close: a 4-labs combined characterization approach</i>
10.45-11.00	- EP10: Giorgia Martino (U-Turin, I) <i>Tuning the properties of the Cr/SiO₂ Phillips catalysts with Al-Alkyls co-catalysts</i>
11.00-11.15	- EP11: David Trummer (ETH Zurich, CH) <i>Experimental Evidences and Conjectures on the Initiation Process in Cr-based ethylene polymerization</i>
11.15-11.30	Coffee break
11.30-11.50	- CL6: Vincent Monteil (CPE, U-Lyon, F) <i>New trends in Heterogeneous Ziegler-Natta Catalysis: Lewis Acids Influence on Titanium and Non-Titanium based Catalysts</i>
11.50-12.10	- CL7: Zhiquiang Fan (Zhejiang-U, Hangzhou, CP) <i>Study on Active Centers and Molecular Kinetics of 1-Hexene Polymerization by Quench-Labeling and ¹H NMR Analysis</i>
12.10-12.30	- CL8: Virendrakumar Gupta (Reliance, Navi Mumbai, IND) <i>Magnesium Alkoxide Catalyst Precursor and Its Ziegler Natta catalyst for Polypropylene: Morphological Insights</i>
12.30-12.45	- EP12: Toshiya Uozumi (Toho Titanium, Chigasaki, J) <i>Propylene Polymerization Performance with Aminosilane Compounds as External Donors in Ziegler-Natta Catalysts</i>
12.45-13.00	- EP13: Bodo Richter (Evonik, Hanau-Wolfgang, D) <i>A spherical Mg-Ethanolate support for Ziegler Natta catalysts of superior ICP-PP capability and well defined particle morphology</i>
13.00-13.30	- IL5: Gerwin Wijsman (Grace, Worms, D) <i>Ziegler-Natta catalysts in changing environments - challenges in implementation</i>
	Lunch break
	5. Molecular Catalysts
16.00-17.00	- KN7: Bernhard Rieger (TU-Munich, D) <i>Catalytic Precision Polymerization: The Search for the Perfect iPP Helix</i>
17.00-17.20	- CL9: Jean-Charles Buffet (U-Oxford, UK) <i>Group 4 permethylindenyl constrained geometry complexes for olefins (co)polymerisation</i>
17.20-17.40	- CL10: Wen-Hua Sun (ICCAS, Beijing, CP) <i>Strictly Linear and Hyperbranched Polyethylenes Attainable Using Late Transition Metal Precatalysts</i>
17.40-18.00	- CL11: Open Slot
18.00-18.20	Coffee break
18.20-18.35	- EP14: Philip Kenyon (U-Oxford, UK) <i>Polymerisation in Polar Solvents to (Ultra)High Molecular Weight PE</i>
18.35-18.50	- EP15: Open Slot
18.50-19.20	- IL6: Kotohiro Nomura (Tokyo Metropolitan-U, J) <i>'Half-Titanocene Catalysts for Synthesis of New Polyolefins by Ethylene Copolymerizations, and Solution XAS for Analysis of Active Species'</i>
19.45-21.00	Dinner
21.00-...	Poster Session 2 (with Open Bar)

Thursday, 27 June 2019 – Sorrento
(Hilton Sorrento Palace Conference Center)

Time	Session
08.45-09.45	6. Materials Properties and Characterizations - KN8: Richard A. Register (Princeton-U, NJ, USA) <i>Polyethylene-Poly(x-Norbornene) Block Copolymers: Synthesis, Miscibility, and Properties</i>
09.45-10.00	- EP16: Rocco Di Girolamo (Federico II U-Naples, I) <i>Structure and morphology of isotactic polypropylene-based block copolymers prepared by Pyridylamido-Hafnium Catalyst</i>
10.00-10.15	- EP17: Open Slot
10.15-10.30	- EP18: Open Slot
10.30-10.50	- CL12: Theo Tervoort (ETH Zurich, CH) <i>Polyethylene "Al Dente", Gel-Spinning of High-Performance Polyethylene Fibers from Vegetable Oils</i>
10.50-11.10	Coffee break
11.10-11.30	- CL13: Tibor Macko (Fraunhofer Institute Darmstadt, D) <i>New applications of liquid chromatography on separation of polyolefins and additives in polyolefins</i>
11.30-11.50	- CL14: Mike T. C. Chung (Penn State-U, Pittsburgh, PA, USA) <i>Synthesis of Polyolefin Blend with IPN Structure and Microporous Morphology; Oil-Superabsorbent for Oil Spill and Recovery</i>
11.50-12.05	- EP19: Simon Jantač (UCT Prague, CZE) <i>Comprehensive experimental and modelling study of triboelectric charging of polyethene</i>
12.05-12.20	- EP20: Open Slot
12.20-12.50	- IL7: Roberto Pantani (U-Salerno, I) <i>Morphology distribution in complex thermomechanical environments: experiments and modeling</i>
	Lunch break
16.00-17.00	7. Novel Catalysts and Catalytic Routes to New Materials - KN9: Eugene Chen (Colorado State-U, USA) <i>Catalytic Routes to Sustainable Polymers with Full Chemical Recyclability for a Circular Plastics Economy</i>
17.00-17.15	- EP21: Carmine Capacchione (U-Salerno, I) <i>Toward more sustainable elastomers: stereoregular polymerization and copolymerization of natural linear terpenes</i>
17.15-17.30	- EP22: Hongfan Hu (Petrochina, Beijing, CP) <i>High Potential Commercial Rare Earth Catalysts System with Well-Defined Structure: Ultra-high Catalytic Activity toward High-Cis Butadiene Rubber</i>
17.30-17.45	- EP23: Giovanni Talarico (Federico II U-Naples, I) <i>Stereoselective lactide polymerization: a challenging game</i>
17.45-18.00	- EP24: Jean Raynaud (CPE, U-Lyon, F) <i>Understanding Iron Catalysis to design Statistical and Block Copolymers from Ethylene & 1,3-diene Copolymerization</i>
18.00-18.20	Coffee break
18.20-18.50	- IL8: Christophe Boisson (CPE, U-Lyon, F) <i>Neodymium catalysts for new polyolefin materials: chain shuttling and copolymerization of ethylene with conjugated dienes</i>
18.50-19.20	- IL9: Adam S. Veige (U-Florida, USA) <i>Catalytic synthesis of cyclic polymers: commercially relevant polyolefins now available without chain ends</i>
21.00-...	DPI Poster Session (for DPI Affiliates only)

Friday, 28 June 2019 – Sorrento
(Hilton Sorrento Palace Conference Center)

Time	Session
09.00-10.00	8. Future Trends - KN10: Ted Carnahan (Dow Chemical, Freeport, TX, USA) <i>'Rethinking Polyolefins in a Changing World'</i>
10.00-10.20	- CL15: Antonio Vittoria (Federico II U-Naples, I) <i>HTE-based opportunities for mastering olefin polymerization catalysts and processes</i>
10.20-10.50	- IL10: Julie Kornfield (Caltech, Pasadena, CA, USA) <i>Refocusing polyolefin research in academia: a solicited expert opinion</i>
10.50-11.10	Coffee Break
11.10-12.10	- KN11: Maurits Van Tol (Senior VP Innovation & Technology, Borealis AG, A) <i>Polyolefins: Quo Vadis?</i>
12.10-12.30	- Best-Poster Lecture
12.30-12.45	- Best-Posters Awards & Closing Remarks

BEST POSTER AWARDS

Poster sessions are given ample space and high visibility. Moreover, Poster Authors should bear in mind that their papers can be selected for oral presentation via the Best-Poster Lecture Award contest. At the Conference, a Board of Referees including the Conference Chairpersons and the Keynote and Invited Lecturers will vote for the **'best poster', which will be presented orally** (20 min including discussion, in a dedicated slot on Friday, 28 June). Furthermore, **the Author(s) of the three poster presentations with the highest numbers of votes will receive a small grant from the Organization.**