31st International Symposium on Chirality



Programme

WELCOME TO BORDEAUX

It is our great pleasure to welcome you to Bordeaux for the 31st International Symposium on Chirality - CHIRALITY 2019 held at ENSEIRB MATMECA, located on the campus of the University of Bordeaux, a short tram ride away from the centre of Bordeaux—the "Port of the Moon"—and its UNESCO world heritage-protected, historic centre created in the Age of Enlightenment.

This annual three and a half days event is dedicated to state-of-the-art research in various fields of chirality, and was first organised in 1991. CHIRALITY 2019 in Bordeaux follows the previous meetings held in Princeton (2018), Tokyo (2017), Heidelberg (2016), Boston (2015), and Prague (2014).

During this 2019 conference, achievements in enantioseparation from some of the founders of the CHIRALITY conference will be highlighted by invited speakers. Also, the annual Chirality Medal will be award to a researcher who has made significant contributions to this field over the course of his career. This year, the Chirality Medal winner is Professor Laurence A. Nafie from Syracuse University, USA.

This exciting programme brings together students, postdoc fellows and established researchers from academia, as well as industrialists, with topics covering the whole spectrum of chirality research.

CHIRALITY 2019 was made possible only through the generous help of our sponsors and we thank them for all their support.

We also wish to thank all the local organisers, students and postdocs, as well as the advisory board and the past organisers for their valuable advice.

We hope that you will have a great CHIRALITY 2019 experience and that you will enjoy the beautiful city of Bordeaux and its surroundings.

Reiko ODA, University of Bordeaux, Chair **Jeanne CRASSOUS**, University of Rennes 1, Co-chair

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INTERNATIONAL COMMITTEE

- Toru ASAHI, Waseda University, Japan
- Isao AZUMAYA, Chiba University, Japan
- · Zachary S. BREITBACH, AbbVie Inc., North Chicago, USA
- · James CANARY, New York University, USA
- · Albert CHAN, Hong Kong Polytechnic University, China
- Jeanne CRASSOUS, University of Rennes 1, France
- Lorenzo DI BARI, University of Pisa, Italy
- Bart KAHR, New York University, USA
- · Jérôme LACOUR, University of Geneva, Switzerland
- Oliver TRAPP, University of Munich, Germany
- Claudio VILLANI, Sapienza University of Rome, Italy
- David WALBA, University of Colorado, Boulder, USA
- + R. Thomas WILLIAMSON, University of North Carolina, USA
- Eiji YASHIMA, Nagoya University, Japan
- Daniel W. ARMSTRONG, Arlington TX, USA
- Nina D. BEROVA, New York, NY, USA
- John CALDWELL, Liverpool, UK
- Eric FRANCOTTE, Basel, Switzerland
- Wolfgang LINDNER, Vienna, Austria
- Yoshio OKAMOTO, Nagoya, Japan
- Kazuhiko SAIGO, Kochi, Japan
- Christopher WELCH, Indiana, USA
- Domenico MISITI, Rome, Italy retired 2010
- Vadim A. DAVANKOV, Moscow, Russia retired 2007
- Volker SCHURIG, Tübingen, Germany retired 2006
- Irving WAINER, Washington, USA retired 2000
- Bernard TESTA, Lausanne, Switzerland retired 1998
- Anthony FELL, Bradford, UK retired 1999
- Uli HACKSELL, Stockholm, Sweden retired 1995
- André COLLET, Lyon, France Deceased 1999
- William PIRKLE, Urbana, USA retired 2001, deceased 2017

LOCAL ORGANISING COMMITTEE

Scientific

committee

&

- Reiko ODA, CBMN, University of Bordeaux / CNRS / Bordeaux INP, Chair
- + Jeanne CRASSOUS, University of Rennes 1 / CNRS, Co-chair
- Thierry BUFFETEAU, ISM, University of Bordeaux / CNRS
- Nicolas DAUGEY, ISM, University of Bordeaux / CNRS
- Yann FERRAND, CBMN, University of Bordeaux / CNRS / Bordeaux INP
- Gilles GUICHARD, CBMN, University of Bordeaux / CNRS / Bordeaux INP
- organising
 Elizabeth HILLARD, CRPP, University of Bordeaux / CNRS
 - Brice KAUFFMANN, IECB, University of Bordeaux / CNRS
 - Yannick LANDAIS, ISM, University of Bordeaux / CNRS
 - + Sylvain NLATE, CBMN, University of Bordeaux / CNRS / Bordeaux INP
 - + Emilie POUGET, CBMN, University of Bordeaux / CNRS / Bordeaux INP
 - + Vincent RODRIGUEZ, ISM, University of Bordeaux / CNRS
 - Patrick ROSA, ICMCB, University of Bordeaux / CNRS

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committee

Honorary advisory

committee

Emeritus

members

Executive

INVITED SPEAKERS

Plenary speakers

- Donald HILVERT, ETH Zurich, Switzerland
- Nicholas KOTOV, University of Michigan, USA
- Alexander KUHN, University of Bordeaux / CNRS / Bordeaux INP, France
- Laurence A. NAFIE, Syracuse University, USA
- Virginie SIMONET, CNRS / Grenoble Alpes University, France
- Michinori SUGINOME, Kyoto University, Japan

Keynote speakers

- Narcis AVARVARI, University of Angers, France
- ◆ Petr BOUR, University of Chemistry and Technology, Prague, Czech Republic
- Zachary BREITBACH, AbbVie Inc., USA
- Chiara CAPPELLI, Scuola Normale Superiore, Italy
- Shunai CHE, Shanghai Jiao Tong University, China
- Jonathan CLAYDEN, University of Bristol, UK
- Lorenzo DI BARI, University of Pisa, Italy
- Stephen FLETCHER, University of Oxford, UK
- Pilar FRANCO, Chiral Technologies, France
- Hirotaka IHARA, University of Kumamoto, Japan
- Nathalie KATSONIS, University of Twente, The Netherlands
- Jérôme LACOUR, University of Geneva, Switzerland
- Giovanna LONGHI, University of Brescia, Italy
- Keiji MARUOKA, Kyoto University, Japan
- Cornelia MEINERT, University of Côte d'Azur, France
- Anja PALMANS, Eindhoven University of Technology, The Netherlands
- Jun SHEN, Harbin Engineering University, China
- Jay SIEGEL, Tianjin University, China
- Oliver TRAPP, Ludwig-Maximilians University, Germany
- Joanna WENCEL-DELORD, University of Strasbourg, France
- Eiji YASHIMA, Nagoya University, Japan
- Jieping ZHU, Ecole Polytechnique Fédérale de Lausanne, Switzerland









CHIRALITY MEDAL 2019

The Chirality Medal was instituted by the Societa Chimica Italiana in 1991 to honor internationally recognized scientists who have made a distinguished contribution to all aspects of chirality. It is awarded each year by a Chirality Medal Honor Committee comprising the Chirality International Committee members and the most recent recipients of the medal. This year, we will be honored to award



Professor Laurence (Larry) A. NAFIE

Distinguished Professor Emeritus in Chemistry, Syracuse University (USA), world-wide recognized specialist of Vibrational Optical Activity

Prof. Larry Nafie receives the honor for his seminal contributions to the development and application of vibrational optical activity (VOA). VOA comprises two powerful complementary chiroptical spectroscopies: infrared vibrational circular dichroism (VCD) and vibrational Raman optical activity (ROA), both of which provide complete three-dimensional solution structures, including absolute configuration, of chiral molecules. In 1974, while a postdoctoral associate in the laboratory of Philip Stephens (1940-2012) at the University of Southern California, Larry Nafie confirmed and extended the first reported VCD spectrum published earlier that year from the laboratory of George Holzwarth at the University of Chicago. Using a superior VCD instrument design (based on the fabrication of the first ZnSe photoelastic modulator, now used in all VCD spectrometers), he published with Tim Keiderling and Philip Stephens, the first major paper on VCD. Thanks to his groundbreaking papers, Larry was appointed to the faculty of Syracuse University in 1975, the first to be hired in the USA specifically to pursue a career in VCD. Due to his doctoral research experience at the University of Oregon with Raman spectroscopy, he extended his program to include ROA, thereby establishing the first laboratory dedicated to research in both VCD and ROA. His ensuing research made vital contributions to the theory, instrumentation, measurement and application of both VCD and ROA spanning 35 years until his retirement from Syracuse University in 2010.

Especially important was the development in his laboratory in 1979 of a Fourier transform (FT) instrument for measuring VCD. Commercial FT-VCD instruments based on this design are now used in both academic and pharmaceutical research laboratories around the world. The advent of a practical VCD instrument has made a huge impact on many areas of chemistry, biochemistry and medicinal chemistry. Additionally he was the first to measure ROA using the circular polarization content of Raman spectra which he named scattered circular polarization (SCP) ROA, now the basis of all commercial ROA instruments. Further, he has made fundamental contributions to the foundations of the theory of VOA including the vibronic coupling theory of VCD, nuclear velocity dependence of VCD and vibrational electron current density, resonance ROA, and VCD in molecules with low-lying electronic states. Among many other things, VOA has become one of the most important and reliable methods to determine the absolute configuration of single-enantiomer drug molecules. BioTools, Inc., which was co-founded by Prof. Nafie and Dr. Rina Dukor in 1996 for the commercialization of VOA, offered the first dedicated spectrometer for the measurement of VCD in 1997 and of ROA in 2003.

The living scientist who had the most to do with this major innovation in chiral analysis is undoubtedly Prof. Larry Nafie. We address our warmest congratulations to him!

CONGRATULATIONS

Professor Laurence A. Nafie recipient of the





On behalf of Vibrational Optical Activity users around the world, students, collaborators and employees of BioTools, we thank you for the pioneering and continued work on VCD & ROA.

You are an inspiration for everything we do.



PRACTICAL INFORMATION

WELCOME DESK

Staff will be available to offer assistance with registration, city information and transport. Opening hours : Sunday: 9.30 - 19.00 Monday: 08.00 - 18.30 Tuesday: 08.00 - 18.30 Wednesday: 08.00 - 16.00

REGISTRATION FEE

Registration fee includes access to all sessions, conference material, daily coffee breaks, daily lunches, and the welcome reception. The gala dinner is not included.

NAME BADGE

Please wear your badge at all times, including during the welcome reception. For security reasons, badge controls may be made during the symposium throughout the venue.

WIRELESS INTERNET

Free wireless internet is available throughout the venue.

Network: Bordeaux INP

Password: a personal ID and password are provided to each participant, written on the name badge.

Special instruction: If the connection is not automatic, please check if one of the following security mechanisms is being used: WPA2 Entreprise, AES, PEAP, MSCHAPv2.

CATERING

Coffee will be served daily in Building 2, near the amphitheaters and the exhibition. Lunches will be served daily as well, in a dedicated room in Building 1. After lunch, you can enjoy a coffee or tea with sweets during the poster sessions, in Building 2.

GALA DINNER

The gala dinner will be held on Tuesday the 16th of July, at Chateau Smith Haut Lafitte, (Martillac). If you didn't register for the dinner, please see us at the welcome desk. On-site registration will depend on last minute availabilities. If you chose the gala dinner option, a voucher has been inserted in your badge, please make sure to present it at departure, scheduled at 18.45 from the venue. More info p.15

CLOAKROOM

A secured cloakroom will be available in Building 1 for suitcases. We kindly ask you to keep valuable belongings like handbags and laptops with you.

CERTIFICATE OF ATTENDANCE

Certificates of attendance are provided on request at the welcome desk during opening hours.

SPEAKER READY ROOM

The speaker ready room is located in the direct vicinity of the amphitheaters, in Building 2.

TAXI

Should you need a taxi, please contact the following companies:

Taxis 33: 05 56 74 95 06 Taxis Alliance: 05 56 77 24 24 Taxis Télé: 05 56 96 00 34 Taxis Girondins: 05 56 80 70 37

Meeting point : main entrance

ENSEIRB MATMECA / Bordeaux INP Avenue des Facultés 33400 Talence The duration of the journey from the venue to the airport is +/- 30 minutes, depending on traffic.

FREE PUBLIC TRANSPORT CARD

All participants have received a free travel card kindly offered by Bordeaux Métropôle.

These cards can be used for buses and tramways in Bordeaux from the 14^{th} to the 17^{th} of July.

Please note that every time you use a route on the network, you must validate your ticket, even if you are just changing services. Otherwise, you risk incurring a hefty penalty.

ORAL PRESENTATIONS

Presenting authors of oral communications are required to bring their presentation on a USB stick to the **speaker ready room**, **no later than the last coffee break before their talk**. Individual computers are not accepted.

POSTER SESSIONS

Two poster sessions are scheduled, on Monday and Tuesday after lunch (Building 2). Presenting authors are required to display their posters before Monday

at 12.00 (clips available on panels).

Authors of posters with even numbers are required to present their paper during the poster session 1 on Monday. Authors of posters with odd numbers are required to present their paper during the poster session 2 on Tuesday.

Posters can be displayed during the whole duration of the symposium and must be taken down at the end, on Wednesday.

POSTER AWARDS

Poster prizes, sponsored by the Royal Society of Chemistry, BioTools and INITIO, FET Open European Project, will be awarded during the closing ceremony.

BORDEAUX GENERAL INFORMATION

EMERGENCIES

In the event of a medical emergency: (24 hours a day, 7 days a week)

- Ambulance (Samu): 15
- Fire and rescue: 18
- SOS Médecins Bordeaux: 05 56 44 74 74
- European Emergency Number: 112

Pharmacies open 24/7:

Pharmacie des Capucins
30 place des Capucins - Bordeaux

Pharmacie d'Albret
 71 cours d'Albret - Bordeaux

Police : 17 Hôtel de Police - 23 rue François de Sourdis Tram line A - Hôtel de Police station

BORDEAUX PUBLIC TRANSPORT

Tramways run from 5am to midnight, Sunday to Wednesday, and until 1am on Thursdays, Fridays and Saturdays (last departures from terminal). During the day, tram services run every 3 to 5 minutes. The rest of the time, trams run every 8 to 15 minutes.

Information and timetables can be found on www.infotbm.com.

BANK

Most banks are closed on Sundays and Mondays, and are generally open from 9am to 5pm. Cash machines can be found everywhere in town.

CURRENCY EXCHANGE

Bureau de Change Novacambios Bordeaux 46 cours du Chapeau rouge - Bordeaux

Tram line B - Grand Théâtre station Opening hours: 10am - 7pm

SHOPPING IN BORDEAUX

In France and in Bordeaux, stores are generally open from Monday to Saturday, from 10am to 7pm. Essential shopping addresses in the centre of Bordeaux are :

• Sainte-Catherine pedestrian street (longest shopping street in Europe)

Mollat book store (largest independent book store in France)

• Quai des Marques (a group of factory outlet stores and restaurants located in former maritime warehouses of the city, at the foot of the new bridge, Pont Jacques Chaban Delmas)

 Mériadeck shopping centre (a large downtown shopping centre with shops, services and restaurants along with a supermarket spanning 3 floors).

SPECIAL EVENT IN BORDEAUX

The French Republic National Day is celebrated on July 14th. This event attracts millions of people each year in a very festive atmosphere.

After the symposium welcome reception, we invite you to enjoy the festive atmosphere of the Bordeaux city and admire the traditional July 14th fireworks, scheduled at 22.45, along the Garonne river between the *Pont de Pierre* and *Place de la Bourse* (subject to weather).

We advise you to leave your valuable items and identity papers at your hotel, to avoid robberies. Please note that tram lines may be interrupted in the very centre of Bordeaux during this evening.











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GALA DINNER TUESDAY 16th JULY - 18.45

The CHIRALITY 2019 gala dinner will take place at **Château Smith Haut Lafitte, Grand cru classé**, one of the most famous and prestigious chateaux in the Bordeaux vineyards. The gala dinner will be a great opportunity to exchange with the community in an exceptionnal environment, and to taste the delicious Bordeaux wines.



PROGRAMME

- **18.45** Departure from the venue to Chateau Smith Haut Lafitte (by bus) Meeting point : see plan on p. 55
- 19.15 Arrival at Chateau Smith Haut Lafitte
- **19:20** Guided tour of the Smith Haut Lafitte estate and wineries, following by a welcome cocktail in the gardens (weather permitted).
- 20:40 Dinner served in the historical Cantelys Hall
- **23:00** Return journey to Bordeaux
- 23:30 Arrival at Bordeaux city centre

PLEASE NOTE:

The gala dinner is accessible by registration only and costs extra.

If you took the gala dinner option during the registration process, a voucher has been inserted in your badge. Please make sure to present it at departure. If you didn't choose the gala dinner option, please note that registration is subject to last minute availabilities (information at the welcome desk).

Please also be aware that no return shuttle to Bordeaux will be scheduled before the end of the dinner (around 23.00). Tramways run until midnight downtown.

THANK YOU TO OUR PARTNERS & SPONSORS



PROGRAMME SUNDAY 14th JULY

Time	Amphitheater F
9.30	Welcome coffee
10.00	Short course 1: Chiroptical spectroscopy methods for structural analysis of chiral molecules Teachers: Giovanna LONGHI, University of Brescia, Italy Prasad POLAVARAPU, Vanderbilt University, USA
12.30	Lunch
13.30	Short courses 2 : Materials Teachers: Anja PALMANS, Eindhoven University of Technology, The Netherlands Gil MARKOVICH, University of Tel Aviv, Israel
	Amphitheater 1
16.00	Opening ceremony Reiko ODA, Research director, Univ. of Bordeaux / CNRS / Bordeaux INP Jeanne CRASSOUS, Research director, University of Rennes / CNRS Jérôme LACOUR, Research director, University of Geneva, Switzerland Philippe MORETTO, Vice president for Research, University of Bordeaux Erick DUFOURC, Deputy Scientific Director, Institute of Chemistry (INC)
16.40	Chirality medal ceremony
16.50	Award lecture: Laurence A. NAFIE, Syracuse University, USA Vibrational optical activity: discovery, development and future challenges
18.00	Welcome reception
20.00	End

PROGRAMME MONDAY 15th JULY

Time	Amphitheater 1		
8:45 9:30	Donald HILVERT, ETH Zurich, SwitzerlandChair:Design and evolution of artificial metalloenzymesK. Saigo		
	Polymer / materials 1 Chair: E. Hillard		
9:30 9:55	Eiji YASHIMA, Nagoya University, Japan Control of macromolecular helicity for the development of unique chiral materials		
9:55 10:15	Tiziana BENINCORI, University of Insubria, Italy The «inherent chirality» concept: a very simple tool for designing materials with impressive enantiodiscrimination ability		
10:15 10:35	Xinhua WAN, Peking University, China Induced circular dichroism of isotactic poly(2-vinylpyridine) with diverse and tunable «sergeants-and-soldiers» type chiral amplification		
10:35 10:55	Jochen BRANDT, Imperial College London, United Kingdom Towards circularly polarized electroluminescence with a high dissymmetry factor from chiral emitters		
	Coffee break		
	Fundamentals Chair: V. Rodriguez		
11:15 11:40	Cornelia MEINERT, University of Côte d'Azur, France The Asymmetry of life		
11:40 12:00	Eric GRELET, CRPP, University of Bordeaux, France Chirality-controlled self-assembly via topological defects		
12:00 12:20	Maxwell CROSSLEY, University of Sydney, Australia The last fundamental form of stereoisomerism revealed !		
12:20 12:40 12:45*	Oliver TRAPP, Ludwig-Maximilians University, Germany * Emergence of evolution and homochirality on a molecular level		
	Lunch		

Plenary
Keynote
Oral presentation

Spectroscopy 1 Chair: C. Merten

Amphitheater 2

Giovanna LONGHI, University of Brescia, Italy Circularly polarized luminescence of twisted conjugated systems

Prasad POLAVARAPU, Vanderbilt University, USA Dissymmetry factor spectral analysis can be a useful diastereomer discrimination tool

Christian JOHANNESSEN, University of Antwerp, Belgium Resonance raman optical activity as a tool in structural biology: tales from the cold North

Tadashi MORI, Osaka University, Japan Is there any meaningful correlation between emission and absorption dissymmetry factor values?

Coffee break

Supramolecular 1 Chair: E. Yashima

Jay SIEGEL, Tianjin University, China Chirality and corannulene Yukata OKAZAKI, Kyoto University, Japan Detection of chiralized monoatomic anions using molecular assembled nanohelices as UV-transparent chiral template Donato MONTI, University of Rome Tor Vergata, Italy Supramolecular chirality and morphological features of homo and heteroaggregates of zinc (I)- and (d)-proline-porphyrin derivatives. David GONZALEZ RODRIGUEZ, University of Madrid, Spain Helically chiral self-assembled nanotubes through hierarchical coupling of cooperative interactions

Lunch

PROGRAMME MONDAY 15th JULY

13:30 14:50	Poster session 1 (even numbers)	
Time	Amphitheater 1	
	Asymmetric 1 Chair : J. Canary	
14:50 15:10	Shinobu TAKISAWA, Osaka University, Japan Facile enantioselective synthesis of hetero[9]helicenes using redox/acid cooperative catalysts	
15:10 15:30	Jon ANTILLA, Tianjin University, China Chiral phosphoric acid and metal chiral phosphate catalysis: double asymmetric catalytic reaction (dacr) and the arylation of indolyl methanols	
15:30 15:50	Francesco TASSINARI, Weizmann Institute of Science, Israel Enantioselective reduction of camphorsulphonic acid using a spin-polarized electrode	
15:50 16:15	Joanna WENCEL-DELORD, University of Strasbourg, France Sulfoxide as a new solution for accessing original chiral molecules via C-H activation	
Coffee break		
	Supramolecular (bio) Chair: G. Guichard	
16:35 16:55	Supramolecular (bio) Chair: G. Guichard Lucile FISCHER, University of Bordeaux, France Chirality induction in oligoamide aromatic foldamers interacting with protein surfaces	
16:35 16:55 16:55 17:15	Supramolecular (bio) Chair: G. Guichard Lucile FISCHER, University of Bordeaux, France Chirality induction in oligoamide aromatic foldamers interacting with protein surfaces Nathan VAN ZEE, Eindhoven University of Technology, The Netherlands Exploiting monomeric water in apolar environments to control the structure of supramolecular polymers	
16:35 16:55 16:55 17:15 17:15 17:35 17:40*	Supramolecular (bio) Chair: G. Guichard Lucile FISCHER, University of Bordeaux, France Chirality induction in oligoamide aromatic foldamers interacting with protein surfaces Nathan VAN ZEE, Eindhoven University of Technology, The Netherlands Exploiting monomeric water in apolar environments to control the structure of supramolecular polymers Jonathan CLAYDEN, University of Bristol, United Kingdom* Communicating chirality using molecular conformation	
16:35 16:55 16:55 17:15 17:15 17:35 17:40* 17:40 18:35	Supramolecular (bio) Chair: G. Guichard Lucile FISCHER, University of Bordeaux, France Chirality induction in oligoamide aromatic foldamers interacting with protein surfaces Nathan VAN ZEE, Eindhoven University of Technology, The Netherlands Exploiting monomeric water in apolar environments to control the structure of supramolecular polymers Jonathan CLAYDEN, University of Bristol, United Kingdom* Communicating chirality using molecular conformation Chair: N. Berova Michinori SUGINOME, Kyoto University, Japan Asymmetric catalysis with chirality-amplifiable dynamic helical macromolecular catalysts Chair:	

Plenary
Keynote
Oral presentation

PM

Poster session 1 (even numbers)

Amphitheater 2

Chirality at nano 1 Chair : B. Kauffmann

Gil MARKOVICH, Tel Aviv University, Israel Spontaneous and directed symmetry breaking in the formation of chiral lanthanide phosphate nanocrystals

Zhifeng HUANG, Hong Kong Baptist University, China Intrinsically chiral nanoparticles with sub-10 nm pitch: fabrication, characterization and applications

Andrew GELLMAN, Carnegie Mellon University, USA Surface structure sensitive enantioselectivity: quantification across chiral surface orientations

Shunai CHE, Shangaï Jiao Tong University, China Chirally mesostructured inorganic materials with optical activity

Coffee break

Physical computational Chair: T. Asahi

Inbal TUVI-ARAD, The Open University of Israel Protein chirality spectrum and chiral ramachandran plots

Jiri KESSLER, Czech Academy of Sciences, Czech Republic Modeling of resonance-induced enhancement of solvent raman optical activity

Shira YOCHELIS, The Hebrew University of Jerusalem, Israel Chirality and the electron spin

Free evening

PROGRAMME **TUESDAY 16th JULY**

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* Registration mandatory

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TUI	ESDAY 16 th JULY	
Time	Amphitheater 1	
8:45 9:30	Virginie SIMONET, CNRS / Grenoble Alpes University, France Magnetic chirality Chair: P. Rosa	
	Supramolecular 2 Chair: D. Walba	
9:30 9:55	Jérôme LACOUR, University of Geneva, Switzerland Supramolecular chemistry and chiroptical spectroscopy of readily prepared chiral macrocycles	
9:55 10:15	Minghua LIU, Institute of Chemistry, China Circularly polarized luminescence from supramolecular nanoassemblies of pi-conjugated gelators	
10:15 10:35	Stephen GOLDUP, University of Southampton, United Kingdom Mechanical chirality and mechanical motion	
10:35 10:55	Aya TANATANI, Ochanomizu University, Japan Development of helical structures based on the aromatic squaramides	
Coffee break		
Spectroscopy 2 Chair: L. Guy		
11:15 11:40	Chiara CAPPELLI, Scuola Normale Superiore, Italy A fully polarizable embedding model for chiroptical spectroscopy of complexsystems: status and perspectives	
11:40 12:00	Christian MERTEN, Ruhr-University Bochum, Germany VCD spectroscopy as tool to investigate substrate binding in asymmetric catalysts	
12:00 12:20	Reilly SONSTROM, University of Virginia, USA Chiral analysis of molecules with multiple chiral center using chiral tag rotational spectroscopy	
12:20 12:40 12:45*	Lorenzo DI BARI, University of Pisa, Italy* Discrimination of circularly polarized light based on molecular, supramolecular and mesoscopic chirality	
	Lunch Vendor Lunch*	

Plenary Keynote Ora

Oral presentation A	M
Amphitheater 2	
Chiral resolution Chair: C. Welch	
Jun SHEN, Harbin Engineering University, China Controlled synthesis and enantioseparation ability of polysaccharide derivatives bearing various functional pendants	
Reiko KURODA, Chubu University, Japan Spontaneous optical resolution in the crystalline state	
Yann MAIRESSE, University of Bordeaux, France Real-time determination of enantiomeric and isomeric content using photoelectron elliptical dichroism	
Chunhong ZHANG, Harbin Engineering University, China Synthesis of helical poly(phenylacetylene)s bearing l-proline dipeptide derivatives with different sequences as pendants and their chiral recognition abilities	
Coffee break	
Asymmetric 2 Chair: S. Nlate	
Jieping ZHU, EPFL, Switzerland Ion-pairing in catalytic enantioselective rearrangements	
Takanori SHIBATA, Waseda University, JapanEnantioselective construction of saddle-shaped chirality inbenzene-fused heteroatom-containing medium ring systems	
Christophe MICHON, University of Lille, France Development of chiral C ₂ -Symmetric <i>N</i> -Heterocyclic carbene Rh(I) catalysts through control of their steric properties	
Erika BENEDETTI, Paris Descartes University, France Highly enantioselective asymmetric transfer hydrogenation: a practical and scalable method to efficiently access planar chiral [2.2]paracyclophanes	



PROGRAMME TUESDAY 16th JULY

13:45 14:50	Poster session 2 (odd numbers)		
Time	Amphitheater 1		
	Asymmetric 3 Chair: J. Lacour		
14:50 15:15	Keiji MARUOKA, Kyoto University, Japan Design of new, high-performance organocatalysts with privileged structures for asymmetric catalysis		
15:15 15:35	Timothée CADART, Charles University, Czech Republic Synthesis of enantioenriched helical bispiroindeno[2,1-c]fluorenes via an enantioselective [2+2+2] cyclotrimerization step		
15:35 15:55	Mohamed AMEDJKOUH, University of Oslo, Norway Remote asymmetric amplification in synergistic and responsive autocatalytic systems		
15:55 16:15	Yannick GEIGER, IPCM Strasbourg, France First observation of hyperpositive non-linear effects in asymmetric catalysis		
	Coffee break		
	Enantioseparation Chair: C. Villani		
16:35 17:00	Pilar FRANCO, Chiral Technologies, France Chirality in chromatography: where should innovation go ?		
17:00 17:20	Ashraf GHANEM, University of Canberra, Australia Chirality at the dried blood spot: enantioselective analysis of pharmaceuticals on sub two micron columns		
17:20 17:40	Ben SLATER, Imperial College London, United Kingdom Mechanistic detail of enantioselective adsorption in a chiral metal organic framework		
17:40 18:00	KENJI HAMASE, Kyushu University, Japan Multi-dimensional HPLC analysis of chiral α-amino acids and carboxylic acids in extraterrestrial materials		
18:00 18:25	Zachary BREITBACH, AbbVie Inc., USA Evaluation of newly commercialized sub-2 μm chiral stationary phases in SFC and HPLC		
18:45	Departure for gala dinner at Chateau Smith Haut Lafitte		

Plenary Keynote Oral presentation

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Poster session 2 (odd numbers)

Amphitheater 2

Polymer / materials 2 Chair: N. Avarvari

Anja PALMANS Eindhoven University, The Netherlands From molecular to supramolecular chirality and back

Max HIRSCHMANN, Technische Universität Darmstadt, Germany Thermo- and magnetoresponsive polyaspartates

Girish LAKHWANI, University of Sydney, Australia Hierarchical self-assembly of chiral Perylene Imide based organogelators explained

Marine MICHEL, Imperial College London, United Kingdom Enantioselective polymeric membranes for chiral separation: comparison of pressure driven separation, pertraction and preferential sorption

Coffee break

Chirality at Nano 2 Chair: E. Pouget

Nathalie KATSONIS University of Twente, The Netherlands Chirality-derived motion of protocells

Davy GERARD, University of Troyes, France Probing optical chirality in the near-field of plasmonic nanostructures with photosensitive azobenzene-containing polymers

Ventsislav VALEV, University of Bath, United Kingdom First observation of optical activity in hyper-rayleigh scattering

Ignacio GARZON, University of Mexico, Mexico Chirality in bare and ligand-protected metal nanoparticles

Hirotaka IHARA, University of Kumamoto, Japan Strong and tunable circularly polarized luminescence induced by chiral supramolecular gel

Departure for gala dinner at Chateau Smith Haut Lafitte

PROGRAMME WEDNESDAY 17th JULY

8:45 Nicholas KOTOV, University of Michigan, USA Chair: 9:30 Chiral Inorganic Nanostructures W. Lindner **Spectroscopy 3** Chair: L. Di Bari 9:30 Petr BOUR, University of Prague, Czech Republic 9:55 Interpretation of optical activity spectra of proteins Wada TAKEHIKO, Tohoku University, Japan Development of high sensitive and high time-resolved circular dichroism (CD) 9:55 measurement system "Toward the analyses of biomolecular interactions and 10:15 their dynamics" Anne ZEHNACKER, Institut des Sciences Moléculaires d'Orsay, France 10:15 Vibrational circular dichroism study of the solid-state organisation of ring-10:35 containing peptides Sergio ABBATE, University of Brescia, Italy 10:35 How to deal with anharmonicities in various circumstances to obtain safe 10:55 conformational and configurational information from VCD spectra Coffee break Supramolecular 4 Chair: T. Brotin 11:15 Ji-Young KIM, University of Michigan, USA 11:35 Circularly polarized light driven chiral assembly of gold nanoparticles

11:15
11:35Ji-Young KIM, University of Michigan, USA
Circularly polarized light driven chiral assembly of gold nanoparticles11:35Stéphane LE GAC, University of Rennes 1, France
Towards chiroptical sensing from Möbius-type receptors12:00Kazushi KINBARA, Tokyo Institute of Technology, Japan
Design of synthetic chiral receptor molecules inspired
by structure and function of membrane proteins12:20Matthieu RAYNAL, Sorbonne University, France
Dynamic asymmetric catalysis by tuning the structure
of supramolecular helices

Lunch

Plenary
Keynote
Oral presen

Oral presentation	
Amphitheater 2	
Polymer / Materials 3	
Chair: I. Azumaya	
Narcis AVARVARI, University of Angers, France	
Chiral materials based on tetrathiafulvalene and metal-dithiolene complexes	
Karl-Heinz ERNST, Swiss Federal Laboratories for Materials Science and	
Technology, Switzerland On-surface topochemistry of helicenes	
Félix FREIRE, University of Santiago de Compostela, Spain	
Synthesis of a single-handed helical poly(diphenylacetylene) derivative based o helicity induction and memory effect and its conformational analysis	n
Coffee break	
Asymmetric 4 Chair: Y. Landais	
Tsuneomi KAWASAKI, Tokyo University of Science, Japan Asymmetric Strecker-type synthesis by using chiral amine arising from bydroger	n
isotope substitution	
Wim NOORDUIN, AMOLF Institute, The Netherlands Physicochemical routes to enantiomeric purity	
Takeo KAWABATA, Kyoto University, Japan 5Å-Hypothesis for remote asymmetric induction	
Stephen FLETCHER, University of Oxford, United Kingdom* Asymmetric additions to racemates	
Lunch	

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PROGRAMME WEDNESDAY 17th JULY

POSTER	
SESSIONS)

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Time	Amphitheater 1
	Chair: O.Trapp
13:45 14:30	Yunjie XU, University of Alberta, Canada Conformational landscapes and non-covalent interactions of chiral molecules: chirality recognition/transfer/amplification
14:30 15:15	Alexander KUHN, University of Bordeaux / CNRS / Bordeaux INP, France Chiral biomimetic metal electrodes for enantioselective analysis, separation and synthesis
15:15 16:00	Poster awards - Closing remarks Presentation of CHIRALITY 2020
	End

POSTER N°	AUTHOR	TITLE
P1	Abbasi David	Controlling the preferential motion of chiral molecular walkers on a surface
P2	Abbate Sergio	CD and CPL spectra of pyrenopyrene-based helicene hybrids
P3	Abbinante Vincenzo Mirco	TetraPh-Tol-BITIOPO: a new atropisomeric 3,3'-bithiophene based phosphane oxide as organocatalyst in lewis base-catalyzed lewis acid mediated reactions
P4	Abuaf Meir	Miniemulsion polymerization of chiral nanoparticles of amino acid and their application for enantioselective separation
Р5	Ando Mitsuka	Synthesis of polyacetylene derivatives bearing axially chiral pendants and their application to asymmetric catalysis
P6	Andrushchenko Valery	Supramolecular chirality of nucleic acids
P7	Arafah Rami	Enantioseparation of the four nadolol stereoisomers by fixed-bed and simulated moving bed chromatography
P8	Arai Midori	Synthesis and evaluation of chiral spirooxindoles for Notch signal inhibitors
P9	Arai Takayoshi	Actual iodinating reagent in catalytic asymmetric halo- lactonization
P10	Baglai laroslav	Viedma ripening: a simple access to enantiomerically pure compounds
P11	Baguenard Bruno	Fast circularly polarized luminescence spectroscopy
P12	Batista Jr. Joao M.	VCD spectral markers of acetonide rings: facilitating absolute configuration assignments of diols
P13	Bednarova Lucie	Chiroptical redox switching of tetra-cationic derivatives of azoniahelicenes
P14	Belviso Sandra	The first hexahelicene-substituted tetrapyrrole: synthesis, HPLC enantiomeric separation, and absolute configuration
P15	Blasius Jan	New approaches for calculating VCD spectra
P16	Bloch Etienne	3D imaging of dichroism in the photoionization of chiral molecules by ultrashort laser pulses
P17	Bond Caoimhe	Sensitive analysis of chiral pharmaceuticals by photoelectron spectroscopy
P18	Bornerie Mégane	Synthesis of meso oligourea foldamers built from chiral subunits
P19	Bosson Johann	Late-stage functionalizations of cationic helicenes

		.
P20	Boulloy Alice	Photo-tunable aromatic oligoamide foldamers for controlled carbohydrate encapsulation
P21	Brehm Martin	Computing bulk phase vcd and roa spectra from ab initio molecular dynamics
P22	Brotin Thierry	Chiroptical properties of water-soluble cryptophane derivatives and their complexes
P23	Buffeteau Thierry	Kinetic investigation of chiral nanometric molecular assemblies by electronic (ECD) and vibrational (VCD) circular dichroisms
P24	Choi Yunjeong	Synthesis of novel nicotinamide-attached binol receptor as chiral shift reagent for amino acids
P25	Ciogli Alessia	Flow reactors based on supported 9-amino-9-deoxy- 9-epi-quinine for stereoselective activation of carbonyl compounds
P26	Clavier Hervé	Design and preparation of new chiral atropisomeric N-heterocyclic carbene ligands: application in asymmetric catalysis
P27	Costil Romain	Unidirectional rotation in molecular motors with a helically chiral rotor
P28	Daugey Nicolas	Vibrational optical activity and induced solvent ROA of chiral trinuclear paddlewheel complexes
P29	Daugey Nicolas	Whisky lactone : new chiral separation and chiroptical identification
P30	Devaraj Karthik	Conversion of axial-to-central chirality of heteroarene atropisomers
P31	Dhbaibi Kais	Circularly polarized luminescence of novel chiral heli- cene molecules
P32	Dong Hongxing	Effect of crosslinker on chiral separation of surface mo- lecularly imprinted polymer as chiral stationary phase
P33	Durola Fabien	Rigid twisted chiral conjugated macrocycles
P34	Favereau Ludovic	Helical push-pull dyes with intense circularly polarized (CP) luminescence for CP-organic light emitting diodes
P35	Fernandez Zulema	Chiral Harvesting in POPEAs
P36	Fleckenstein Max	Helically-chiral poly(isocyanides) as asymmetric transi- tion metal catalysts
P37	Fossépré Mathieu	Multiscale chirality and symmetry in the supramolecular self-assembly of DNA with a π -conjugated polymer
P38	Fukuda Mayu	Synthesis of a helix-sense switchable poly(phenyl isocyanate) derivative bearing a stimuli-responsive optically active group at the initial chain end and its chiroptical properties

POSTER SESSIONS

P39	Gao Jie	Chiral gold nanoparticle superstructures directed by silica nanohelices towards innovative chiro-optical properties	
P40	Gauthier Etienne	Circularly polarized phosphorescent chirality-at- rhenium complexes bearing a helicenic NHC ligand : studies of their chiroptical and photophysical properties.	
P41	Gicquiaud Julien	Enantioselective carbocyclization reactions catalyzed by Brönsted acids involving carbon-carbon triple bond activation.	
P42	Giorgi Michel	Exploring the versatility of chiral molecules in crystals by combining XRD and CD	
P43	Goetzke Wieland	Enantio- and diastereoselective Suzuki-Miyaura coupling with racemic bicycles	
P44	Ha Heun-Jong	Asymmetric synthesis of acyclic pyrimidine nucleosides by organocatalytic aza-Michael reaction	
P45	Hammoud Ahmad	Stereodivergent synthesis by means of chirally ampli- fied supramolecular catalysts	
P46	Hanatani Yutaro	Organocatalytic umpolung Michael process: synthesis of highly functionalized ketones bearing a chiral quaternary carbon center	
P47	Hérault Damien	Tunable P-stereogenic P,N-Heterobidentate Ligand/ Pd(II) Complexes: Synthesis, Characterization and Enantioselective Catalysis	
P48	Hiroki Ishikawa	Chiral symmetry breaking of spiropyrans and spirooxazines via dynamic enantioselective crystallization	
P49	Hirose Keiji	Temperature dependent chirality recognition of rotaxane hosts having chirality specific to rotaxane structure in complexation with chiral guests	
P50	Homberg Alexandre	Combined (+/-) ECD and (on/off) CPL reversible swit- ching with chiral fluorescent polyether macrocycles	
P51	Hong Aram	Induced circular dichroism of phenol complexes with chiral molecules in a supersonic jet	
P52	Hsieh Chin-Ling	Design and development of a highly selective chiral 3D-HPLC system for the determination of lactate and 3-Hydroxybutyrate enantiomers in human physiological fluids	
P53	Hudecova Jana	Histidine-metal complexes studied by spectroscopic and computational methods	
P54	Ibrahim Diana	Sub-2-Micron stationary phase innovations rise to meet the demands of modern chromatographer, a comparative study between two columns: Chiralpak® IG-U and Chiralpak® ID-U	

P55	lijima Satoe	Analysis of cannabidiol in CBD products by SFC-CD- MS
P56	Ishido Yuki	Side chain-driven bimodal helical conformation of non- natural polypeptide derived from arylene ring flips
P57	Itsuno Shinichi	Chiral polymers of cinchona alkaloid derivatives for asymmetric organocatalysts
P58	Izak Pavel	Separation of racemic mixtures by non-porous membranes
P59	Jaeger Wolfgang	A spectroscopic study of the formic acid - hydrogen peroxide complex: signatures of transient chirality
P60	Jiang Liming	Novel Poly(2-oxazoline)s bearing triazolylpyrrolidine pendants for asymmetric catalysis of the michael addition in water
P61	Jin Jong Sung	Development of chiral crown ether type column for optical resolution of racemic drugs with amino group
P62	Jin Yingji	Enantioselective resolution of racemic amino acids by liquid-liquid extraction using chiral extractors with tert- butyl ketone group
P63	Jintoku Hirokuni	Thermo-induced chirality change of supramolecular assembly in polymer matrix
P64	Kamiya Naoaki	Asymmetric Suzuki-Miyaura cross-coupling reactions in aqueous media by using water-soluble helical polymer ligands
P65	Kawai Takeshi	Chirality-controlled synthesis of double-helical au nanowires
P66	Kawasaki Tsuneomi	Self-replication of chiral α-hydroxy acids in the Strec- ker-type synthesis in combination with asymmetric amplification of chiral intermediate cyanohydrin in solid-state
P67	Kawasaki Tsuneomi	Enantioselective Strecker-type amino acids synthesis by using chiral crystal of racemic cyanohydrin as a substrate and source of chirality
P68	Kim Bora	Stereoselective synthesis of carboxy-substituted 2-isoxazolines by phase-transfer-catalyzed cascade reaction
P69	Kim Ka Young	Helical inversion of peptide-based supramolecular polymer
P70	Kim Sang Youl	Supramolecular chirality by light-induced self-assembly of achiral triphenylamine molecules
P71	Kiraly Sandor Balazs	Preparation of condensed chiral O- and O,N-heterocy- cles in diastereoselective domino reactions
P72	Kotras Clément	Chiral and fluorescent dynamic covalent polymers for DNA complexation

POSTER SESSIONS

P73	Kurtan Tibor	DFT calculation of chiroptical and NMR data for distin- guishing stereoisomeric natural products
P74	Kuwahara Yutaka	Chiral assembling of metal complexes induced by glutamide substituted pyridinium salts
P75	Laye Claire	Silylium lons with si-centered chirality - chiral memory at silicon
P76	Lee Jen-Ai	The increase of lactate enantiomers in the serum and urine of mice with nephrotoxic serum nephritis
P77	Lerdwiriyanupap Tharit	Crystallization-induced diastereomer transformation of N-[(S)-1-phenylethyl]-(D/L)-mandelamide through the phase transformation
P78	Li Ming-Chia	Lamellar-twisting-induced electronic circular dichroism of chromophore moieties in banded spherulites
P79	Liu Peizhao	Chirality induced from inorganic silica nanohelices templates to inorganic perovskites nanocrystals
P80	Ménand Mickaël	Chiral communications in a three-level chirality totem. remote-control of the möbius aromatic twisting in hexaphyrin-cyclodextrin hybrids
P81	Maeda Yuki	Fabrication of conductive nanohelix by electrochemical filling of helical nanopores in silicon
P82	Makoto Takafuji	Fabrication of hybrid chiral hydrogels composed of 1D self-assembly crosslinked-polymer network
P83	Martial Benjamin	Vibrational circular dichroism reveals supramolecular chirality inversion of α -synuclein peptide assemblies upon interactions with anionic membranes
P84	Matsumoto Arimasa	Mechanistic study of asymmetric autocatalysis using cd spectrum: temperature and concentration effect on catalysts aggregation structure
P85	Mayorga-Burrezo Paula	Triphenylmethyl radical-based halogenated derivatives: where luminiscence, magnetism and chirality gracefully coexist.
P86	Menke Jan-Michael	Intramolecularly interlocked stereodynamic catalysts: a new concept to excellent enantioselectivity
P87	Michal Pavel	Raman optical activity of intermolecular, overtone and combination bands, and absolute spectral intensities
P88	Nagata Yuuya	Circularly polarized selective reflection from achiral poly(quinoxaline-2,3-diyl)s forming cholesteric superstructure by the exposure of vapor of chiral solvents
P89	Nakamura Kento	Synthesis and application of novel photoswitchable chiral catalyst
P90	Nakaya Masahiro	Chiral gold nanoparticles synthesized in chiral nanospace constructed by molecular assembled nanohelices

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P91	Neill Justin	Rapid characterization of enantiomeric excess using molecular rotational resonance spectroscopy
P92	Nozaki Mai	Asymmetrically substituted poly(diphenylacetylene)s bearing a chiral pendant through an amide linkage that exhibit solvent-dependent helicity inversion and their chiral recognition abilities
P93	Nulek Thitapond	The influence of chiral additives on separation of aspartic acid
P94	Ogita Takuya	Helically chiral poly(quinoxaline-2,3-diyl)s bearing N-heterocyclic carbene pendants
P95	Okutsu Hinako	Synthesis of macrocycles bearing dynamic helical peptide chains and their chiroptical properties
P96	Olivier Céline	Aromatic oligoamide foldamers as versatile scaffolds for induced circularly polarized luminescence at adjus- table wavelengths
P97	Ondrisek Pavol	Functionalization of ethynyl [4]helicenes through diels- alder-retro-diels-alder reactions. investigation of the resulting atropisomeric situation
P98	Ono Ryutaro	Stereocontrol of planar-chiral bridged isonicotinamide via crystallization-induced asymmetric transformation
P99	Oppermann Malte	Time-resolved broadband circular dichroism in the deep-UV
P100	Otis Gil	Asymmetric induction of Wulfingite chiral crystals detected using EPR spectroscopy
P101	Ouyang Jiangkun	Design and synthesis of chiral peptide polymers for information storage
P102	Park Jaehyeon	Critical role of achiral guest molecules in planar chira- lity in-version of alanine-appended pillar[5]arenes
P103	Pathan Shaheen	Optically active flexible materials based on molecular assembly template chiral hybrid nanostructures
P104	Perrio Stephane	Organocatalytic synthesis of chiral spirocyclopentene oxindole derivatives through a sulfinate ammonium ion pair
P105	Pescitelli Gennaro	Chiroptical super-spectra of Co(II) salicylaldiminato complexes with symmetry-dependent vibrational circu- lar dichroism enhancement
P106	Plamitzer Lubos	Pressure-induced conformational change of a dipep- tide. a computational study
P107	Polavarapu Lakshmina- rayana	Chiral perovskite nanocrystals: chirality transfer from ligand molecules to excitons
P108	Pop Flavia	Chirality and anion size driven properties of methylated EDT-TTF conductors

POSTER SESSIONS

P109	Reboul Vincent	Diazirine 14N/15N isotopomers: chirality and hyperpo- larization	
P110	Ring Tom	Photoelectron circular dichroism observed on the nanosecond timescale	
P111	Rivadulla Elena	Competing stereocenters defining the helical sense of polymers	
P112	Rodriguez Rafael	Elastin-based helical polymers: custom-made chiro- fluorescent materials with biological applications	
P113	Rotunno Giuseppe	The use of UiO-type MOFs in vapour phase Soai reactions	
P114	Rullich Claudia	Chiral discrimination by enantioselective raman spec- troscopy and chemometric approaches	
P115	Ryoo Jae Jeong	Ultrasound-controlled chiral separation	
P116	Ryu Naoya	Chirality induction in rare earth-silica nanohybrids prepared by templating amphiphile-dye supramolecular assemblies	
P117	Sakata Yoko	Chiral guest recognition behaviour of a pentanuclear metallonanobelt constructed by template-directed self-assembly of a triptycene-based ligand	
P118	Salafia Fabio	Effects on enantiomeric resolutions of chiral pesticides through different conditions of supercritical fluid chro- matography	
P119	Salafia Fabio	Comparison of monodimensional and multidimensional gas chromatography methods for the separation of volatile chiral compounds in mandarin essential oil	
P120	Saleh Nidal	BenzoDiazepinoIndoliums: novel class of chiral polycy- clic fluorophores	
P121	Sallembien Quentin	Exploring pathway complexity in chiral supramolecular polymers reveals a thermo-thickening effect	
P122	Santra Kakali	Role of electric field on enantio-specific interactions of chiral molecules with ferromagnetic substrates	
P123	Scalabre Antoine	Grafting of organics fluorophores on chiral hybrid nanostructures	
P124	Shukla Nisha	Enantiospecific interactions of propylene oxide with penicillamine	
P125	Sklorz Julian	Bio-orthogonal single chain polymeric nanoparticle catalyse cyclopropanation	
P126	Sung Ji Yeong	Resolution of flecainide and its derivatives, an antiar- rhythmic agent that treats abnormal heart rhythms, on a new chiral stationary phase	
P127	Superchi Stefano	Biphenyl chiroptical probes as tools for the assignment of absolute configuration to natural products	

P128	Superchi Stefano	Regio- and stereoselective tandem carbolithia- tion-substitution reaction on 1-aryl-vinylcarbamates	
P129	Surin Mathieu	DNA-induced chirality in templated supramolecular assemblies of conjugated molecules	
P130	Takahashi Takuya	Enantioselective O- to C- Acyl rearrangement of oxindole derivatives using helically chiral nucleophilic polymer catalyst	
P131	Taniguchi Yoshimasa	Rapid and comprehensive determination of absolute configurations of a series of natural bitter compounds derived from hop (humulus lupulus I.) by the crystalline sponge method	
P132	Tassoni Alessandra	Chiral resolution using circular Couette flow	
P133	Teeuwen Paula	Separation and chiroptical properties of chiral porphyrin cages	
P134	Thinhinane Aoudjit	Nanoscale photoimaging of chiral nanostructures	
P135	Traboulsi Iman	Stereocontrolled access to all-carbon quaternary stereocenter in cyclic and acyclic systems. approach to the total synthesis of indole alkaloids.	
P136	Uemura Naohiro	Absolute asymmetric synthesis by diels-alder reaction involving dynamic enantioselective crystallization	
P137	Valentin-Pérez Angela	Exotic techniques for the characterization of chirality: x-ray natural circular dichroism	
P138	Valzer Emmanuel	New chiral iodoarenes and iodanes for asymmetric C-O and C-C bondforming reactions	
P139	Vantomme Ghislaine	Controlling the length of cooperative helical supramolecular polymers	
P140	Vasudevan Sudheendran	Compression of supercontinuum pulses using different chirped mirror technologies	
P141	Verreault Dominique	Intensity-dependent hyper-rayleigh chiroptical effect in liquids: a new route for the determination of the enantiomeric excess	
P142	Verreault Dominique	First chiral discrimination of helical oligoquinoline foldamers in solution evidenced by hyper-rayleigh scattering	
P143	Vidanović Igor	Modification of bicyclic ketones for PECD experiments	
P144	Villani Claudio	Chromatographic resolution and absolute configuration determination of stereolabile indole derivatives	
P145	Wada Yuya	Triptycene-based chiral functional molecules/polymers	
P146	Xiang Wang	Synthesis of spiroborate-based homo and hetero double-strand helicates	
P147	Yamana Kazushige	Circularly polarized luminescence (CPL) activities in helical assemblies of pyrenes on RNA Duplex	

POSTER SESSIONS

P148	Yang Jian	Enantiopure encaged Verkade's superbases: synthesis, chiroptical properties, and use as chiral derivatizing agent		
P149	Yasuda Takumi	Effect of shapes of pt nanoparticles on helical nano- pores formed by metal-assisted chemical etching of silicon		
P150	Ye Xichong	Quantitative resolution of conglomerates through a magnetic separation strategy		
P151	Yingying Duan	Hierarchically chiral inorganic films with multi-optical activities		
P152	Yoshida Kyohei	Generation of room-temperature phosphoresce based on one-dimensional chiral stacking of a simple lumino- phore		
P153	Yoshida Kyohei	CPL switching system utilizing microgel of pNIPAM functionalized by Ru(bpy)3 and phenylbornic acid		
P154	Yoshida Yasushi	Catalytic asymmetric umpolung organocascade reaction of α -imino carbonyl compounds		
P155	Yospanya Wijak	Supramolecular asymmetric photochirogenesis of 2-anthracene carboxylate dimers in chiral medias: from synthetic antibodies to silica hybrid nanofibers		
P156	Zelenovskii Pavel	Investigation of chirality-dependent growth of diphenylalanine microtubes		
P157	Zhang Jie	Chirality induction of inorganic-organic hybrid assem- bled materials		
P158	Metzger Tzuriel S.	Utilizing chiral induced spin selectivity effect to enantio- separation		
P159	Tanatani Aya	Development of helical aromatic oligoamides based on conformational property of aromatic tertiary amide		
P161	Penélope Rodríguez- Zamora	Effect of metal core on chiroptical activity of L- and D-Cysteine protected nanoparticles		
P162	Laureen Moreaud	Programmed artificial protein origami super-helix		

Authors of posters with even numbers are required to present their paper during the poster session 1 on Monday. Authors of posters with odd numbers are required to present their paper during the poster session 2 on Tuesday.

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PROGRAMME OVERVIEW

TIME*	Sunday 14 th July	Monday 15 th July	Tuesday 16 th July	Wed. 17 th July
08.00				
08.30		Dianany appaign	Dianany appaign	Dianan (accession
09.00		Fieldly Session	Fieldly Session	Fieldly session
09.30				
10.00			Parallel sessions	
10.30		Parallel sessions		Parallel sessions
11.00	Short course 1			
11.30				
12.00				
12.30		Lunch	Lunch	Lunch
13.30	Lunch			
14.00		Poster session 1	Poster session 2 (odd numbers)	Plenary session
14.30		(even numbers)		
15.00	Short course 2			Plenary session
15.30				Poster awards
16.00				Closing remarks
16.30	Opening ceremony	Parallel sessions	Parallel sessions	
17.00	Chirality Medal			
17.30	Ŷ			
18.00				
18.30	Welcome reception 00			
19.00			Cala dinnor	
19.30			Chateau Smith Haut Lafitte**	
20.00				
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*Approximate time - Please check the detailed programme. ** Departure : 18:45 from the venue - End: 23.00

Amphitheater 2 Coffee break floor -1 aera Meeting point gala dinner Poster _ Poster (\mathbf{F}) sessions sessions Sponsors Speaker exhibition ready room Information ۸ desk 🔴 Please, wear your badge at all times. **BUILDING 2** Amphitheater 1 Cloakroom Lunch area **BUILDING 1** •• •• •• •• •• Welcome desk • **. | X**.|, Main entrance 0 0 0 0 0 0 Taxi meeting point 🌑

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