

2015 **IMIL** adrid

2-3 July 2015

IBEROAMERICAN MEETING ON IONIC LIQUIDS

Program Book



CENTRO CULTURAL LA CORRALA – MADRID (SPAIN)



www.uam.es/imil2015

 @Imil2015

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WELCOME MESSAGE

The IMIL2015 Organizing Committee, Scientific Committee and Honorary Committee welcomes you to Madrid, Spain, to this opportunity for the Iberoamerican Scientific Community to share the most recent achievements on their research on Ionic Liquids.

Iberoamerican Meeting on Ionic Liquids 2015 (IMIL2015) continues the spirit of the previous Iberian Meetings on Ionic Liquids, bringing, for the first time, this promising, exciting and rapidly evolving conference to the Iberoamerican Community of specialists. IMIL 2015 attempt to unite research groups starting out in the ionic liquid field with more experienced groups, and to cover the wide variety of disciplines currently being investigated on this subject.

The program for IMIL2015 includes 32 oral and 120 poster presentations evolving different topics on ionic liquid research: synthesis and thermophysical properties, reaction and separation process, biotechnology, advanced materials and electrochemical applications.

The conference IMIL2015 will bring together more than 100 researchers from 15 countries: Brazil, Colombia, Chile, France, Germany, Italy, India, Japan, Poland, Portugal, Qatar, South Africa, Spain, United Kingdom and United States of America.

The present IMIL is the fourth in a series of biannual conferences on Ionic Liquids held in Iberian Peninsula since 2009. Previous locations were:

2009 – Aveiro (Portugal)

2011 – Santiago de Compostela – A Coruña (Spain)

2013 – Algarve (Portugal)

We thank you for your participation in the Iberoamerican Meeting on Ionic Liquids 2015, and we wish you a stimulating and rewarding time at the conference and a pleasant visit to our lively city.

On behalf of the IMIL 2015 Organizing Committee,

José Palomar, UAM
Francisco Rodríguez, UCM

IMIL2015 Chairmen

COMMITTEES

Honorary Committee

João A. P. Coutinho	Portugal
Óscar Cabeza	Spain
Luis Paulo N. Rebelo	Portugal
Luis Miguel Varela	Spain

Organizing Committee

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Francisco Rodríguez	<i>Chairman</i>	UCM
Jorge Bedia	<i>Secretary</i>	UAM
Ismael Díaz	<i>Secretary</i>	UPM
Noelia Alonso	<i>Treasurer</i>	UAM
Rafael López	<i>Treasurer</i>	UAM
Cristian Moya		UAM
Emilio J. González		UCM
Isabel Lage		UAM
Jesús Lemus		UAM
Juan Carlos Domínguez		UCM
Juan Riva Silva		UAM
Lourdes del Olmo		UAM
Marcos Larriba		UCM
María del Mar Villar		UCM
Pablo Navarro		UCM
Tamara Santos		UCM
Victoria Rigual		UCM

Scientific Committee

Virgina Alonso	Spain
Santiago Aparicio	Spain
Teresa Corrales	Spain
Alberto Coronas	Spain
Ángeles Domínguez	Spain
Ana Rita C. Duarte	Portugal
Josefa Fernández	Spain
Abel G. M. Ferreira	Portugal
Víctor R. Ferro	Spain
Julián García	Spain
Miguel Ángel Gilarranz	Spain
Eugénia A. Macedo	Portugal
Isabel Marrucho	Portugal
David Mecerreyes	Spain
Ángel F. Mohedano	Spain
Juan Ortega	Spain
Mercedes Oliet	Spain
Inmaculada Ortiz	Spain
Juan J. Rodríguez	Spain
Manuel Rodríguez	Spain
María Manuela Silva	Portugal
Ana Soto	Spain
Emilia Tojo	Spain
Roberto Manuel Torresi	Brazil
Lourdes Vega	Spain
Rodolfo G. Willoud	Argentina

UAM: Universidad Autónoma de Madrid

UCM: Universidad Complutense de Madrid

UPM: Universidad Politécnica de Madrid



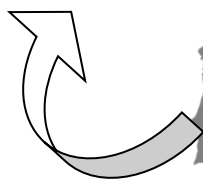
CONFERENCE LOCATION

Centro cultural “La corrala”

Universidad Autónoma de Madrid
C/ Carlos Arniches, 3 y 5
28005 – Madrid
Phone: 34 914976500

info.imil@uam.es
www.uam.es/imil2015

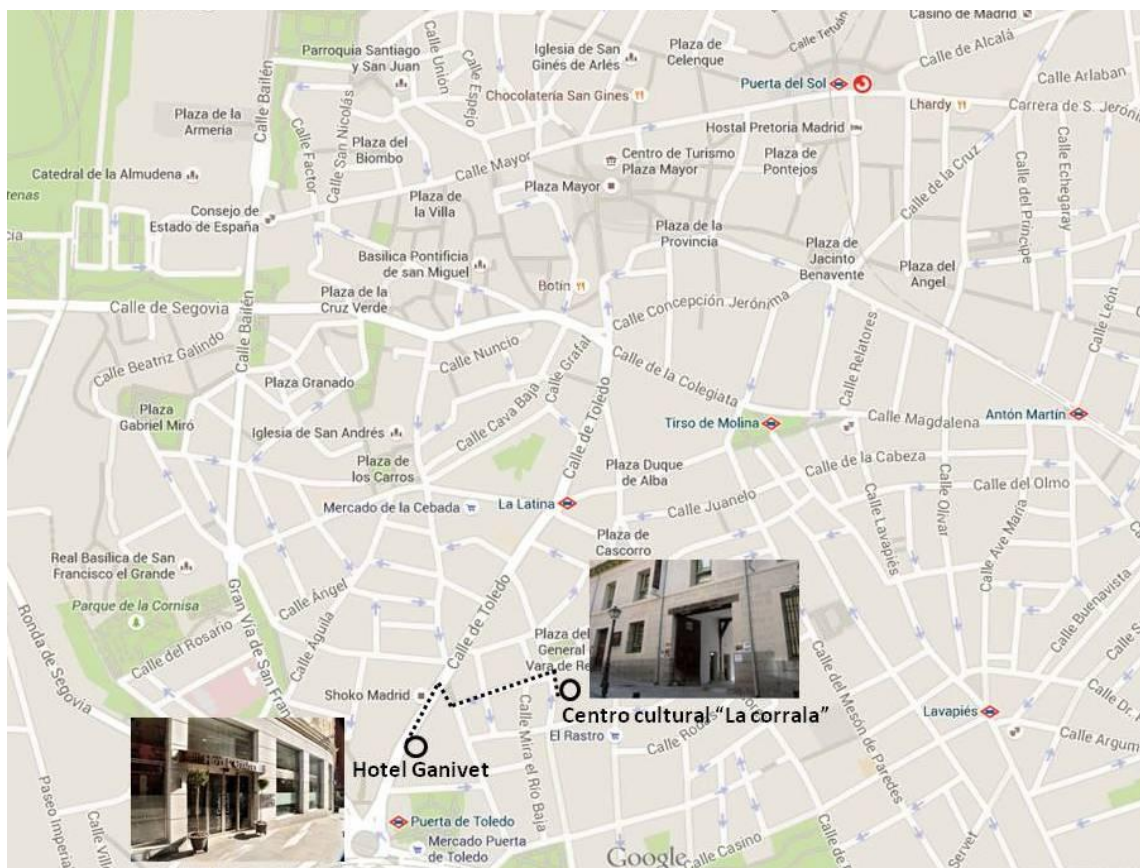
2015 **IMIL** Madrid



Madrid



STREET MAP



* Lunch will be served in Hotel Ganivet – Calle de Toledo, 111.

TRANSPORTATION

From “Adolfo Suárez – Madrid Barajas” airport to IMIL 2015

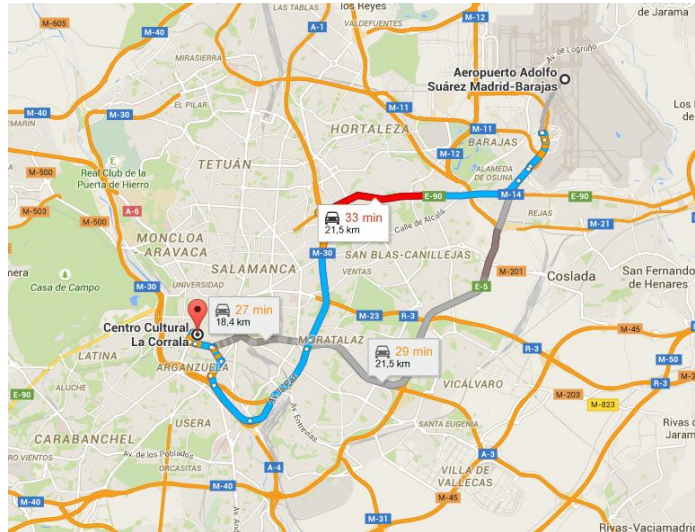
The airport is, approximately, 20 km from the city center, and there are two options to arrive to the Conference Center:

TAXI

The cost of the TAXI from the airport to the city center is 30€ fixed rate.

METRO

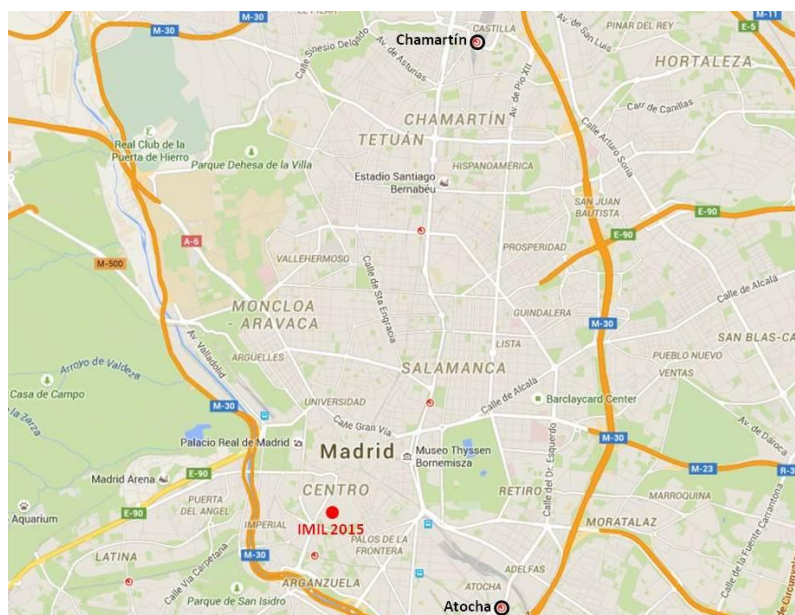
At the airport metro station, take the pink line (8) to “Nuevos Ministerios”. In “Nuevos Ministerios”, take line 10 (dark blue) to “Tribunal” and change to line 1 (light blue) direction “Valdecarros” and get off at “Tirso de Molina”. “Latina” and “Puerta de Toledo” stations are nearby the Conference Center too (< 5 min walking).



For more information, please visit Metro de Madrid website: <http://www.metromadrid.es>

From the main train stations to IMIL 2015

Madrid has two main train stations: “Atocha” and “Chamartín” which have connections to the light blue line (1) metro to “Tirso de Molina”. “Atocha” is approximately 3.5 km from “La Corrala” while “Chamartín”, located in the North, is a little further away. In both cases, to arrive at the Conference center, you can take a taxi (15-30 €.)



HELPFUL WEBSITES AND CONTACT INFORMATION

Weather forecast: Madrid



<http://www.aemet.es/en/el tiempo/prediccion/municipios/madrid-id28079>

Tourism: Things to do and see in Madrid



<http://turismomadrid.es/en/>

Transport: Train, metro and bus



<http://www.renfe.com/viajeros/cercanias/madrid/>



<http://www.metromadrid.es/en/index.html>



<http://www.emtmadrid.es/Home.aspx>



Flight information:

<http://www.aena.es/csee/Satellite/Aeropuerto-Madrid-Barajas/es/Inicio.html>

Important telephone numbers:



EMERGENCY TELEPHONE: 112

POLICE TELEPHONE: 091 (NATIONAL) 092 (LOCAL)

MEDICAL EMERGENCY TELEPHONE: 061

VISA Electron/Master Card/VISA: 902114400 / 913626200

Useful Apps:



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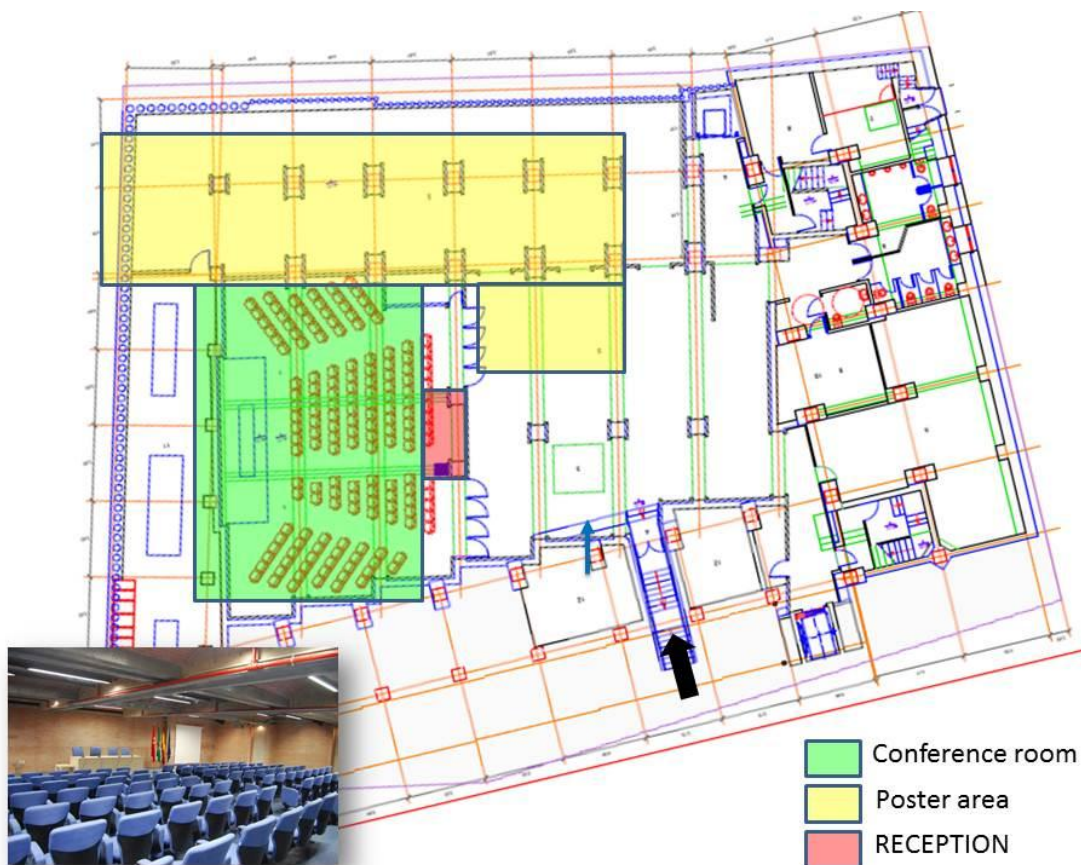
CONFERENCE VENUE

IMIL 2015 meeting will be held in the “**La Corrala**” Cultural Center of the Universidad Autonoma de Madrid, a traditional Madrid-style building located in the historical city center, in a zone where every Sunday **El Rastro**, the most popular open air flea market in Madrid takes place.

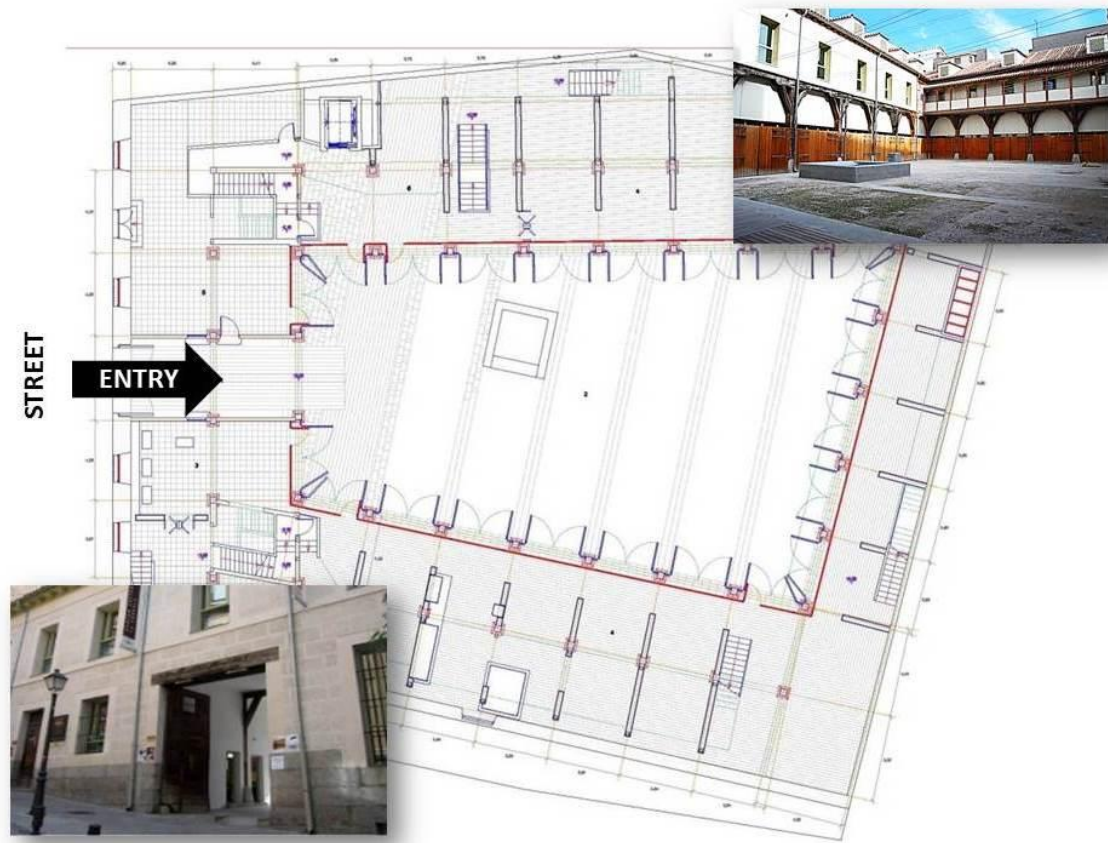


“La Corrala” Cultural Center has the **Museum of Popular Arts and Traditions**, with a collection of more than 8000 pieces of ethnographic and anthropological interest, which can be visited by IMIL2015 participants free of charge.

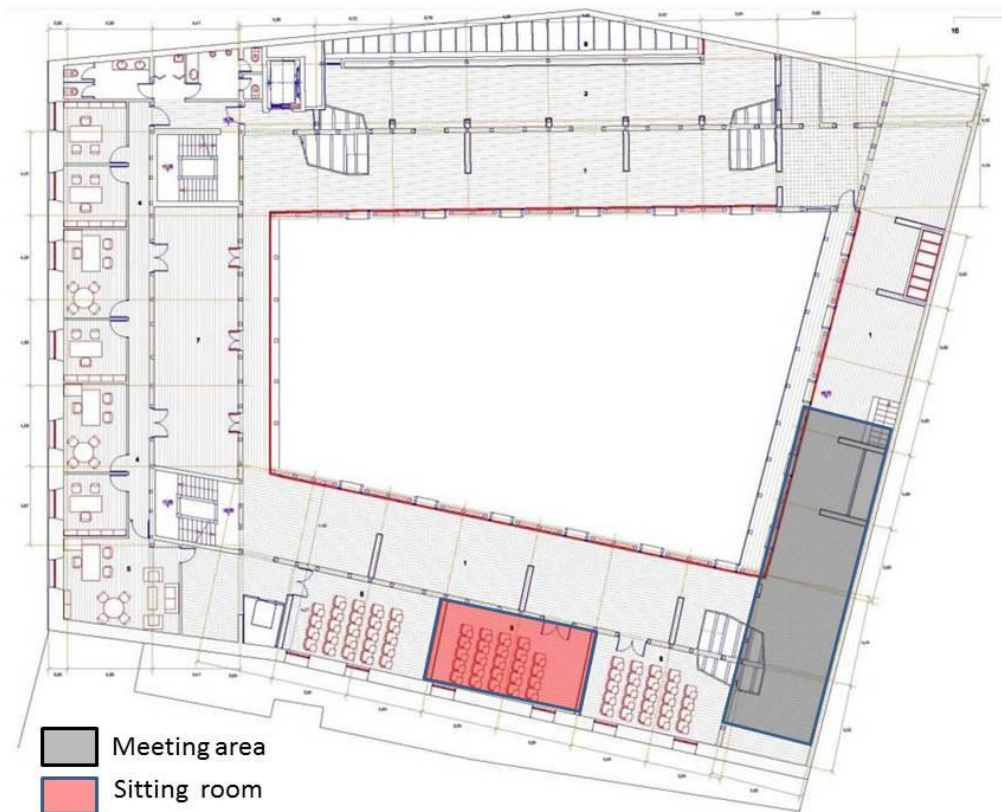
The **Conference Room** and **Poster Area** of IMIL2015 are located in the basement of the building.



- Conference room
- Poster area
- RECEPTION



On the second floor of the “La Corrala” building are located the **Meeting area** and **Sitting room** with Wifi and electrical outlets for laptops or other devices.



AUTHOR GUIDELINES

Presentation Instructions (for the authors)

Plenary, Keynotes and Oral and Communications

- Plenary Lectures: 45 minutes.
- Keynotes Lectures: 30 minutes.
- Oral Communications: 15 minutes.

Discussion time is included in the presentation time.

- The official conference language will be English, no simultaneous translation will be available.
- The lecture halls will be equipped with computer presentation technology.

Poster Presentation

- The number of each poster and its corresponding poster board is given in the Book of Abstract.
- Contributors are responsible for printing and providing their own posters for display at the congress.
- The dimensions of the poster board are 90 cm wide and 120 cm high.
- More information about when and where to hang each poster will be included in the Book of Abstracts
- Tape and technical equipment for hanging the posters will be provided.

PLENARY LECTURES



Joan J. Brennecke

Keating-Crawford Professor of Chemical and Biomolecular Engineering Department of University of Notre Dame, Indiana (USA).

Presentation Title: Ionic liquids for post-combustion CO₂ capture.



Mara G. Freire

Coordinator Researcher at CICECO, Chemistry Department, University of Aveiro (Portugal).

Principal investigator of a Starting Grant from the European Research Council (ERC).

Presentation Title: Ionic Liquids as Alternative Solvents for the Extraction, Purification and Concentration of High-Value Proteins: from Biopharmaceuticals to Cancer Biomarkers.



Tom Welton

Professor of Sustainable Chemistry at Imperial College of London (United Kingdom).

Dean of the Faculty of Natural Sciences.

Presentation Title: Fine-tuning ionic liquid mixtures.

KEYNOTES

Jairton Dupont - University of Nottingham (United Kingdom)

Pedro Lozano - University of Murcia (Spain)

Rebeca Marcilla - IMDEA Energy (Spain).

Héctor Rodríguez - University of Santiago de Compostela (Spain)

PROGRAM

Thursday, July 2nd 2015

9:00	Registration
9:30	Opening Session
Chair	Jose Palomar, Francisco Rodríguez
Vice Rector	Rafael Garesse

SESSION I. *Chairman: M. Rodríguez, Universidad Politécnica de Madrid*

10:00 PL1	Ionic Liquids for Post-Combustion CO₂ Capture J. F. Brennecke
10:45 O1	Utilization of Choline Chloride and Levulinic Acid Based Deep Eutectic Solvents for Efficient CO₂ Capture M. Atilhan
11:00 O2	Greenhouse and Acid Gases with Ionic Liquids - Predictive Model L. F. Vega
11:15 O3	Experimental Studies on the Dissolution and Dispersion of Four Indian Coals T. Banerjee
11:30	Coffee Break (30 min)

SESSION II. *Chairman: S. Aparicio, Universidad de Burgos*

12:00 KN1	Phase Equilibria in Mixtures of Ionic Liquids H. Rodríguez
12:30 O4	Increasing the Tuneability of Ionic liquids A. B. Pereiro
12:45 O5	Renewable Lipidic Ionic Liquid Crystals: Cation-Anion Effects on SLcLE G. Maximo
13:00 O6	Rheological and thermodynamic properties of deep eutectic solvents I. M. Aroso
13:15 O7	On the Ionic Liquids Structure-Property Relationship P. J. Carvalho
13:30	Lunch (Hotel Ganivet)
14:30	Coffee + Poster Session (Meeting venue)

SESSION III. *Chairman: A. G. M. Ferreira, Universidade de Coimbra*

- 15:30**
O8 **Adding Inorganic Salts to Ionic Liquids: Impact on the Properties and Ionicity of the Mixture**
F. Serrão
- 15:45**
O9 **Bulk Structure and Transport Properties of Protic-Aprotic Ionic Liquid Mixtures: Imidazoles and Ammonium Nitrates**
B. Docampo-Álvarez
- 16:00**
O10 **Mechanistic Studies on the Beckmann Rearrangement in Ionic Liquids**
E. Tojo
- 16:15**
O11 **Organic Reactivity in Ionic Liquids: the Role of the Anion**
C. S. Pomelli
- 16:30**
O12 **Thermal Stability of Ionic Liquids**
J. Salgado
- 16:45**
O13 **Process Simulation in the Design/Selection of Ionic Liquids**
J. de Riva
- 17:00**
KN2 **Sponge-Like Ionic Liquids and Supercritical Fluids, as New Platform for Green Chemical Processes**
P. Lozano

17:30 **Spanish wine in "La Corrala"**

20:30 **Guided Tour, "Cañas y Tapas"**
Guided Tour through historical downtown Madrid. The visit will end with the tasting of "Cañas y Tapas" in bars of the city center.

Friday, July 3th 2015

SESSION IV. *Chairman: R. M. Torresi, Universidade de Sao Paulo*

- 9:30**
PL2 **Ionic Liquids as Alternative Solvents for the Extraction, Purification and Concentration of High-Value Proteins: from Biopharmaceuticals to Cancer Biomarkers**
M. G. Freire
- 10:15**
O14 **Ionic Liquids as Extractive Solvents of Terpenes and Terpenoids**
M.A.R Martins
- 10:30**
O15 **Organophosphorous Pesticides in Ionic Liquids: Reactivity vs. Selectivity**
D. Millán

- 10:45**
O16 **On the Use of Ionic Liquids to Immobilize Biomolecules onto Different Sensing Platforms**
S.I. Córdoba de Torresi
- 11:00**
O17 **Tailoring Ammonium-Based Bistriflamide Ionic Liquids to Manipulate their Properties and Interactions**
J. M. S. S. Esperança
- 11:15**
O18 **Novel Electrolytes for Supercapacitors Based on Ionic Liquids**
B. Iliev

11:30 Coffee Break (30 min)

SESSION V. Chairman: A. Soto, Universidad de Santiago de Compostela

- 12:00**
KN3 **Supported Ionic Liquid Phase Nanoparticle Catalysts**
J. Dupont
- 12:30**
O19 **Encapsulated Ionic Liquids (ENILs): Carbon Dioxide Capture**
C. Moya
- 12:45**
O20 **Polymer and Ionic Liquids: A Successful Combination**
S. Livi
- 13:00**
O21 **Novel Aqueous Biphasic Systems Composed of ILs and Copolymers**
F.A. Silva
- 13:15**
O22 **Synthesis and Gas Separation Performance of Copper(I)-Containing Poly(RTIL)-RTIL Composite Membranes**
G. Zarca

13:30 Lunch (Hotel Ganivet)

14:30 Coffee + Poster Session (Meeting venue)

SESSION VI. Chairman: E. Tojo, Universidad de Vigo

- 15:30**
KN4 **Application of Ionic Liquids and their Polymer Electrolytes in Electrochemical Energy Storage**
R. Marcilla
- 16:00**
O23 **Study of Ionic Liquids Electrolytes for Dye-Sensitized Solar Cells**
J. M. Vicent-Luna
- 16:15**
O24 **Potential Induced Restructuring at Ionic Liquids Electric Double Layer**
R. Costa
- 16:30**
O25 **Transport Properties in Phosphonium Ionic Liquids and its Lithium Mixtures.- R. M. Torresi**
R. M. Torresi
- 16:45** **Presentation IMIL2017**
J. F. B. Pereira
- 17:00**
PL3 **Closing Session**
Final Session of IMIL2015: Fine-Tuning Ionic Liquid Mixtures
T. Welton

BOOK OF ABSTRACTS NEWS

The Book of Abstracts will be ready to download from the website (www.uam.es/imil2015) the 20th of June. A copy of this book will be given on a memory stick at the Congress Venue.