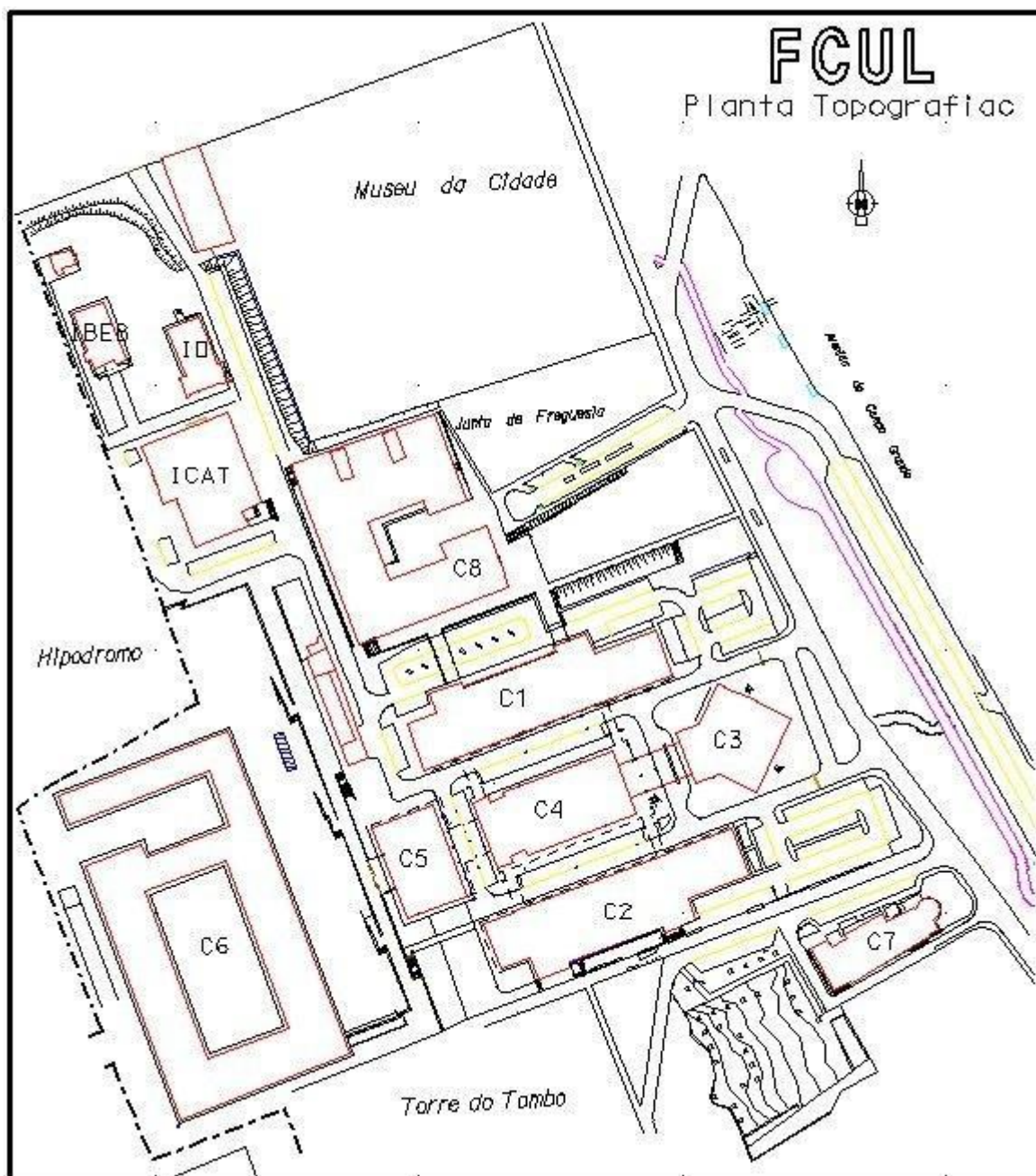


FCUL CAMPUS MAP LAYOUT



Workshop venue: Buildings C1 and C6

WILS2012 PROGRAM AT A GLANCE

Time	February 1, 2012 (Wednesday)	February 2, 2012 (Thursday)	February 3, 2012 (Friday)
8:30-9:00		Registration (Bldg C6, Level 2, LT 6.2.53 Lobby)	Registration (Bldg C1, Level 3, Northeast side Lobby)
9:00-9:20		Opening the workshop (Bldg C6, LT 6.2.53)	Session 5: Talk on NARILAR Project (Bldg C1, LT 1.3.14)
9:20-11:00		Session 1: Invited Lectures- Academic (Bldg C6, LT 6.2.53)	Session 6: Invited Lectures- Industry (Bldg C1, LT 1.3.14)
11:00-11:30		Coffee Break	Coffee Break
11:30-13:30		Session 2: Oral Presentations ¹ (Bldg C6, LT 6.2.53)	Session 7: Oral Presentations ³ (Bldg C1, LT 1.3.14)
13:30-15:00		Lunch and informal contacts (Bldg C6, Restaurant)	Lunch and informal contacts (Bldg C6, Restaurant)
15:00-16:00		Session 3: Oral Presentations ²	Session 8: Poster Presentations (Bldg C6, Level 1, North side Lobby)
16:00-17:00		(Bldg C6, LT 6.2.53)	Session 9: Panel discussion- Working Groups 1 and 2 (Bldg C1, LT 1.3.14 & 1.3.15)
17:00-18:00	Registration and Welcome reception (Bldg C6, Level 1, Restaurant Lobby)	Session 4: Poster Presentations (+Coffee) (Bldg C6, Level 1, North side Lobby)	Session 10: Reports from Working Groups and Discussion(+Coffee) (Bldg C1, LT 1.3.14)
18:00-18:30			Closing remarks and Way Forward (Bldg C1, LT 1.3.14)
20:00		Workshop Dinner (Restaurant: Churrasqueira do Campo Grande)	

¹Topic: Ionic Liquids-Synthesis and Characterization;

²Topic: Ionic Liquids and Absorption Refrigeration;

³Topic: Ionic Liquid- Processes and Heat Transfer

Note: LT 6.2.53=Lecture Theater in Building C6, Level 2, and Room 53. The same applies to other LT numbers.

WILS2012 DETAILED PROGRAM

Day 0 (Wednesday, February 1, 2012)

17:00–18:30: Registration and Welcome reception

Venue: Building C6, Level 1, Restaurant Lobby

Day 1 (Thursday, 2 February 2012)

8:30–9:00: Registration and workshop check-in

Venue: Building C6, Level 2, LT 6.2.53 Lobby

9:00–9:20: Opening the workshop (Venue: Building C6, LT 6.2.53)

9:20–11:00: Session 1–Invited Lectures (Academic)

Chair: Luís Rebelo (ITQB, Portugal)

Venue: Building C6, LT 6.2.53

- 1.1 Developing new ionic liquid formulations for energy applications, *John D. Holbrey* (Senior Research Fellow, QUILL, The Queen's University of Belfast, UK)
- 1.2 Towards the next generation of absorption heat pumps, *Alberto Coronas* (Director CREVER-University Rovira I Virgili, Tarragona, Spain)
- 1.3 Ionanofluids– Will they be useful?, *Carlos Nieto de Castro* (Director CCMM, Faculty of Sciences, University of Lisbon, Portugal)
- 1.4 Methods to improve the efficiency of ionic liquids, *Anil Kumar* (Senior Researcher, National Chemistry Laboratory, Pune, India)

11:00–11:30: Coffee Break

11:30–13:30: Session 2 – Oral Presentations (contributed papers)

Topic: Ionic Liquids-Synthesis and Characterization

Chair: Eduarda Araújo (FCUL, Portugal) and João Fareleira (IST, Portugal)

Venue: Building C6, LT 6.2.53

- 2.1 Interactions of ionic liquids with metals: friction at surfaces and solvation of nanoparticles, *A.A.H. Pádua*, (Université Blaise Pascal Clermont-Ferrand, France)
- 2.2 Thermophysical property research on ionic liquids at the Erlangen graduate school in advanced optical technologies (SAOT), *M.H. Rausch, A. Leipertz and A.P. Fröba* (Erlangen Graduate School in Advanced Optical Technologies (SAOT), Erlangen, Germany)

- 2.3 Temperature dependence of electrolytic conductivity for some room temperature ionic liquids, *M.S. Calado, J.C. F. Diogo, J.L. Correia da Mata, F.J.P. Caetano, Z.P. Visak and J.M.N.A. Fareleira* (Instituto Superior Técnico, Technical University of Lisbon, Portugal)
- 2.4 Design and synthesis of new ionic liquids for specific applications, *P. Verdía, M.Vilas, M.Mahrova, F. Santamarta and E. Tojo*, (Universidade de Vigo, Spain)
- 2.5 Thermal properties of new phosphonium-based ionic liquids with carbon nanotubes, *M.A. Fonseca, A.G.M. Ferreira, M.S.A. Oliveira and A.F. Ferreira* (University of Aveiro and University of Coimbra, Portugal)
- 2.6 Ionic liquids: toxicity assays in a cell model, *R.F.M. Frade, A.A. Rosatella, S.P. Simeonov and C.A.M. Afonso* (University of Lisbon, Technical University of Lisbon and Bulgarian Academy of Sciences, Sofia, Bulgaria)

13:30–15:00 Lunch and informal contacts (Venue: Building C6, Restaurant)

15:00–17:00: Session 3– Oral Presentations (contributed papers)

Topic: Ionic Liquids and Absorption Refrigeration

Chair: Josefa Fernandez (USC, Spain) and Joan Carles Bruno (URV, Spain)

Venue: Building C6, LT 6.2.53

- 3.1 Evaluation of several IL + TFE systems for refrigeration by absorption using thermophysical properties, *M.R. Currás, L.M. Casás, A.A.H. Padua, J.L. Legido and J. García* (Universidad de Vigo, Spain and CNRS, Laboratoire Thermodynamique et Interactions Moléculaires, France)
- 3.2 Performance analysis of a single -effect absorption refrigeration cycle with 2,2,2-trifluoroethanol + 1-ethyl-3-methylimidazolium tetrafluoroborate and ethanol + 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, *D.S. Ayou, D. Salavera, M. Curras, J. García, J.C. Bruno and A. Coronas* (Universitat Rovira i Virgili and Universidad de Vigo, Spain)
- 3.3 Bubble nucleation dynamics of R-134a refrigerant in a pool boiling system, *S.M.S. Murshed and R. Kumar* (University of Lisbon, Portugal and University of Central Florida, USA)
- 3.4 A review: Solubility behaviour of natural refrigerants with ionic liquids, *T. Altamash, D. Salavera, A.Kumar, K.R. Patil, C.A. Nieto de Castro and A. Coronas* (Universitat Rovira i Virgili-Spain, National Chemical Laboratory-India and University of Lisbon-Portugal)
- 3.5 Review on the absorption heat pumps and chillers using ionic liquid as absorbents, *S.K. Swarnkar, G. Venkatarathnam, D.S. Ayou, J.C. Bruno and A. Coronas* (Indian Institute of Technology Madras, India and Universitat Rovira i Virgili, Spain)

3.6 How far percolation in ionic liquids is reflected in their thermophysical properties, *L. M. N. B. F. Santos, M. A. A. Rocha* (University of Porto, Portugal)

17:00–18:00: Session 4– Poster Presentations (with Coffee)

Venue: Building C6, Level 1, North side Lobby

Best Poster Selection Committee: Luis Santos (FCUP, Portugal), Maria José Lourenço (FCUL, Portugal), and Maria Isabel Lampreia (FCUL, Portugal)

Poster#

PPD1-01 Low toxicity ionic liquids prepared from biomaterials, *W. Gouveia, M. Eduarda and M Araújo* (University of Lisbon, Portugal)

PPD1-02 Ionic liquids as thermal fluids: feasibility study of its application on a heat exchanger of a plastic production machine, *T.I.L. Antunes, L.M.L. Mendes, C.A. Nieto de Castro and V.M.B. Nunes* (Instituto Politécnico de Tomar and University of Lisbon, Portugal)

PPD1-03 Optimized ionic liquids for toluene absorption, *E. Ruiz, J. Bedia, V. Ferro, J. Palomar and J. J. Rodríguez* (Universidad Autónoma de Madrid, Spain)

PPD1-04 Preparation and thermophysical characterization of [P6,6,6,14]Cl with AgI IoNanofluid, *B.R. Cabo, A. Arce Jr, H. Rodríguez, E. Rodil, J.M. S. Jabardo and A. Soto* (University of Santiago de Compostela, Spain)

PPD1-05 Preparation of CdS nanoparticles in the [P6,6,6,14][NTf2] ionic liquid, *B.R. Cabo, I. R. Palmeiro, E. Rodil, A. Soto and A. Arce* (University of Santiago de Compostela, Spain)

PPD1-06 Economic criteria in design/selection of ionic liquids using COSMO-based process simulations. Separation of aromatic and aliphatic hydrocarbons, *V. R. Ferro, J. de Riva, D. Sanchez, E. Ruiz and J. Palomar* (Universidad Autónoma de Madrid, Spain)

PPD1-07 Encapsulated ionic liquids (EIL): from continue to discrete fluid for enhancing transport phenomena kinetics in separation and reaction applications, *J. Lemus, J. Palomar, N. Alonso, J. Bedia, M.A. Gilarranz, and J.J. Rodriguez* (Universidad Autónoma de Madrid, Spain)

PPD1-08 Impact of the magnetic field on the physical properties of magnetic ionic liquids, *C.I. Daniel, C.A.M. Afonso, F.V. Chávez, P.J. Sebastião, C.A.M. Portugal and J.G. Crespo* (Universidade Nova de Lisboa, Portugal)

PPD1-09 Analysis of densities and surface tensions of binary mixtures of imidazolium-based ionic liquids: influence of cation and anion structure of the ionic liquid, *L.M. Casás, M.R. Currás, M. Mato, J.L. Legido and J. García* (Universidad de Vigo, Spain)

- PPD1-10 Isobaric heat capacity at high pressure and viscosity of a diphenyl ether + biphenyl mixture for solar thermal energy storage application, *L. Lugo, D. Cabaleiro, M.C. Martín, J.L. Legido and J.J. Segovia* (Universidad de Valladolid and Universidad de Vigo, Spain)
- PPD1-11 Thermophysical characterization of ethylene glycol-based ZnO nanofluids, *M.J. Pastoriza-Gallego, D. Cabaleiro, L. Lugo, J.L. Legido and M.M. Piñeiro* (Universidad de Vigo, Spain)
- PPD1-12 CO₂ capture from high temperature sources using room temperature ionic liquids, *L.A. Neves, I.M. Coelho and J.G. Crespo* (Universidade Nova de Lisboa, Portugal)
- PPD1-13 Ionic liquids based on bis(trifluoromethylsulfonyl)imide or alkylsulfate anions as neat lubricants in steel-steel contacts, *F.L. Sánchez, I. Otero, E.R. López and J. Fernández* (Universidad de Santiago de Compostela, Spain)
- PPD1-14 Volumetric properties of a pyrrolidinium-based and two imidazolium-based ionic liquids at high pressures, *F.M. Gaciño, T. Regueira, M.J.P. Comuñas and J. Fernández* (Universidad de Santiago de Compostela, Spain)
- PPD1-15 Long-term thermal stability of three ionic liquids, *J. Salgado, M. Villanueva, J. Parajó and J. Fernandez* (Universidad de Santiago de Compostela, Spain)
- PPD1-16 ILs as extractors of carbohydrates from aqueous solutions, *A.A. Rosatella, L.C. Branco and C.A.M. Afonso* (Universidade de Lisboa and Universidade Nova de Lisboa, Portugal)
- PPD1-17 Density of the reference ionic liquid [C6mim][NTf₂] at high pressures, *J.C.F. Diogo, F.J.P. Caetano and J.M.N.A. Fareleira* (Universidade Técnica de Lisboa, Portugal)
- PPD1-18 Novel ionic liquids based on L-cysteine derivatives, *K. Zalewska and L.C. Branco* (Universidade Nova de Lisboa, Portugal)
- PPD1-19 Design of new hot-strip sensors to measure thermal conductivity of ionic liquid systems, *A.P.C. Ribeiro, M.J.V. Lourenço, F.J.V. Santos, J.M. Serra and C.A. Nieto de Castro* (University of Lisbon, Portugal)
- PPD1-20 Complex molecular structures in binary mixtures of some [NR₁R₂R₃R₄]⁺[Tf₂N]⁻ ionic liquids in ethanol, *A.F.S. Santos, M.L.C.J. Moita, J.F.C.C. Silva and I.M.S. Lampreia* (University of Lisbon, Portugal)

20:00 Workshop Dinner

Venue: Restaurant Churrasqueira do Campo Grande, Close to FCUL Campus

Day 2 (Friday, 3 February 2012)

8:30–9:00: Registration

Venue: Building C1, Level 3, Northeast side Lobby

9:00–9:20: Session 5– Talk on NARILAR Project, *Alberto Coronas* (Coordinator)

Venue: Building C1, LT 1.3.14

9:20–11:00: Session 6– Invited Lectures (Industry)

Chair: Alberto Coronas (URV, Spain) and Carlos Nieto de Castro (FCUL, Portugal)

Venue: Building C1, LT 1.3.14

- 6.1 Ionic liquids at BASF SE: introduction and technical applications, *Klemens Massonne* (Vice President, BASF SE, Ludwigshafen, Germany)
- 6.2 Industrial Progress: A new generation of commercially available working fluids for absorption chillers and heat pumps, *Matthias Seiler* (Director New Business Development, Evonik Industries AG, Hanau, Germany)
- 6.3 Brief overview about sorption media and thermal fluids, *Thomas J. S. Schubert* (CEO and Founder, Io-Li-Tec, Ionic Liquids Technologies GmbH, Germany)
- 6.4 Ionic liquids from Solchemar as functional organic materials, *Luis Branco* (Director Research and Development, Solchemar Lda., Portugal)

11:00–11:30: Coffee Break

11:30–13:30: Session 7–Oral Presentations (contributed papers)

Topic: Ionic Liquid–Processes and Heat Transfer

Chair: John Holbrey (QUILL, UK) and Manuel Matos Lopes (FCUL, Portugal)

Venue: Building C1, LT 1.3.14

- 7.1 Ionic Liquids as gear lubricants and hydraulic fluids, *J. Fernández, J. Salgado, X. Paredes, T. Regueira, F.M. Gaciño and I. Otero* (Universidad de Santiago de Compostela, Spain)
- 7.2 Systematic study of the dynamic and static thermal stability of ionic liquids, *H.I.M. Veiga, J.M.S.S. Esperança, J.N.C. Lopes, L.P.N. Rebelo* (Universidade Nova de Lisboa, Portugal)
- 7.3 Recovery of ionic liquids from aqueous effluents using aluminium-based salts, *C.M.S.S. Neves, M.G. Freire and J.A.P. Coutinho* (University of Aveiro, Portugal)
- 7.4 Physical chemistry asks industry for a dance: what a reply???, *S.P. Verevkin, V.N.*

Emely'anenko and Dz.H. Zaitsau (University of Rostock, Germany)

7.5 Rheology of ionic liquids, *F.J.V. Santos* (University of Lisbon, Portugal)

7.6 IoBiofluids: The new concept for thermal materials, *C.S. Queirós, S.I. Vieira, M.J.V. Lourenço, and C.A. Nieto de Castro* (University of Lisbon, Portugal)

13:30–15:00: Lunch and informal contacts (Venue: Building C6, Restaurant)

15:00–16:00:Session 8– Poster Presentations

Venue: Building C6, Level 1, North side Lobby

Best Poster Selection Committee: Luis Santos (FCUP, Portugal), Maria José Lourenço (FCUL, Portugal), and Maria Isabel Lampreia (FCUL, Portugal)

Poster#

PPD2-21 Ionic-liquid-based aqueous two-phase systems for the extraction of dyes, *A.M. Ferreira, M. G. Freire and J.A.P. Coutinho* (University of Aveiro, Portugal)

PPD2-22 Extraction of caffeine from guaraná seeds using aqueous ionic liquid solutions, *A.M. Ferreira, A.F.M. Cláudio, M.G. Freire and J.A.P. Coutinho* (University of Aveiro, Portugal)

PPD2-23 ThermophIL: An application for ionic liquids property estimation, *P.J. Carvalho, R.L. Gardas and J.A.P. Coutinho* (University of Aveiro, Portugal and IIT Madras, India)

PPD2-24 Ionic liquids for CO₂ and CH₄ separation, *P.J. Carvalho and J.A.P. Coutinho* (University of Aveiro, Portugal)

PPD2-25 Liquid-Liquid equilibria and transport studies of ternary systems composed of ionic liquid, 1-hexanethiol and n-dodecane, *A.R. Ferreira, M.G. Freire, L.A. Neves, J.C. Ribeiro, F.M. Lopes, J.G. Crespo and J.A.P. Coutinho* (University of Aveiro, Universidade Nova de Lisboa and Galp Energia, Portugal)

PPD2-26 Electrospinning of cellulose using non-volatile and non-flammable solvents: Ionic liquids, *A.R.R. Teles, M.G. Freire, R.A.S. Ferreira, L.D. Carlos, J.A.Lopes-da-Silva and J.A.P. Coutinho* (University of Aveiro, Portugal)

PPD2-27 Enthalpies of vaporization of ionic liquids, *V.N. Emelyanenko, Dz. H. Zaitsau, S.P. Verevkin and C. Schick* (University of Rostock, Germany)

PPD2-28 Performance of absorption heat transformers using ionic liquids and 2,2,2-trifluoroethanol (TFE) and methanol as working fluids, *D.S. Ayou, M. Curras, D. Salavera, J. García, J.C. Bruno and A. Coronas* (Universitat Rovira i Virgili and Universidad de Vigo, Spain)

PPD2-29 Preliminary measurements of the thermophysical properties of some ionic liquids with water for absorption chillers, *R. Nanda, V. Patil, D. Salavera, J.S.*

<p><i>Urieta, A. Kumar and A. Coronas</i> (National Chemical Laboratory-India, Universitat Rovira i Virgili and Universidad de Zaragoza, Spain)</p>	
<p>PPD2-30 Characterisation of some Ionic Liquids by various techniques, <i>V. Patil, R. Nanda, D. Salavera, K.R. Patil, J. Urieta, A. Kumar and A. Coronas</i> (National Chemical Laboratory-India, Universitat Rovira i Virgili and Universidad de Zaragoza, Spain)</p>	
<p>PPD2-31 Interaction parameters from viscosity and polarity of the ionic liquid solutions: A model study, <i>S.K. Shukla and A. Kumar</i> (National Chemical Laboratory, India)</p>	
<p>PPD2-32 Liquid-liquid equilibria of ionic liquids for absorption refrigeration systems, <i>S. Thawarkar and A. Kumar</i> (National Chemical Laboratory, India)</p>	
<p>PPD2-33 Natural nano resources to enrich scientific and economical global needs, <i>C.S. Queirós, S.I. Vieira, M.J. Lourenço and C.A. Nieto de Castro</i> (University of Lisbon, Portugal)</p>	
<p>PPD2-34 Evidence of economic impact of quality measurements, <i>J.M.P França, C.A. Nieto de Castro, M.L.M. Lopes and S.M.S. Murshed</i> (University of Lisbon, Portugal)</p>	
<p>PPD2-35 State of the art research on exploitation of nanofluids as advanced heat transfer fluids, <i>S.M.S. Murshed and C.A. Nieto de Castro</i> (University of Lisbon, Portugal)</p>	
<p>PPD2-36 Current status and future prospects of ionanofluids, <i>S.M.S. Murshed, C.A. Nieto de Castro, M.J.V. Lourenço, F.J.V. Santos and M.L.M. Lopes</i> (University of Lisbon, Portugal)</p>	
<p>PPD2-37 Preliminary development of viscosity prediction of ionic liquid for absorption refrigeration systems, <i>A. Kumar, N. Khupse, T. Altamash, J.Mesonés, D. Salavera and A. Coronas</i> (National Chemical Laboratory, India and Universitat Rovira i Virgili, Spain)</p>	
<p>PPD2-38 Thin films ILs as components of organic light emitting diodes, <i>J.C.S. Costa and L.M.N.B.F. Santos</i> (Universidade do Porto, Portugal)</p>	
<p>PPD2-39 Studies of organic solvent polarities using ionic liquids as additives, <i>R.T. Couto, C. Lourenço, J.C. Lima, P.C. Simões and L.C. Branco</i> (Universidade Nova de Lisboa, Portugal)</p>	
<p>PPD2-40 Functional task specific ionic liquids, <i>G.V.S.M. Carrera, S. Dias, A. Costa, A. Forte, M.N. Ponte and L.C. Branco</i> (Universidade Nova de Lisboa, Portugal)</p>	
<p>16:00–17:00: Session 9a- Panel discussion Venue: Building C1, LT 1.3.14 Chair: Alberto Coronas (URV, Spain)</p>	<p>16:00–17:00: Session 9b- Panel discussion Venue: Building C1, LT 1.3.15 Chair: Carlos Nieto de Castro (FCUL,</p>

<p>Rapporteur: Daniel Salavera (URV, Spain)</p> <p>Group 1–Absorption refrigeration and heat pumps <i>(Please leave your name at registration desk)</i></p>	<p>Portugal)</p> <p>Rapporteur: Sohel Murshed (FCUL, Portugal)</p> <p>Group 2– New heat transfer and engineering fluids <i>(Please leave your name at registration desk)</i></p>
<p>17:00–18:00: Session 10 – Reports from working groups and discussion (+Coffee)</p> <p>Venue: Building C1, LT 1.3.14</p> <p>Chair: Alberto Coronas (URV, Spain) and Carlos Nieto de Castro (FCUL, Portugal)</p> <p>Group 1–Absorption refrigeration and heat pumps</p> <p>Group 2– New heat transfer and engineering fluids</p>	
<p>18:00–18:30: Closing Remarks and Way Forward</p> <p>Venue: Building C1, LT 1.3.14</p>	