

• **The Aims**

The International Association for Transport Properties (IATP) is a non-profit grouping of scientists devoted to the advancement of the transport properties of materials. In particular, the association is engaged in the preparation of representations of the transport properties that are of value to engineering process design, and to the description of natural processes in the environment where international collaboration and agreement is specially significant. These developments will be carried out in the context of the underlying science and with the intention of improving understanding.

IATP was formerly known as the Subcommittee on Transport Properties of the International Union of Pure and Applied Chemistry (1981 - 2001).

Further info at : <http://transp.cheng.auth.gr>

2001 - 2009 Chairman : Professor Sir W.A. Wakeham
 Secretary : Professor M.J. Assael

• **List of Scientific Meetings**

1. 2001 Chalkidiki, Greece
2. 2002 Imperial College, London, U.K.
3. 2003 Boulder, Colorado, U.S.A.
4. 2004 Pau, France
5. 2005 Bratislava, Slovakia
6. 2006 Boulder, Colorado, U.S.A.
7. 2007 Istanbul, Turkey
8. 2008 Pau, France
9. 2009 Boulder, Colorado, U.S.A.

• **Books Published (as STP/IUPAC)**

1. *Experimental Thermodynamics. Vol. III. Measurement of the Transport Properties of Fluids.*
Eds. A. Nagashima, J.V. Sengers and W.A. Wakeham.
Blackwell Scientific Publications (1991).
2. *Transport Properties of Fluids. Their Correlation, Prediction and Estimation.*
Eds. J.H. Dymond, J. Millat and C.A. Nieto de Castro.
Cambridge University Press (1996).

10th

Meeting of the International Association for Transport Properties

(former Subcommittee on Transport Properties
of IUPAC Commission I.2: Thermodynamics)



July 2nd - 3rd, 2010

Hotel Compostela
Santiago de Compostela, Spain



Program

Local Organising Committee

Prof. Josefa Fernández (josefa.fernandez@usc.es)
Dr. María J.P. Comuñas (mariajp.comunas@usc.es)



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- All presentations are informal and are followed by a discussion period.

Thursday July 1st, 2010

20:30 Aperitif and dinner at the hotel.

Friday July 2nd, 2010

10:00 Opening Remarks.
W.A. Wakeham (UK).

Scientific Session A.

10:10 Piezorheometer: Principle of Measurement and Adaptation to High Pressure
M. Milhet, M. Sultan, A. Graciaa, C. Boned (France)

10:30 On the Application of the Vibrating-Wire Technique to the Measurement of High-Viscosity Molecular and Ionic Liquids
J.C.F. Diogo, D. Maximo, F.J.P. Caetano, G. Cruz, J. M. N.A. Fareleira. (Portugal)

10:50 Measurement of the Thermal Conductivity of Ionic Liquids by the Transient Hot Bridge Method
B. Rathke, S. Will, U. Hammerschmidt (Germany)

11:10 Thermophysical Property Research on Ionic Liquids at the Erlangen Graduate School in Advanced Optical Technologies (SAOT)
J. Lehmann, M.H. Rausch, A. Leipertz, A.P. Fröba (Germany)

11:30 Coffee

Scientific Session B.

12:00 Thermophysical Properties of Poly(Ethylene Glycol) + Polar Solute Systems
Z. Vizak, F.J.P. Caetano, S.P. Serbanovic, M.L. Kijevcanin, E. Zivkovic (Portugal)

12:20 Molecular Structure under Shear Flow
P.V. Ramírez-González, S.E. Quiñones-Cisneros (Mexico), U.K. Deiters (Germany)

12:40 On the Measurement of the Electrical Conductivity of Ionic Liquids
J.C.F. Diogo, F.J.P. Caetano, J.L. Correia da Mata, D. Maximo, J.M. N.A. Fareleira, U.V. Mardolcar (Portugal), A. Laesecke (USA)

13:00 Decrease of the Viscosity of PEG200 by Addition of Supercritical CO₂
H.M.N.T. Avelino, J.M.N.A. Fareleira, D. Gourgouillon, J. M. Igreja, M. Nunes da Ponte (Portugal)

13:20 Lunch

Scientific Session C.

14:40 Reference Data for the Density and Viscosity of Liquid Copper and Liquid Tin
M.J. Assael, A. Kalyva, K. Antoniadis (Greece), W.A. Wakeham (UK), I. Egry (Germany), P. Quested (UK), J.T. Wu (R.P. China), E. Kaschnitz (Austria), M. Banish (USA)

15:00 Ab Initio Calculation of the Transport Properties of Hydrogen Sulfide Gas
R. Hellmann, E. Bich, E. Vogel (Germany), V. Vesovic (UK)

15:20 Preliminary Data of the Viscosity of Ionic Liquids with the New Rheometer TA AR1500EX
F.J.V. Santos, J.M.P. França, C.A. Nieto de Castro (Portugal)

Business Session.

15:30 Announcements.

- Projects Concluded
 1. Evaluation of the Viscosity Effect upon the Vibrating U-tube Densimeter
J.P.M. Trusler (UK), J. Fernandez, M.J.P. Comunas, L. Lugo (Spain), Caetano, J.M.N.A. Fareleira (Portugal), A. Goodwin (USA), K. Harris (Australia), B. Rathke (Germany)

Coffee

- Continuing Collaborative Projects
 1. Viscosity and Thermal Conductivity of Water/Steam
M.J. Assael (Greece), E. Vogel, J. Millat (Germany), A. Nagashima (Japan), D. Friend, J.V. Sengers (USA)
 2. Density and Viscosity of Molten Metals Cu and Sn
M.J. Assael (Greece), W.A. Wakeham (UK), I. Egry (Germany), P. Quested (UK), J.T. Wu (R.P. China), E. Kaschnitz (Austria), M. Banish (USA)
 3. High-Temperature, High-Pressure Viscosity Standards
J.M.N.A. Fareleira (Portugal), W.A. Wakeham, J.P.M. Trusler (UK), A.P. Froba, A. Leipertz, B. Rathke (Germany), K. Harris (Australia), A.R.H. Goodwin, A. Laesecke (USA), J. Fernandez (Spain), F. Caetano (Portugal), K. Schmidt (Canada), Chr. Boned (France)
 4. Reviews of Modern Viscosity Measurement Techniques
A.H.R. Goodwin(USA), W.A. Wakeham(UK), M.J. Assael (Greece) and colleagues to be appointed
 5. Short Review Paper on Evaluation of Existing Thermal Conductivity Measurements
M.J. Assael (Greece), W.A. Wakeham (UK), J. Wu (R.P. China), C.A. Nieto de Castro (Portugal), M. Banish (USA)
 6. Ionic Liquids Viscosity, Thermal Conductivity, Measurements for a new IUPAC standard
C.A. Nieto de Castro (Portugal), A. Froeba, A. Leipertz, U. Hammerschmidt (Germany), J. Fernandez (Spain), R. Perkins (USA), K. Harris (Australia).

- Future Collaborative Projects: Proposals
- Membership
- Future Meetings

17:20 Meeting Adjourn

17:40 Meetings of Project Committees

21:00 Dinner

Saturday July 3rd, 2010

09:30 Guided visit to old town (must register).

13:00 Guided tour to Cathedral (must register).

14:00 Tour ends