The International Association for Transport Properties

- **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 - 2008 Chairman : Professor W.A. Wakeham

- **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

- **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).

9th

Meeting of the International Association for Transport Properties

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

Saturday 20th - Sunday 21st June, 2009

NIST
Boulder, Colorado, USA

Program

Local Organising Committee
Dr R. Perkins (perkins@boulder.nist.gov)

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

Saturday June 20th, 2009

09:00 Opening Remarks.
W.A. Wakeham (UK).

Scientific Session A.

09:10 Zero-Density Thermal Conductivity of Water Vapor. Comparison of the IAPWS Formulation with Theoretically Calculated Values Including Original Experimental Data
E. Bich, E. Vogel (Germany)

09:30 Progress Report on the Background Thermal Conductivity of Water
D.G. Friend, M.L. Huber, R.A. Perkins, J.V. Sengers (USA), M.J. Assael, I.N. Metaxa (Greece)

09:50 Thermal Diffusivity of H_2O near the Critical Point.
J.V. Sengers, M.L. Huber, R.A. Perkins (USA), B. Le Neindre (France)

10:10 On the Prediction of the Viscosity and Thermal Conductivity of Liquid Hydrocarbon Mixtures on Considerations Based Upon the Hard Sphere Theory
M.J. Assael, A. Kalyva, K. Antoniadis, K. Kakosimos (Greece)

10:30 Coffee

Scientific Session B.

11:00 Current Status of Viscosity and Thermal Conductivity of Ionic Liquids
C.A. Nieto de Castro (Portugal)

11:20 Binary Diffusion in Ionic Liquid Co-Solvent Mixtures by Dynamic Light Scattering (DLS)
A. Froeba, J. Lehmann, A. Leipertz (Germany)

11:40 Thermophysical Properties of DIDP
F. Peleties, J.P.M. Trusler (UK)

12:00 The Necessity for Reference Fluids for Viscosity Measurements of Viscous Fluids at High Pressures
M.J.P. Comunas, A.S. Pensado, X. Paredes, J. Fernandez (Spain), K.R. Harris (Australia)

12:20 Lunch

Business Session.

14:30 Announcements.

New project on high temperature/high pressure high viscosity standard needed for industry.

- 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 Viscosity Standards
     J.M.N.A. Fareleira (Portugal), W.A. Wakeham (UK), A.P. Froba (Germany), A. Leipertz (Germany), K. Harris (Australia), A.R.H. Goodwin (USA), J. Fernandez (Spain), B. Rathke (Germany), F. Caetano (Portugal)
  4. Reviews of Modern Viscosity Measurement Techniques
     A.H.R. Goodwin(USA), W.A. Wakeham(UK), M.J. Assael (Greece) and colleauges 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) and colleauges to be appointed
  6. 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)
  7. Ionic Liquids Viscosity, Thermal Conductivity, Diffusion and Other Properties
     C.A. Nieto de Castro (Portugal), A. Froeba, A. Leipertz (Germany), colleagues to be determined.

- Future Collaborative Projects: Proposals.
- Membership.
- Future Meetings.

17:00 Adjourn.

Sunday June 21st, 2009

Meetings of all project committees.