

The Subcommittee of Transport Properties



• The Aims

The aims pursued of the Subcommittee is the study of topics of international, scientific or technical significance requiring agreement, regulation, standardization or codification in the area of transport properties and related quantities of fluids, with emphasis on fluids of industrial importance.

1981 - 1990 Chairman : Professor J. Kestin.
1991 - today Chairman : Professor W.A. Wakeham.

• List of Scientific Meetings

1. 1981 Washington, USA.
2. 1982 Lisbon, Portugal.
3. 1983 Lyngby, Denmark. (32nd IUPAC GA)
4. 1984 London, UK.
5. 1985 Lyon, France. (33rd IUPAC GA)
6. 1986 Lisbon, Portugal.
7. 1987 Boston, USA. (34th IUPAC GA)
8. 1988 Gaithersburg, USA. (10th STP)
9. 1989 Lund, Sweden. (35th IUPAC GA)
10. 1990 Thessaloniki, Greece.
11. 1991 Hamburg, Germany. (36th IUPAC GA)
12. 1992 Rostock, Germany.
13. 1993 Lisbon, Portugal. (13th ETPC)
14. 1994 Boulder, USA. (12th STP)
15. 1995 Guildford, UK. (38th IUPAC GA)
16. 1996 Geiranger, Norway.
17. 1997 Boulder, USA. (13th STP)
18. 1998 Amsterdam, The Netherlands.
19. 1999 Erlangen, Germany (15th ETPC)
20. 2000 Boulder, USA (14th STP)
21. 2001 Chalkidiki, Greece

• Books Published

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).

21st

Meeting of the Subcommittee on Transport Properties of IUPAC Commission I.2: Thermodynamics



7 - 8 September, 2001

Possidi, Chalkidiki
Greece

Programme

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

Friday, 7th September 2001

09:30 Opening Remarks.
W.A. Wakeham (UK).

Scientific Session.

09:40 Determination of Binary Diffusion Coefficients of Gases using Holographic Interferometry in a Loschmidt Cell.
J. Baranski, E. Vogel (Germany)

10:00 Effective Cross-sections for the Thermal Conductivity of Diatomic and Linear Triatomic Gases.
S. Bock, E. Bich, E. Vogel (Germany)

10:20 The Density Dependence of the Viscosity Coefficient.
P.S. van der Gulik, C.A. ten Seldam (The Netherlands)

10:40 Coffee.

11:00 Accurate Determination of Viscosity and Surface Tension by Surface Light Scattering.
A.P. Froeba, S. Will, A. Leipertz (Germany)

11:20 Simultaneous Measurement of Density and Viscosity of Mixtures at High Pressure.
A.A.H. Padua, F. Audonnet (France)

11:40 Static and Dynamic Light Scattering in the Critical Region of a Ternary Liquid Mixture.
J. Winkelmann (Germany)

12:00 Application of the Transient Hot-wire Technique to the Accurate Measurement of the Thermal Conductivity of Solids.
M.J. Assael, K. Gialou (Greece)

13:00 Lunch.

Saturday, 8th September 2001

Business Session.

09:30 Announcements.

- Concluded Collaborative Projects
 1. Viscosity of Toluene as a Function of Pressure
N. Dalaouti, M.J. Assael (Greece), K. Harris (Australia), J.M.N.A. Fareleira (Portugal)

- Final Drafts on Concluded Collaborative Projects
 2. Viscosity of Toluene at Atmospheric Pressure in Wide Ranges of Temperature. (*started 96, approved 98*)
F.J.V. Santos, C.A. Nieto de Castro (Portugal), J.H. Dymond (UK), N. Dalaouti, M.J. Assael (Greece), A. Nagashima (Japan)
- Progress Reports on Existing Collaborative Projects
 3. Transport Properties of Methane + Ethane
S. Will and A. Leipertz (Germany), V. Vesovic, W.A. Wakeham (UK)
 4. Thermal Conductivity of *n*-Butane
R. Perkins, J.V. Sengers (USA), C.A. Nieto de Castro (Portugal)
 5. Viscosity of Liquid Water
W.A. Wakeham (UK), H.A. Oye (Norway), J.H. Dymond (UK)
 6. Viscosity of Alkali Chlorides
H. Oye (Norway), C.A. Nieto de Castro (Portugal)
 7. Viscosity and Thermal Conductivity of Water & Steam
M.J. Assael (Greece), J. Millat (Germany), A. Nagashima (Japan), D. Friend, J.V. Sengers (USA)
 8. Viscosity and Thermal Conductivity of D₂O
M.J. Assael (Greece), A. Nagashima (Japan)
 9. Viscosity of *n*-Pentane
A. Laesecke (USA), E. Vogel (Germany), M.J. Assael (Greece)
 10. Viscosity of Cyclopentane
N. Dalaouti, M.J. Assael (Greece), J.M.N.A. Fareleira (Portugal), H. Bauer (Germany), K. Harris (Australia)
 11. Investigation of a New High-Viscosity Standard
M.J. Assael (Greece), J.M.N.A. Fareleira (Portugal), H. Bauer (Germany)
 12. Feasibility Study for a Book on The Properties of Water, Air and Sea Water
A. Nagashima (Japan), M.J. Assael (Greece)
 13. Thermal Conductivity of Iso-Butane
R. Perkins (USA), K. Marsh (New Zealand), C.A. Nieto de Castro (Portugal), E. Vogel (Germany)
 14. Correlation of the Thermal Conductivity of R134a.
R. Perkins, A. Laesecke, J.V. Sengers (USA)

- Future Collaborative Projects: Proposals.
- Future of the Subcommittee on Transport Properties
- Membership.
- Future Meetings.

13:00 Lunch.