

# Liquids Group Newsletter

## Institute *of* Physics

November 2003

Welcome to the inaugural Newsletter of the Liquids Group of the Institute of Physics.

### 🌟 Our Scope:

Initiated by the successful EPSRC Liquid Matter Network (2001), the Liquids Group aims to advance UK liquid-state research by fostering collaborations within a broad spectrum of experimentalists, theorists, and computer simulators. Topics covered include the structure and dynamics of pure liquids of all kinds, as well as liquid mixtures and solvation phenomena, liquids under extreme conditions, confined liquids and fluids at interfaces, the glass transition, crystal growth in liquids, and self-assembly from solution.

### 🌟 Special Features:

We aim to develop new diffraction instruments at UK X-ray and neutron sources together with sophisticated data interpretation tools. We will endeavour to foster links with liquids researchers in other parts of Europe through co-operation with the Liquids Board of the European Physical Society.

### 🌟 Committee Members:

Professor Alan K Soper	ISIS Facility (Chair)
Dr Philip S Salmon	Department of Physics, University of Bath (Secretary)
Dr Chris Hardacre	School of Chemistry, Queen's University Belfast (Treasurer)
Dr Piers Buchanan	Department of Chemistry, Kings College London (Webmaster)
Dr Daniel T Bowron	ISIS Facility
Dr Stuart M Clarke	Department of Chemistry, University of Cambridge
Dr Jason Crain	Department of Physics and Astronomy, University of Edinburgh
Professor Bob Evans	Department of Physics, University of Bristol
Professor Paul A Madden	Physical & Theoretical Chemistry Laboratory, University of Oxford
Dr Neal T Skipper	Department of Physics and Astronomy, University College London

### 🌟 How to Contact Us:

#### **Chair**     **Professor Alan K Soper**

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#### **Secretary**     **Dr Philip S Salmon**

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### 🌀 How to Join the Liquids Group:

Please go to the Institute of Physics web pages for the Liquids Group, <http://groups.iop.org/LG>, and follow the links. (Note – the “Join the Liquids Group” link on the “contacts” page does not at present work).

### 🌀 Group Activities – the story so far:

Since its inauguration, the Liquid’s Group has organised the following symposia and workshops:

- Symposium on “Materials under Extreme Conditions” at the joint European Physical Society Condensed Matter Division and IoP Condensed Matter & Materials Physics (CMMP) meeting in Brighton, April 2002
- Workshop on “Empirical Potential Structure Refinement (EPSR)”, organised jointly with the CCLRC Centre for Molecular Structure and Dynamics, Cosenor’s House, November 2002
- International Workshop on “Advances in the Fundamental Properties of Confined Fluids”, organised by Bob Evans, Neal Skipper and Alan Soper jointly with the CCLRC Centre for Molecular Structure and Dynamics (Cosenor’s House, April 2003)
- Symposium on “Ionic Liquids” at the IoP Condensed Matter & Materials Physics (CMMP) meeting in Belfast, April 2003

### 🌀 Forthcoming Group Activities:

- Disordered Materials User Group Meeting, 14-15 April, ISIS
- Workshop on “Empirical Potential Structure Refinement (EPSR)”, organised jointly with the CCLRC Centre for Molecular Structure and Dynamics, Cosenor’s House, June 2004
- Workshop on “Structure and Dynamics of Liquids and Glasses,” probably organised with the Neutron Scattering Group – *ca.* August 2004
- Meeting, with the European Molecular Liquids Group (EMLG), on “Complex Liquids – Fundamental Properties to Industrial Applications” (September 3-7, Sheffield Hallam).

### 🌀 News on Instrumentation:

As part of the remit of the Group, there have been significant interactions between many members in developing plans for new instrumentation at both the second target station of the ISIS pulsed neutron source and at the Diamond synchrotron radiation facility.

- The Near and InterMediate Range Order Diffractometer (NIMROD) as been given the go ahead by the Target Station 2 Science Advisory Committee (SAC) to be built as one of the first 7 new instruments. At the present time, the proposal is going into the Government Gateway process, along with the other approved instruments, to establish a funding mechanism. There is significant interest in particular from colleagues in Italy to assist in building the new instrument. A group led by committee member Dr Neal Skipper (UCL) developed support for the proposal,

and Professor Bob Newport (Kent) presented the proposal to the SAC. Details of the instrument can be found at: <http://www.isis.rl.ac.uk/TargetStation2/instruments/index.htm>

■ The Diamond Science Advisory Committee (SAC) at its meeting of 4<sup>th</sup> November recommended that a detailed proposal should be developed for the High Energy x-Ray Amorphous and Liquids Diffraction and Spectroscopy (HERALDS) beamline. A call for expressions of interest in the beamline will be made to the scientific community on 5<sup>th</sup> January and a submission of the detailed proposal to the SAC is due on 16<sup>th</sup> February 2004.