Background and purpose of meeting: A continuous challenge in the research field *viscous liquids and the glass transition* is the origin of the non-Arrhenius temperature dependence of the liquid relaxation time. Is there a universal explanation of this intriguing fact? Phenomenological models like the entropy, free volume, and elastic models, link the relaxation time activation energy to macroscopic observables; other models attempt first-principles approaches.

This informal workshop is meant to illuminate various models and viewpoints. The meeting emphasizes discussions of models and correlations between fragility and other observables.

Opening lecturer: Austen Angell.

Deadline for abstract submission: June 10, 2008.

Conference fee: 100 Euro before June 10 (after: 250 Euro).

Maximum number of participants: 70. Participants are registered on a “first-come, first-served basis” upon receipt of the conference fee.

Contact: fragility@ruc.dk

For details of abstract submission, payment, etc: Please consult the Glass and Time webpage at http://glass.ruc.dk
Fragility of Viscous Liquids: Cause(s) and Consequences

Program

Carlsberg Academy, Copenhagen, October 8-10, 2008
Wednesday, October 8

8.00-9.00  REGISTRATION

CHAIR: Aleksander Matic
9.00-9.05  WELCOME by Jeppe Dyre
9.05-9.20  Klaus Bock (DNRF)
            The Danish National Research Foundation
9.20-9.50  Austen Angell (Arizona State University)
            Opening lecture
9.50-10.00 Discussion
10.00-10.30 Keith Nelson, Jeremy Johnson & Christoph Klieber (MIT)
            Coherent MHz and GHz Longitudinal and Shear Acoustic Phonons in Glass-Forming Liquids
10.30-10.40 Discussion
10.40-11.00 COFFEE BREAK.

CHAIR: Ernst Rössler
11.00-11.20 Tina Hecksher (Roskilde University)
            Little Evidence for Dynamic Divergences in Ultraviscous Molecular Liquids
11.20-11.30 Discussion
11.30-11.50 Isak Avramov (Bulgarian Academy of Sciences)
            Viscosity, entropy and fragility
11.50-12.00 Discussion
12.00-12.20 Nikolaus Petzold (Universität Bayreuth)
            The Dynamic Crossover in o-Terphenyl
12.20-12.30 Discussion
12.30-12.50 Albena Nielsen (Roskilde University)
            Prevalence of $\sqrt{t}$ Relaxation for the Dielectric $\alpha$-process in Viscous Organic Liquids
12.50-13.00 Discussion
13.00-14.00 LUNCH.

14.00-16.00 POSTER SESSION.

CHAIR: Andrea Mandanici
16.00-16.20 Ulf Rørbaek Pedersen (Roskilde University)
            Long-lived Structural Fluctuations and Crystallization of Binary Mixture
16.20-16.30 Discussion
16.30-16.50 Francois Sausset (Université Pierre et Marie Curie)
            A Fragile Monodisperse Lennard-Jones Liquid on the Hyperbolic plane: Dynamical Heterogeneities and Topological Defects
16.50-17.00 Discussion
17.00-17.20 Alistar Ottochian (Pisa University)
            Universal Scaling between Structural Relaxation and Caged Dynamics in Glass-Forming Liquids, Polymers and Binary Mixtures
17.20-17.30 Discussion
17.30-17.50 Frederic Affouard (Université Lille)
            Breakdown of the Stokes-Einstein Relation in Lennard-Jones Glass-Forming Mixtures with different Interaction Potentials
17.50-18.00 Discussion

18.00-20.00 DINNER (buffet).

CHAIR: Marc Descamps
20.00-20.20 Niels Boye Olsen (Roskilde University)
            Ageing of Dielectric and Mechanical Properties
20.20-20.30 Discussion
20.30-20.50 Gregor Diezemann (Universität Mainz)
            Memory effects in the Gaussian Trap Model
20.50-21.00 Discussion
Thursday, October 9

**CHAIR: Christ Glorieux**

**9.00-9.20** Friedrich Kremer (Universität Leipzig)

Electrode Polarisation and its Scaling: A Microscopic Model

**Discussion**

**9.20-9.50** Joshua Sangoro (Universität Leipzig)

Charge Transport and Mass Transport in Ionic Liquids

**Discussion**

**1.00-10.20** Bo Jakobsen (Roskilde University)

Frequency-Dependent Specific Heat from Thermal Effusion in Spherical Geometry

**Discussion**

**10.30-11.00** COFFEE BREAK.

**CHAIR: Ulrich Buchenau**

**11.00-11.20** Claudio Maggi (Roskilde University)

Shear-Mechanical and Dielectric Dynamic Heterogeneity in Supercooled Liquids

**Discussion**

**11.30-11.50** Melanie Köhler (Universität Augsburg)

Dynamics of Structurally and Orientationally Disordered Materials Investigated by Broadband Dielectric Spectroscopy

**Discussion**

**12.00-12.20** Catalin Gainaru (Universität Dortmund)

Dynamics Slower than the Structural Relaxation in Viscous Liquids

**Discussion**

**12.30-14.30** LUNCH & LEISURE.

**CHAIR: Tullio Scopigno**

**14.30-14.50** Kumar Kunal (University of Akron)

Influence of Chemical Structure on Fragility in Polymers: A Qualitative Picture

**Discussion**

**15.00-15.20** Daniele Cangialosi (University of the Basque Country)

Fragility and Thermodynamics in Complex Glass-formers

**Discussion**

**15.30-15.50** Kristine Niss (Roskilde University)

Fragility and its (Proposed) Correlation to other Properties – What Can We Learn from High-Pressure Experiments?

**Discussion**

**16.00-16.20** Aleksander Matic (Chalmers University)

Structure and Dynamics in Hydrogen-Bonded Liquids

**Discussion**

**16.30-17.00** COFFEE BREAK.

**CHAIR: Burkhard Geil**

**17.00-17.20** Nicholas P. Bailey (Roskilde University)

Understanding non-exponentiality and non-Arrhenius Temperature Dependence through Memory Functions

**Discussion**

**17.30-17.50** John C. Mauro (Corning Incorporated)

On the Relationship Between Fragility and Stretching

**Discussion**

**18.00-18.20** Andreas Heuer (Universität Münster)

Fragility as Explained from the Landscape Perceptive

**Discussion**

**CONFERENCE DINNER.**

PIANO MUSIC played by Friedrich Kremer.
Friday, October 10

**CHAIR: Morten Eldrup**

9.00-9.20  **Wei-Hua Wang** (Chinese Academy of Sciences)  
*The Fragility of Bulk Metallic Glasses*

9.20-9.30  Discussion

9.30-9.50  **Ralf Busch** (Universität des Saarlandes)  
*On Fragility of Bulk Metallic Glass-Forming Liquids*

9.50-10.00  Discussion

10.00-10.20  **Isabella Gallino** (Universität des Saarlandes)  
*Kinetic and Thermodynamic Studies of the Fragility of Bulk Metallic Glass-Forming Liquids*

10.20-10.30  Discussion

10.30-11.00  COFFEE BREAK.

**CHAIR: Søren Toxværd**

11.00-11.20  **Roland Böhmer** (Technische Universität Dortmund)  
*Strong forever - Supercooled hydration water in connective tissue*

11.20-11.30  Discussion

11.30-11.50  **Thomas B. Schroeder** (Roskilde University)  
*What can Thermal Fluctuations tell us about Fragility?*

11.50-12.00  Discussion

12.00-12.20  **Simone Capaccioli** (University of Pisa)  
*Single-Parameter Description of the Overall Dynamics of Glass-Forming Liquids under Temperature and Density Variations*

12.20-12.30  Discussion

12.30-13.30  LUNCH.

**CHAIR: Dorthe Lybye**

13.30-13.50  **David Sidebottom** (Creighton University)  
*Dynamic Light Scattering in Glass-Forming Ultraphosphate Liquids*

13.50-14.00  Discussion

14.00-14.20  **Yuanzheng Yue** (Aalborg University)  
*Link between Liquid Fragility and Glass Iso-structure Viscosity*

14.20-14.30  Discussion

14.30-14.50  **Ralf Keding** (Aalborg University)  
*Fragility of High BaO Containing Glasses*

14.50-15.00  Discussion

15.00-15.20  **Neville Greaves** (Aberystwyth University)  
*Low Entropy Glasses from Zeolite Amorphisation*

15.20-15.30  Discussion

15.30  MEETING ENDS.