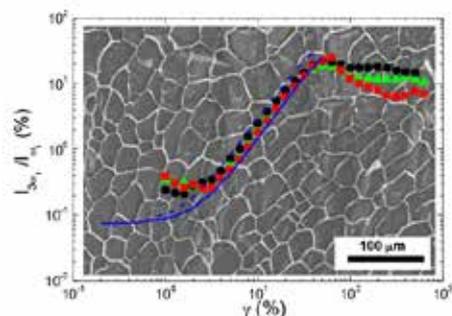


Rheology Workshop: Principles and Applications of Linear and Nonlinear Viscoelasticity

5-6 December 2012, School of Chemical Sciences
The University of Auckland



Rheology is the study of flow and deformation of materials and allows determination of the materials viscoelastic behaviour. This well established and powerful technique is extensively used in fundamental and applied research, and in different industries such as the food, pharmaceutical and chemical industries.

On the first day of the workshop, lectures covering advanced topics in small and large deformation oscillatory rheology will be presented. Recent instrumentation and theoretical developments will be covered. Emphasis will be put on how to explain experimental data using different theoretical frameworks. Examples borrowed from food, polymer and material sciences will be considered.

On the second day hands-on demonstrations, using state-of-the-art rheometers, will be carried out and attendees are encouraged to bring their samples.

This workshop is jointly organised by The School of Chemical Sciences, The University of Auckland, and MEP Instruments with the support of Anton Paar.

Programme outline

December 5 2012

Lectures Session

Venue: Room 407, 4th Floor building 301
23 Symonds Street, Auckland

9.00am	Arrival
9.20am	Welcome and start
9.30am	Dr S. Raha: <i>Basics of Oscillatory Rheology</i>
10.30am	Dr. L. Hilliou: <i>Large Deformation Rheology</i>
11.30am	Dr. Y. Hemar: <i>Micro-rheological methods</i>
12.30pm	Lunch
1.30pm	Dr. S. Raha: <i>Rheology Instrumentation: Special Accessories and Test Methods</i>
2.30pm	Dr. Y. Hemar: <i>Viscoelasticity of colloidal systems</i>
3.30pm	Dr. L. Hilliou: <i>Rheology of polymeric system</i>
4.30pm	General Discussion: <i>Recent and Future Developments in Rheology</i>
5.00pm	Closing

December 6 2012

Hands-On Session

Viscoelastic measurements

Venue: Room 507, 6th Floor building 301
23 Symonds Street, Auckland

9.00am -1.00pm	First Group: Viscoelastic measurements and their interpretation
2.00pm -6.00pm	Second Group: Viscoelastic measurements and their interpretation

Attendance fees:

\$175 per session (full workshop \$300)

Please note second day session is limited to 20 attendees.

Enquiries: Associate Professor Yacine Hemar

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Phone: +64 9 923 9676

Principal lecturers:

Dr Loic Hilliou obtained a PhD in macromolecular sciences from the University of Strasbourg (France). He has held several positions in academia and in industry including Total and BASF. He is currently working at the Institute for Polymers and Composites in Portugal in research areas including gelling natural additives, biodegradable food packaging, microfluidics, and online monitoring of industrial extrusion processes using rheo-optical techniques. He is the Director of EURHEO, the European Masters in Engineering Rheology.

Dr Sumanta Raha is the Rheology Specialist at MEP Instruments and has extensive industrial and research experience in the practical applications of these techniques in the areas of nanomaterials research and rheology of thermoplastic elastomers. Dr Raha has published many scientific articles and holds two patents.

Associate Professor Yacine Hemar obtained his PhD in Physics from the University of Strasbourg (France). He has extensively worked on theoretical and applied rheology of complex systems such as foams, emulsions and protein and polysaccharide gels. He is one of the first researchers to introduce the use of high-frequency microrheology to study colloidal and biopolymer networks. He is currently working at the School of Chemical Sciences, where he teaches rheology to the undergraduate and postgraduate students in the Food Science Programme.