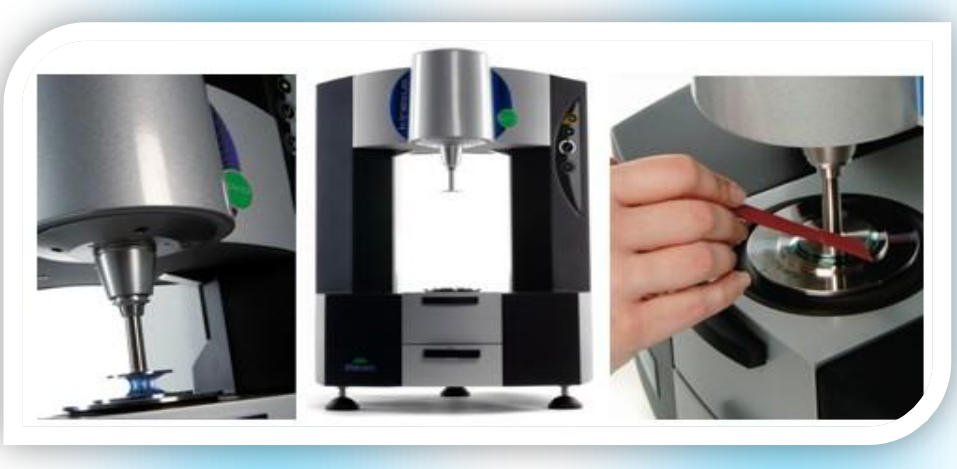
Your invitation

Understanding the Relationships between Rheology and Particle Properties



This 2 hour seminar will guide you through some of the fundamental properties of dispersed systems and demonstrate how these affect rheological properties and how this understanding allows the rheology of the material to be controlled.

INTERNATIONAL GUEST SPEAKER

Dr Adrian Hill, is the Product Technical Specialist for Rheometry Products, at Malvern Instruments based in the UK.

Adrian obtained his PhD from the School of Chemistry at the University of Exeter, where his work involved rheological studies on high particle-loaded dispersions. For over 10 years he has worked as a rheologist, supporting customers working with both rotational and capillary rheometers. Working with Malvern's complementary particle characterisation technologies has enabled Adrian to use his background to focus on the properties of dispersed systems – from suspensions and emulsions through to pastes and gels – and help customers understand how the bulk rheology of their materials can be controlled by the properties of the constituent components.

TOPICS COVERED

- **Introduction to Rheology - A Practical Measurement Perspective**

Rheology is the science of deformation and flow. Whilst advanced rheological investigations linked to highly mathematical theories continue to be the domain of significant academic studies, rheological measurements themselves are actually a valuable practical tool that have proven benefits across multiple industries. This seminar will focus on the applied use of rheological measurements, and will show how a rheometer can be used as a powerful laboratory-based analysis system to simulate the broad range of processing conditions that a typical sample experiences in its lifetime. In this respect, rheology is used as a problem solving tool for all aspects of material behaviour. If any of the following questions are familiar, then rheology could have the answer – is my sample stable; will it pump or dispense in my process; are end-use application properties satisfactory; why does the same sample work initially then cause difficulties?

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Typical rheological properties are discussed using a basic series of robust testing procedures aimed at gaining an understanding of how a material will behave, from rest conditions through to high speed processing conditions.

- **Relating Rheological Parameters to Particle Properties - A Suspension Stability Perspective**

Dispersions are common sample types used across multiple industries – from foodstuffs to personal care and pharmaceutical formulations, and from paints and coatings to mineral slurries. For all these applications, rheological properties are key to enabling satisfactory performance at all stages of the product lifetime. In a suspension, these bulk material properties are influenced by the physical properties of the dispersed particles, such as the average particle size, the size distribution, the zeta potential (or charge on the particles) and even the shape of the particles. This seminar will present some of the fundamental properties of dispersed systems, and demonstrate how these ultimately affect rheological properties.

SESSION TIMES

These two hour seminars will start at either **10am to 12pm** or **2pm to 4pm.**

DATE AND VENUE

Mon 22 Jul	Perth	10am-12pm	Curtin University, Building 300, Rm 215
Tue 23 Jul	Adelaide	10am-12pm	University of Adelaide, Union House, Level 4, W.P. Rogers room
Wed 24 Jul	Melbourne	10am-12pm	University of Melbourne, Trinity college, Old Wardens Lodge (OWL)
Fri 26 Jul	Canberra	10am-12pm	Australian National University, RSISE, Rm A105
Mon 29 Jul	Sydney	10am-12pm 2pm-4pm	UNSW, Tyree Energy Technology, Room K-H6-G17 University of Sydney, School of Chemistry, Rm 418
Tue 30 Jul	Brisbane	10am-12pm	University of QLD, School Agric. & Food Sci. Rm S524
Wed 31 Jul	Auckland, NZ	10am-12pm	Auckland University, Engineering building Eng4502/404-502
Thurs 1 Aug	Dunedin, NZ	10am-12pm	Otago University, Blg 145 Applied Sc seminar Rm
Friday 2 Aug	Palmerston North, NZ	10am-12pm	Massey University, Inst. Food, Nutri. & Human Health (IFNHH) Seminar Rm 2.07

REGISTRATION

Registration is free of charge, however participants must register
Please register your interest below or online at www.atascientific.com.au

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