



RSC Lecture

12th December 2013 at 2 p.m.

Lecture Theatre A, Edward Llwyd Centre

“Novel interfacial structures based on proteins and polysaccharides for stabilization of food colloids”

Professor Brent S. Murray

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Brent Murray is Professor of Food Colloids, appointed as lecturer in January 1995. Prior to this he spent 3 years in ICI's corporate colloid research group (UK) and 3 years in the Department of Physical Chemistry Colloid Group, at the University of Melbourne. Brent's principal research interests are as follows:

- Measurement of colloidal interaction forces between particles, e.g., emulsion droplets, via atomic force microscopy (AFM) and particle collision techniques, to enable predictions of emulsion rheology and stability, etc
- Measurements of interfacial rheology and interfacial phase behaviour of adsorbed biopolymer/biosurfactant films in relation to emulsion and foam formation and stability, including use of Brewster angle microscopy
- Development of methods for measuring the adsorption/desorption and conformation of biopolymers/biosurfactants at oil-water and air-water interfaces, such as Langmuir trough methods
- Applications of confocal microscopy, bulk rheology and particle tracking techniques to understand the relationship between colloidal microstructure and bulk texture
- Particle-stabilized foams and emulsions
- Biopolymer complex formation as a route to novel encapsulation, emulsification and controlled delivery of functional food ingredients
- Non-food uses of food materials in colloid and surface science technology