QCM-D, An advanced analytical tool for the study of nanoscale surface interactions

Quartz Crystal Microbalance with Dissipation monitoring (QCM-D) technology is a real-time surface sensitive technique which enables the characterisation of surface interaction processes such as mass uptake/mass loss at surfaces, conformational changes of molecular layers, as well as viscoelastic characterisation films adhering to the sensor surface. The QCM-D technique can monitor all processes where the surface adhering mass changes. Suitable application areas range from adsorption/desorption/binding of small molecules such as proteins, surfactants, and lipids, to polymers, nanoparticles and whole cells.

TOPICS DISCUSSED

Talk 1: QCM-D Technology

Join us to learn more about the basic principles of the QCM-D technique and the application areas where it can be used. The session will also cover what instrumentation that is offered to enable these different applications.

Talk 2: Experimental data and modelling

The QCM-D technology session will be followed by a session on experimental tips and tricks and how to analyse the QCM-D data. Learn more about the experimental design, the regeneration of sensor surfaces and the fine tuning of experimental conditions for optimal measurement results. We will also discuss different ways to analyse QCM-D data, modelling fundamentals and how to extract information on mass, thickness and viscoelastic properties of the surface adhering layers, as well as options for advanced modelling.

INTERNATIONAL GUEST SPEAKER

Malin Edvardsson, PhD, graduated in Physics from Chalmers University of Technology, Gothenburg, Sweden, in 2006. After having done her PhD in the research group where the QCM-D technology was born, she continued with a post doc focusing on experimental setups combining QCM-D with complementary technologies. In 2010, after having worked with the QCM-D technology for almost a decade, she joined Biolin Scientific to work as Product Manager for the Q-Sense brand.

ATA Scientific Pty Ltd www.atascientific.com.au enquiries@atascientific.com.au
T: +61 2 9541 3500 F: +61 2 9525 7166

SESSION TIMES

The presentation will consist of two separate talks, 45minutes each in duration and will start at either **10am or 2pm.**

DATE AND VENUE 2013

Mon 19 Aug	10am-12pm	**University of Queensland,** Pharmacy Australia Centre of Excellence, Level 4, Interaction Space/ Boardroom
Tue 20 Aug	10am-12pm	**University of New South Wales**, Samuels Building F25, Level 5, Room 513
Wed 21 Aug	2pm – 4pm	**Australian National University**, Research School of Physics and Engineering RSPE Seminar Room, building 60, Level 4 Room 414
Thu 22 Aug	10am-12pm	**University of Adelaide**, North Terrace SA 5005 Union House, Level 4, Margaret Murray room
Fri 23 Aug	10am-12pm	**Australian Synchrotron**, National Centre for Synchrotron Science (NCSS) 800 Blackburn Road, Clayton, NCSS Seminar room

REGISTRATION

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

NAME:
ORGANISATION:
DEPARTMENT:
EMAIL:
PHONE:
DATE & LOCATION PREFERED:

For further information please contact us.

CONTACT INFORMATION

ATA Scientific Pty Ltd

PO Box 2172, Taren Point, NSW 2229 | P: +61 2 9541 3500 | F: +61 2 9525 7166

enquiries@atascientific.com.au | www.atascientific.com.au

*Make sure to 'Like' ATA Scientific on **Facebook** for further updates and information*

Young Scientist award