

Nanoscale Surface Structure and Dynamics (BVC Prize Symposium 2018)

Date: Thursday 11th October 2018

Venue: Lounge South, Ricoh Arena, Coventry, CV6 6GE

INTRODUCTION

Investigating the structure and dynamics of surfaces with high spatial and/or temporal resolution is a rich field of fundamental science with strong technological implications. A detailed understanding of the nanoscale structure and dynamics of surfaces lies at the heart of innovation in areas as diverse as materials growth and self-assembly; nanoscale control of the electronic and magnetic properties of materials (which increasingly includes control at the quantum level); and chemical processes such as catalysis and sensing. Cutting edge developments in instrumentation and analysis techniques have always underpinned our ability to probe ever smaller and faster; e.g. the invention of the scanning tunnelling microscope (STM) provided the capability to "see" individual atoms, while the invention of quasi-elastic helium atom scattering (QHAS) provided the ability to probe dynamics at surfaces with picosecond time resolution.

This meeting is organised by the British Vacuum Council and is composed of six invited talks from national and international leaders in the field of nanoscale structure and dynamics of surfaces utilising a range of techniques from He atom scattering, to scanning probe, to synchrotron radiation.

The symposium will serve as a platform for the award of the 2018 BVC Senior Prize and John Yarwood Memorial Medal to Dr William Allison of University of Cambridge for his contributions to understanding the structure and dynamics of surfaces using Helium Atom Scattering techniques.

Provisional Programme

09:00 Registration opens in the atrium

09:50 Opening and Prize Presentation

10:00 **JOHN YARWOOD MEMORIAL MEDAL TALK**

Low-energy Atoms for Spectroscopy and Microscopy of Surfaces

Bill Allison, *University of Cambridge*

10:25 Controlling and measuring the rotational orientation of molecules in surface scattering experiments

Gil Alexandrowicz, *Technion—Israel Institute of Technology*

10:50 Tea / Coffee

11:10 Chiral Surfaces - Pathways to Enantioselectivity

Georg Held, *University of Reading*

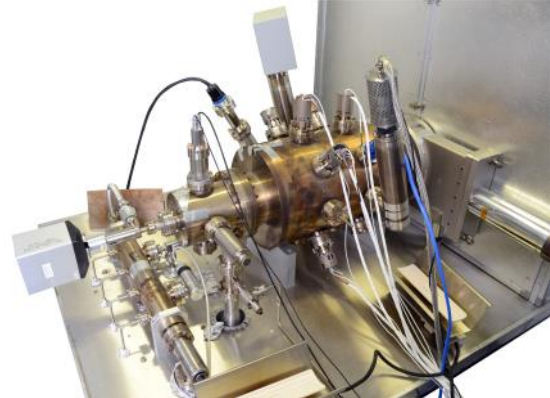
11:35 STM instigation and control over a single molecule reaction

Peter Sloan, *University of Bath*

MEETING ADMINISTRATION & MANAGEMENT

Vacuum Symposium Secretariat

Email: info@vacuum-uk.org



VACUUM SYMPOSIUM

a forum for scientists, academics, technicians and industrial users

10TH & 11TH OCTOBER 2018 . COVENTRY UK

www.vacuum-uk.org

A MEETING AT THE 9TH VACUUM SYMPOSIUM

Please watch out for updates on the website

TECHNICAL PROGRAMME CO-ORDINATOR

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To respond to this Call for Posters please go to:

Vacuum Symposium

www.vacuum-uk.org

and make a note of the dates in your diary TODAY!



Co-located with

VacuumExpo

Industrial and Scientific
Conference & Exhibition

www.vacuum-expo.com

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12:00 Lunch Break | POSTER SESSION

A poster prize will be awarded at 13:30 for the best poster

14:00 Modern applications of normal incidence X-ray standing waves

David Duncan, *Diamond Light Source*

14:25 Manipulating neutral helium atom beams for spatial and dynamical resolution, delivering instruments for nanoscience and understanding contrast formation

David Ward, *University of Cambridge*

14:50 Close

15:00 Exhibition open until 16:00

CALL FOR POSTER PRESENTATIONS

This meeting comprises a programme of invited speakers and a poster session (which will be combined with other meetings for added interest). The programme will allow time for delegates to network with others and to visit the exhibition.

VACUUM SYMPOSIUM POSTER PRIZE

We invite contributions for poster presentation which may be on any vacuum related topic (e.g. thin films, plasma technology, surface analysis, vacuum in manufacturing etc.). Prospective poster presenters should submit their abstract by 21st September 2018.

This year's poster prize is sponsored by Leybold UK Ltd.



To contribute your poster please go to **WWW.VACUUM-UK.ORG** and register to attend. This will lead to the question "Do you want to submit an abstract?" and an easy process follows online.

Deadline 21st September 2018.

MEETING ATTENDEES

To register as an attendee for the Symposium (which includes your pass into the Vacuum Expo exhibition) please go to **WWW.VACUUM-UK.ORG** and register.

Once registered you will be sent regular updates.

PLEASE SUPPORT THE EVENT - TELL YOUR COLLEAGUES!!

COMMENTS FOLLOWING A PREVIOUS CONFERENCE:

Meeting organiser, Alan Webb of the Ion and Plasma Interactions (IPSI) Group of the IOP, commented on the quality of the meeting:

"It is rare to have speakers from so many different industry sectors all speaking in the same programme. It is significant that in the world of vacuum that one industry can learn from the experience of another. We are grateful to all speakers and their companies and organisations for their contributions which made the day so very successful".

A meeting contributing to the Vacuum Symposium at Vacuum Expo, co-located with:-

VacuumExpo
Technology in a Vacuum

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Version V9.3 - 23/08/2018

BVC The British
Vacuum Council

IOP Institute of Physics
**Nanoscale Physics and
Technology Group**



**VACUUM
SYMPOSIUM**
a forum for scientists,
academics, technicians
and industrial users

10TH & 11TH OCTOBER 2018 . COVENTRY UK

Vacuum Symposium UK aims to address cutting edge issues associated with Vacuum Science Technology and Applications. This two-day event fosters a multidisciplinary environment that cuts across traditional boundaries between disciplines and features:

- Technical Sessions
- Poster Sessions
- Training Courses
- Exhibition

Other programmes:

Surface Analysis — Innovations and Solutions for Industry

Thin Film and Coating Technologies for Science and Industry

Technical Plasma Workshop (TPW 2018)

Vacuum in Food Manufacturing

... and training courses

Quality Meetings. Quality Event.

**FREE-OF-CHARGE FOR ALL ATTENDEES
ADVANCE REGISTRATION REQUESTED**

