

### Lasers for Science Facility User Meeting 24<sup>th</sup> – 26<sup>th</sup> April 2012 PROGRAMME

# Lasers for Science Facility User Meeting $24^{th} - 26^{th}$ April 2012 Abingdon - The Guildhall and The Cosener's House

TUESDAY 24<sup>TH</sup> APRIL: The Guildhall, Abbey Close, Abingdon

#### 13:00 – 13:30 REGISTRATION AT THE GUILDHALL

12:30	LUNCH - THE COSENER'S HOUSE
13:30	Prof John Collier - Central Laser Facility Director, Dr Dave Clarke - Laser for Science Facility Division
	Head, Science & Technology Facilities Council
	Welcome and introduction
13:50	Professor Simon Phillips - The Research Complex
	The Research Complex at Harwell

#### Session 1 Chair - Dr David Clarke (Science & Technology Facilities Council)

14.00	Keynote Lecture - Prof Ian Robinson - University College London X-ray imaging coupled with pump-probe laser excitation of nanocrystals
14:40	Presentations from Research Councils with Q & A session Dr Susan Morrell - EPSRC, Dr Colin Miles - BBSRC, Dr Adam Babbs - MRC
15:10	Dr Mike Towrie - Science & Technology Facilities Council ULTRA instrumentation update
15:30	Dr Ray Owens The Oxford Protein Production Factory UK at the Research Complex at Harwell
15:40	COFFEE/TEA - THE GUILDHALL

#### Session 2 Chair - Dr Julia Weinstein (University of Sheffield)

18:10	Synchrotrons and Lasers – Where's the Synergy?  SESSION ENDS
17:40	Prof Nick Terrill - Diamond Light Source
17:20	Dr Peter Portius - University of Sheffield Photochemistry of nitrogen-rich compounds
17:00	Dr Daniel Murdock - University of Bristol Linking Photochemistry in the Gas and Solution Phase: S-H/S-Me Bond Fission following UV Photoexcitation
16.40	Prof Mike George - University of Nottingham Can Time-resolved IR measurements help time resolved X-ray experiments?
16:10	Dr Emma Springate - Science & Technology Facilities Council Ultrafast XUV science at the Artemis Facility

#### The Cosener's House

18:30 DINNER and Poster Session	



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### WEDNESDAY 25<sup>TH</sup> APRIL: The Guildhall, Abbey Close, Abingdon

#### Session 3

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9.00	Keynote Lecture - Prof John Simons FRS - University of Oxford Sweetness and Light: Shape Shifting Sugars	
9:40	Dr Neil Hunt - University of Strathclyde Ultrafast Fourier Transform 2D-IR Spectroscopy of Biomolecular Systems	
10:00	Dr Julia Weinstein - University of Sheffield Following photoinduced charge separation by ultrafast transient (2D) IR spectroscopy	
10:20	Henry Russell - University of Manchester Furthering the understanding of Ethanolamine Ammonia Lyase using Dynamic Infrared Techniques	
10:40	TEA/COFFEE - THE GUILDHALL	

#### Session 4 Chair - Dr Susan Quinn (University College Dublin)

Dr Marisa Martin-Fernandez - Science & Technology Facilities Council
OCTOPUS Cluster Update
Prof Paul Raithby - University of Bath Dynamic Processes in Transition Metal Complexes across the Timescales
Prof Steve Meech - University of East Anglia Transient IR studies of blue light sensing flavoproteins
Richard Taylor - University of St Andrews/Diamond Light Source Using FLIM and XEOL to explore defect heterogeneity in minerals
Dr Pamela Reynolds - University of Oxford The real time kinetics of BER proteins at sites of radiation induced DNA damage
GROUP PHOTOGRAPH & LUNCH - THE COSENER'S HOUSE
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#### Session 5 Chair - Prof Tony Parker (Science & Technology Facilities Council)

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14:00	Keynote Lecture - Prof David Phillips CBE - President of the Royal Society of Chemistry Prosperity through Chemistry
15:00	Prof Robin Perutz FRS - University of York Carbon dioxide as a solar fuel
15:20	Dr Sofia Pascu - University of Bath Confocal Fluorescence and Fluorescence Lifetime Imaging of Small Molecules and Functionalised Carbon Nanotubes in Cancer Cells
15:40	TEA/COFFEE - THE GUILDHALL

#### Session 6 Chair - Prof Robin Perutz FRS (University of York)

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16:10	User Consultation and Feedback Session - Prof Robin Perutz FRS - Chair of LSF Facility Access Panel
17:10	Prof Chris Stubbs - Science & Technology Facilities Council Fluorescence imaging studies of cell membrane organisation and signalling interactions
17:30	Dr Araida Hidalgo - University of Manchester Multi-modal Imaging for Biomaterials and Regenerative Medicine Applications
17:50	Marleen Kerssens - Gloucester Hospitals NHS Trust Exploring deep Raman spectroscopy for real-time non-invasive diagnosis of breast cancer
18:10	SESSION ENDS

#### The Cosener's House

18.45	DINNER , Poster Parade and Poster Session	
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### THURSDAY 26<sup>TH</sup> APRIL: The Guildhall, Abbey Close, Abingdon

Session 7 Chair - Prof Roger Bisby (University of Salford)

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9.00	Keynote Lecture - Prof Helen Saibil FRS - Birkbeck Macromolecular structure determination by cryo-EM	
9.40	Dr Susan Quinn - University College Dublin Ultrafast study of the excited state dynamics of Guanine and Cytosine systems: Identifying the presence of the Guanine radical cation?	
10:00	Prof Chris Hawes - Oxford Brookes University Lasers for the study of the plant endomembrane system - continued	
10:20	Dr Chris Tynan - Science & Technology Facilities Council Investigating the structure, function and dynamics of ErbB receptors at the plasma membrane	
10:40	Dr Fred Currell - Queen's University Belfast Gold nanoparticles: a new approach to radiotherapy?	
11:00	COFFEE/TEA - THE GUILDHALL	

#### Session 8

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11:20	Dr John Runions - Oxford Brookes University Protein dynamics in the plasma membrane: what can we learn using TIRF microscopy and single molecule tracking?
11:40	Prof Roger Bisby - University of Salford Activation of combretastatin anti-cancer drugs by two-photon induced isomerization
12:00	Dr Ian Clark - Science & Technology Facilities Council Loan Pool Update
12:20	Dr Erik Wagenaars - University of York Measuring atomic nitrogen in atmospheric-pressure plasma jets
12:40	Prof Jeremy Frey - University of Southampton TBC
13:00	LUNCH - THE COSENER'S HOUSE

Session 9 Chair - Dr Araida Hidalgo (University of Manchester)

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14:00	Dr Will Bryan - University of Swansea
	Towards femtosecond electron diffraction
14.20	Dr Stuart Greaves - University of Bristol
17.20	ULTRA-fast study of bimolecular reactions in solution
	Dr Neil Kad - University of Essex
14:40	Direct manipulation of single protein molecules on a DNA nanowire using optically tweezed
	synthetic nanoprobes
15:00	Dr Gareth Williams - University of Durham
15.00	Time-resolved emission imaging microscopy with metal complexes
15:20	Dr Andy Alexander - University Edinburgh
	Laser-induced nucleation
15:40	Prof Stephen Faulkner - University of Oxford
	Single and multi-photon spectroscopy of lanthanide species
16:00	Meeting Close