RESEARCH OPPORTUNITIES

SHORT WAVELENGTH LASER SOURCE
PROGRAM SWINBURNE UNIVERSITY
& UNIVERSITY OF MELBOURNE

CXS

The Australian Research Council (ARC) Centre of Excellence for Coherent X-ray Science (CXS) brings together leading Australian researchers in the fields of physics, chemistry and biology. CXS is made up of scientists from the University of Melbourne, La Trobe University, Monash University, Swinburne University of Technology, Griffith University and the CSIRO.

WHY A PHD WITH CXS?

PhD students within CXS will acquire an unusually wide range of experience that will enable them to develop careers across a broad range of disciplines throughout physics, chemistry, biology and theoretical mathematics. CXS can help you achieve your goals and enhance your future career and life opportunities in Australia and overseas.

GENERATION & APPLICATION OF HIGH-ORDER HARMONICS PROJECT

We aim to improve the conversion efficiencies and the coherence properties of our HHG source and to increase the harmonic photon energy down to the water window region between 2 & 5 nm. The HHG source will be applied to the development of new imaging techniques and to the study of ultrafast dynamics of atoms and molecules.

"SUPER-RESOLUTION" OPTICAL MICROSCOPY PROJECT

Optical microscopy is typically limited to spatial resolution of several hundreds of nm. New "super-resolution" optical methods are being developed that can improve this to tens of nm. We will develop various new techniques, including structured illumination microscopy, and apply these to polymeric and biological samples.

SCHOLARSHIPS ARE NOW AVAILABLE.

For more information or to discuss collaboration with our researchers please contact:

Generating & Application of High-order Harmonics Project, Professor Lap Van Dao
Email: dvlap@swin.edu.au

"Super-Resolution" Optical Microscopy Project, A/Professor Trevor Smith
Email: trevoras@unimelb.edu.au

CXS
ARC Centre of Excellence for COHERENT X-RAY SCIENCE

Phone: 03 8344 5444

WWW.COECXS.ORG