

Tuesday, 2 December 2008

Registration

8:00 AM - 6:00 PM

Main Hotel Foyer

Opening Session and Keynote I

9:00 AM - 10:30 AM

Ballroom

Chair: Robert Lamb

9:00am **Robert Lamb**

Australian Synchrotron annual review *abs#001*

9:30am

Ian Gentle

Probing liquid surfaces with synchrotron radiation *abs#002*

Morning Tea

10:30 AM - 11:00 AM

Conference Lobby

Australian Synchrotron Update

11:00 AM - 12:20 PM

Ballroom

Chair: David Cookson

11:00am **Rohan Dowd**

Operations of the Australian Synchrotron Accelerator *abs#003*

11:20am

Christopher Myers

Virtual Beamline eResearch Environment at the Australian Synchrotron *abs#004*

11:40am

Richard Farnsworth

High performance computing at the Australian Synchrotron *abs#005*

12:00pm

Bridget Ingham

The New Zealand Synchrotron Support Programme: Activities and Progress in 2008 *abs#006*

Lunch

12:20 PM - 1:00 PM

Restaurant

Poster Session

1:00 PM - 2:00 PM

Session sponsored by Monash University

First Floor Poster Area

Patryck Allen

Structural Study of Modulated Fresnoite Compounds as Novel Pb-free Piezoceramic Materials *abs#101*

Abram Bishay

Synthesis of Nano TiO₂ from one-step processing of ilmenite sands *abs#102*

Marian Cholewa

Development of high resolution and high efficiency detectors for X-rays *abs#103*

Martin Donnelley

Non-invasive Monitoring of Airway Health: Synchrotron X-ray Tracking of Particle Motion *abs#104*

Katy Evans

XANES evidence for sulphur speciation in Mn-, Ni- and W-bearing silicate melts *abs#105*

Rong Fan

Synchrotron Microprobe Analysis of Nickel Laterites *abs#106*

Denise Fernando

The speciation of foliar Mn in hyperaccumulating plants. *abs#107*

Jack Glover

High-accuracy measurements of the X-ray mass-attenuation coefficient of copper *abs#108*

Ailar Hajimohammadi

One-part mix geopolymer from geothermal silica and sodium aluminate *abs#109*

Xiaojing Hao

XANES investigation of Si nanocrystals embedded in a SiO₂ matrix *abs#110*

Daryl Howard

Elemental Mapping of C. Elegans: The First Experiment at the Microspectroscopy Beamline *abs#111*

Sally Irvine

Measurement of hard-x-ray coherence in the presence of a diffuser *abs#112*

Peter Kappen

The structure of iron in multi-walled carbon nanotubes - Linking EXAFS data to growth parameters *abs#113*

Ben Kent

The role of sugars as protectants against dehydration and freezing damage in biological membranes. *abs#114*

Annie Nguyen

Investigating the Fate of Gallium Complexes in Biological Media Using X-ray Absorption Spectroscopy *abs#115*

Stephen Robinson

Uptake of the endogenous iron chelator, phytic acid, by astrocytes as revealed by synchrotron infrared microspectroscopy *abs#116*

Lalitha Selvam

Inner shell ionization of sugar modified cytidine nucleoside analogs *abs#117*

Withdrawn *abs#118*

Arthur Smith

Structure-Optical Investigation of Blue Phosphorescent Molecules for OLEDs *abs#119*

David Sprouster

Vibrational properties of Cobalt nanoparticles *abs#120*

Kevin Stevens

Synchrotron X-ray tomography characterisation of creep damage in HP stainless steel alloy *abs#121*

Nathan Webster

In situ studies of scale formation under Bayer processing conditions *abs#122*

Qingdi Zhou

Synchrotron Diffraction Studies on Perovskites LaMn_{1-x}Z_xO₃ (Z = Cr, Ga) *abs#123*

Quan Zhu

Substituent effects on structures and properties of model molecules of guanine *abs#124*

Life Sciences I

2:00 PM - 3:20 PM

Chair: Lisa Giachini

2:00pm

Peter Lay

Hampton Room

Biomedical Synchrotron Applications of Metal Speciation in Biological Fluids,
Tissues and Cells *abs#007*

2:20pm

Jeffrey Crosbie

Acute Cellular Response of Normal and Malignant Tissue to High Dose
Synchrotron Microbeam Radiation Therapy *abs#008*

2:40pm

Anna Safitri

Determination of Cr Speciation in Biological Fluids by Synchrotron-Based X-Ray
Absorption Spectroscopy (XAS) *abs#009*

3:00pm

Philip Heraud

Early stages of human embryonic stem cell (HESC) differentiation characterized
by synchrotron FT-IR microspectroscopy *abs#010*

High Energy X-rays

2:00 PM - 3:20 PM

Brighton Room

Chair: Nigel Kirby

2:00pm

Dimitrios Kostas

Quantitative measurements of bio-oil sprays using time resolved x-
radiography *abs#011*

2:20pm

T Welberry

Diffuse Scattering as an aid to the understanding of polymorphism in
pharmaceuticals. *abs#012*

2:40pm

Peter Lynch

X-ray Laue Microspectroscopy *abs#013*

3:00pm

John Daniels

High-energy x-ray scattering for multi-length scale materials analysis *abs#014*

Afternoon Tea

3:20 PM - 3:40 PM

Conference Lobby

Imaging

3:40 PM - 5:00 PM

Hampton Room

Chair: Anton Maksimenko

3:40pm

Martin de Jonge

Differential phase contrast in the scanning transmission x-ray
microscope *abs#015*

4:00pm

Marcus Kitchen

Quantitative phase contrast x-ray imaging of the lung *in vivo* *abs#016*

4:20pm

Damian Myers

Synchrotron tomography of mouse tibia utilising the Elettra synchrotron light
source *abs#017*

4:40pm

David Paterson

The Microspectroscopy Beamline at the Australian Synchrotron: design and
capabilities *abs#018*

Materials & Condensed Matter

3:40 PM - 5:00 PM

Brighton Room

Chair: Kia Wallwork

3:40pm

Patrick Kluth

Density fluctuations and ion tracks in swift heavy ion irradiated SiO₂ *abs#019*

4:00pm

Jimmy Ting

A Strategy to Prepare Multiferroic Materials *abs#020*

4:20pm

Paolo Imperia

XAS of TiO₂ Dispersed in a Glass Matrix and Ferromagnetic TiO₂ Thin Films
Studied by XMCD *abs#021*

4:40pm **Ying Chen**
Wide Bandgap Determination of Boron Nitride Nanotubes Using Synchrotron VUV
Photoluminescent Spectroscopy *abs#022*

Welcome Reception

5:00 PM - 6:30 PM

Conference Lobby & Restaurant

Wednesday, 3 December 2008

Registration

8:00 AM - 3:30 PM

Conference Lobby

Keynote II

9:00 AM - 10:30 AM

Ballroom

Chair: Ian Gentle

9:00am **Peter Colman**

Relenza revisited - designed drugs and drug resistance *abs#023*

9:50am **2008 Australian Synchrotron Thesis Medal Presentation**

Morning Tea

10:30 AM - 11:00 AM

Conference Lobby

Life Science II

11:00 AM - 12:20 PM

Hampton Room

Chair: Tom Caradoc-Davies

11:00am **Nathan Cowieson**

Structural analysis of the HIV gag poly-protein during viral maturation using
synchrotron light *abs#024*

11:20am **Xing Yu**

Recognition of sialic acid derivatives by rotavirus carbohydrate-binding domain
VP8* *abs#025*

11:40am **Leanne Dyksterhuis**

Structural Characterisation of Basement Membranes *abs#026*

12:00pm **Mark Hackett**

SR-FTIR-Mapping, FTIR-FPA-Imaging and PIXE mapping of Hypoxic Brain Tissue in
Cerebral Malaria *abs#027*

Environmental & Minerals

11:00 AM - 12:20 PM

Brighton Room

Chair: Peter Kappen

11:00am **Richard Collins**

Aluminium, iron and sulfur speciation in coastal lowland acid sulfate soil
environments of north-eastern New South Wales *abs#028*

11:20am **Nicholas Rae**

The X-ray Extended Range Technique for condensed matter research XAFS and
biological sciences: Theoretical & Experimental Databases *abs#029*

11:40am **Adele Jones**

The Effect of Si and Natural Organic Matter on the Fe(II)-catalysed
Transformation and Reactivity of Fe(III) Minerals *abs#030*

11:40am **Weihua Liu**

Concurrent determination of copper solubility and speciation in supercritical
low-density water using XAS *abs#031*

Lunch and Poster Viewing

12:20 PM - 1:20 PM	Restaurant
Beamline Breakout - Imaging and Medical Therapy 1:20 PM - 3:00 PM	Hampton Room
Beamline Breakout - XAFS 1:20 PM - 3:00 PM	Brighton Room
Beamline Breakout - Infra Red 1:20 PM - 3:00 PM	Williamstown Room
Beamline Breakout - SAXS 1:20 PM - 3:00 PM	Middle Park Room
Afternoon Tea 3:00 PM - 3:30 PM	
Australian Synchrotron Tour 3:15 PM - 5:30 PM Buses will depart from the front of the hotel at 3.15pm so please gather in the main foyer of the hotel.	Main Hotel Foyer
Combined User Meeting and AOFSTR Banquet 7:30 PM - 11:00 PM Buses will depart from the front of the hotel at 7.00pm	Eureka 89, Eureka Tower

Thursday, 4 December 2008

Registration

8:00 AM - 5:00 PM

Conference Lobby

Next Generation Science Keynote

9:00 AM - 10:30 AM

Ballroom

Co-Chairs: Rob Lamb and Yoshiyuki Amemiya

Welcome & Introduction - **Rob Lamb** (Australian Synchrotron)

Opening Address - **Y Amemiya** (AOFSRR President)

Ah Young Kim, Korean Science and Technology Policy Relating to Synchrotron Facilities and Research

Expectation for AOFSRR -Opening Address of 3rd AOFSRR Forum - **Mr. Takahiro Hayashi**
Director, Office for Quantum and Radiation Research, Basic and Generic Research Division,
Research Promotion Bureau, Ministry of Education Culture, Sports, Science and Technology
(MEXT)

Anton Barty, Femtosecond dynamic diffraction imaging with free electron lasers: X-ray
snapshots of ultra-fast nanoscale phenomena *abs#032*

Morning Tea

10:30 AM - 11:00 AM

Conference Lobby

Next Generation Photon Science I

11:00 AM - 12:20 PM

Ballroom

Co-Chairs: Moonhor Ree

11:00am

Keith Nugent

Prospects for very high resolution imaging using x-ray free electron
lasers *abs#033*

11:20am

Shin-ichi Adachi

From picosecond toward femtosecond time-resolved X-ray science *abs#034*

11:40am

Zhen-tang Zhao

SXFEL - A Soft X-Ray Free Electron Laser Test Facility in China *abs#035*

12:00pm

Michael Grunze

Digital in-line soft X-ray holography *abs#036*

Lunch

12:20 PM - 1:00 PM

Restaurant

Poster Session

1:00 PM - 2:00 PM

Session sponsored by Monash University

First Floor Poster Area

Byungcheol Ahn

Nondestructive, Quantitative Synchrotron Grazing Incidence X-ray Scattering
Analysis of Cylindrical Nanostructure in Supported Thin Films *abs#131*

Byungcheol Ahn

Grazing Incidence X-ray Scattering Studies on Templating Nanopores in
Networked Polymer Thin Films with a Multi-armed Porogen *abs#132*

S.A. Chen

Pressure-induced structural distortion of TbMnO₃: A combined XAS and XRD

study *abs#133*

Sukmin Chung

Early stages of collapsing pentacene crystal by Au *abs#134*

Richard Clements

A Synchrotron Investigation Of The Electronic Structure Of Lanthanide Zirconates *abs#135*

Susan Graham

The electronic structure of bacterial s-layers *abs#136*

Suk Gyu Hahm

A Synchrotron X-ray Scattering Study on the Structure of Pepsin in Solution *abs#137*

Suk Gyu Hahm

Imprinting Nanopores in Spin-On Polymeric Dielectrics with Using Six-Armed Star Porogens *abs#138*

Yuying Huang

SSRF XAFS Beamline and its Preliminary Commissioning *abs#139*

Sangwoo Jin

Quantitative Analysis of Gyroid Structure in Block Copolymer with Synchrotron Grazing Incidence X-ray Scattering *abs#140*

Sangwoo Jin

Synchrotron X-Ray Scattering Studies on Molecular Structures of Star-Shape Polystyrenes with Various Arms *abs#141*

Kenichi Kato

The Next-Generation Debye-Scherrer Camera for Visualization of Bonding Electron in Kinetics *abs#142*

MunGyung Kim

Stored Beam Orbit Stability of the PLS *abs#143*

G Kim

Novel Brush Polymers Bearing Phosphorylcholine Bristle Ends: Synthesis, Structure, Properties and Biocompatibility *abs#144*

G. Kim

Molecular Fibers based on the Honeycomb-like Self-Assembly of an α -Helical Polypeptide *abs#145*

J Kim

Nonempirically-determined oxygen positions in a Prussian blue cyanide *abs#146*

Robin Kirkham

Maia Spectroscopy Detector System *abs#147*

J. Lee

BPM Low-level Control System Upgrade at the PLS Storage Ring *abs#148*

Zhong Li

Commissioning for XRD beam-line of SSRF *abs#149*

Saumitra Saha

Inner-shell ionization spectra of adenine imino tautomers *abs#150*

Bryan, BY. Shew

X-ray Micromachining of mm-Wave Mode Converter *abs#151*

Anton Stampfl

The adsorption of glycine on alumina: Surface complexation and polymerisation *abs#152*

Renzhong Tai

Observation of structural dynamics in materials by Photon Correlation

Spectroscopy *abs#153*

Yoshifumi Takashima

Present Status of Central Japan Synchrotron Radiation Research Facility Project *abs#154*

Feng Wang

Inner-shell ionization spectroscopy of nucleic acid purine bases *abs#155*

Jie Wang

SSRF BL16B1 for small-angle x-ray scattering *abs#156*

Shiqiang Wei

Experimental and theoretical investigations on room temperature ferromagnetism of dilute magnetic semiconductors *abs#157*

Yanqing Wu

Designing a new EUV beamline for X-ray interference Lithography *abs#158*

Shao Xia

Development of Cryogenically Cooled Double Crystal Monochromator in SSRF *abs#159*

Masaki Yamamoto

Protein micro-crystallography with a new micro-beam beamline at SPring-8 *abs#160*

Next Generation Photon Science II

2:00 PM - 3:00 PM

Ballroom

Co-Chairs: Keith Nugent

2:00pm **Takaki Hatsui**

Recent progress of the X-ray Free Electron Laser Project at SPring-8 *abs#037*

2:20pm **Dong-Eon Kim**

The Status of PAL-xFEL Project and the Prospect for the First Scientific Cases *abs#38*

2:40pm **Harry Quiney**

The use of X-ray free-electron laser sources in molecular structure determination: theoretical challenges *abs#039*

Afternoon Tea

3:00 PM - 3:30 PM

Conference Lobby

Industrial Research at AOFSSR Facilities

3:30 PM - 5:00 PM

Hampton Room

Co-Chairs: Keng Liang and Steve Gower

3:30pm **Akira Kira**

Growing Industrial Research Activities in SPring-8 *abs#040*

3:50pm **Moonhor Ree**

Demands of Industrial utilization in Pohang Light Source *abs#041*

4:10pm **Herbert Moser**

Nano science and technology at SSLS *abs#042*

4:30pm **Soichi Wakatsuki**

Industrial applications and the PX/Pharmaceutical contract beamline project at the Photon Factory *abs#043*

Beamline Breakout - Soft X-Ray

3:30 PM - 5:00 PM

Brighton Room

Beamline Breakout - Microspectroscopy

3:30 PM - 5:00 PM

Williamstown Room

Beamline Breakout - Powder Diffraction

3:30 PM - 5:00 PM

Middle Park Room

Beamline Breakout - Protein Crystallography

3:30 PM - 5:00 PM

Port Melbourne Room

Reception

5:00 PM - 6:00 PM

Conference Lobby & Restaurant

Phillip Island Tour

5:00 PM - 10:30 PM

Buses will depart from the front of the hotel

Main Hotel Foyer

Friday, 5 December 2008

Registration

8:00 AM - 4:00 PM

Conference Lobby

AOF Facility Updates

9:00 AM - 10:40 AM

Ballroom

Co-Chairs: Herbert Moser and Richard Garrett

9:00am **John Murray Gibson**

US Light Sources - today and in future *abs#044*

9:40am **Keng Liang**

The Current Status of Taiwan Photon Source *abs#045*

10:00am **Hongjie Xu**

Commissioning Status of Shanghai Synchrotron Radiation Facility *abs#046*

10:20am **Rob Lamb**

The Brightest Light in the Southern Hemisphere - Australian Synchrotron update *abs#047*

Morning Tea

10:40 AM - 11:00 AM

Conference Lobby

AOFSRR Science Highlights

11:00 AM - 12:45 PM

Ballroom

Co-Chairs: Ian Gentle and Masaki Takata

11:00am **Alfred Baron**

meV-Resolution IXS: Recent Results and Future Prospects *abs#048*

11:30am **Yaw-Wen Yang**

In-plane-aligned growth of pentacene thin films on rubbed polymethylene surface *abs#049*

11:45am **Jianhua He**

Protein Science Facility Program at SSRF *abs#050*

12:00pm **Chris Ryan**

High performance X-ray fluorescence imaging using a massively parallel detector array and real-time spectral deconvolution: a catalyst for new applications in geology *abs#051*

12:15pm **Hyun Song**

Orientation-induced crystallization of poly(ethylene terephthalate) fibers with controlled microstructure *abs#052*

12:30pm **Ping Yang**

From atoms to layers - structural characterization of crystalline/amorphous semiconductor and functional materials *abs#053*

Lunch & Poster Viewing

12:00 PM - 1:40 PM

Conference Lobby & Restaurant

AOFSRR Science Highlights II

1:40 PM - 2:00 PM

Ballroom

Co-Chairs: Osamu Shimomura and Garry Foran

Masaharu Oshima

Recent advances in Synchrotron PEEM and new project of 3D-nano-ESCA *abs#054*

AOF Council Report & Discussion Forum

2:00 PM - 3:30 PM

Co-Chairs: Osamu Shimomura and Garry Foran

Ballroom

Report from AOF SRR Council Meeting by Yoshiyuki Amemiya and Keng Liang

Panel Discussion Session: further potential roles for the AOF SRR

Announcement and presentation of the host of the next AOF SRR meeting

Meeting Close and Afternoon Tea

3:30 PM - 4:00 PM

Conference Lobby