


Scientific Programme

Sunday 18 November

- 1630 **Registration Opens**
Parkside Level 1
Registration Desk
- 1800 **SAS2012 Conference Welcome Reception**
Exhibition Hall, Parkside Foyer

Sponsored by **DECTRIS**

Monday 19 November

- 0830 **Parkside Auditorium**
Opening Ceremony
Mary O’Kane, NSW Chief Scientist and Engineer
Rob Robinson, Head, Bragg Institute, ANSTO
Elliot Gilbert, Chair, SAS2012
- 0845 **Greg Warr:** Amphiphilicity and Structure in Ionic Liquid Systems
Session sponsored by  
- 0930 **Aaron Eberle:** A Small-Angle Scattering Characterisation of Unconventional Shale-Gas Reservoirs

1000 Morning tea

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|------|---|---|---|---|
| 1030 | Parkside 110A
A01: Complex Fluids 1 | Parkside 110B
B01: Structural Biology 1 | Parkside G04
C01: Time Resolved 1 | Parkside Auditorium
D01: Porous Materials |
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1220 Lunch (Parkside Foyer)

- 1220 – **Parkside 110B**
1400 **Bruker sponsored Lunch Session**



- 1235 – **Lunch session:**
1400 **Parkside 110A**
Publication Guidelines for SAS-Derived Biomolecular Structural Interpretation

- 1400 **Parkside Auditorium**
Kazuo Sakurai: Characterizing Self-Assembled Nanoparticles Employed in Drug Delivery

- 1445 **Daniel Franke:** Automation of Solution SAS Experiments and Data Analysis
Session sponsored by  **Rigaku**

1515 Afternoon tea

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| 1600 | Parkside 110A
A02: Polymers 1 | Parkside 110B
B02: Structural Biology 2 | Parkside G04
C02: Applications & Technology 1 | Parkside Auditorium
D01: Metals 1 |
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1750 Break

- 1900 **Evening session:**
Parkside Auditorium
Introduction to Small-Angle Scattering
Nigel Kirby, Jan Skov Pedersen, and Jill Trehwella

- 2030 Close

Tuesday 20 November

0830 **Parkside Auditorium**
Alex Holmes: Small-Angle Scattering Measurements at High Magnetic Fields – on Viruses to Superconductors

0915 **Kathryn Krycka:** Detecting Magnetic Morphologies and Inter-Particle Correlations Within Nanoparticle Systems using Polarization Analyzed Small-Angle Neutron Scattering

0945 Morning tea

1030	Parkside 110A A03: Networks	Parkside 110B B03: Membranes 1	Parkside G04 C03: Magnetic Materials	Parkside Auditorium D03: Instruments & Methods 1
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1220 Lunch (Parkside Foyer)

1220-1400 Poster Session (Parkside Foyer)

1400 **Parkside Auditorium**
Michael Gradzielski: Applying SANS to the Study of Soft-Matter – Going to More Complexity

1445 **Adam Perriman:** Small-Angle Scattering from Synthetic Biomaterials

1515 Afternoon tea

1600	Parkside 110A A04: Surfaces 1	Parkside 110B B04: Structural Biology 3	Parkside G04 C04: Metals 2	Parkside Auditorium D04: Theory & Modelling 1
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1750 Break

1900 **Evening session:**
Parkside Auditorium
 Advanced Data Interpretation and Validation Workshop
 Maxim Pethoukov, Jan Ilavsky and Paul Butler

2100 Close

Wednesday 21 November

0830 **Parkside Auditorium**
Lise Arleth: Using Small-Angle Scattering in Studies of Membrane Proteins

0915 **Cy Jeffries:** The Elegance of Small-Angle Scattering for Protein Solution Investigations

Session sponsored by  **NSW** Trade & Investment

0945 Morning tea

1030	Parkside 110A A05: Polymers 2	Parkside 110B B05: Membranes 2	Parkside G04 C05: Time Resolved 2	Parkside Auditorium D05: Theory & Modelling 2
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1220 Lunch (Parkside Foyer)

1235–1400 **Lunch session:**
Parkside 110A
 canSAS: Progress & Plans for Collaboration on a Web Portal, Data, Shared Software, and Standardisation

1400 **Free Afternoon or Visit to OPAL (including Quokka, Bilby, Kookaburra and SAXS instruments) and National Deuteration Facility**
 Visit to OPAL and NDF must have been pre-booked

Thursday 22 November

0830 **Parkside Auditorium**
Andrew Allen: In Situ SAXS and SANS Measurements to Overcome Materials Technology Barriers

0915 **Yuya Shinohara:** X-ray Photon Correlation Spectroscopy of Filled Rubber

0945 Morning tea

1030	Parkside 110A A06: Liquid Crystals 1	Parkside 110B B06: Structural Biology 4	Parkside G04 C06: Contrast Methods 1	Parkside Auditorium D06: Instruments & Methods 2
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1220 Lunch (Parkside Foyer)

1220-1400 Poster Session (Parkside Foyer)

1400 **Parkside Auditorium**
John Tainer: Biological Small-Angle Scattering: Genesis, Misconceptions and Major Strengths Going Forward

Session sponsored by  Anton Paar

1445 **Nozomi Ando:** Structural Interconversions Modulate Activity of Escherichia coli Ribnucleotide Reductase

1515 Afternoon tea

1545	Parkside 110A A07: Surfaces 2	Parkside 110B B07: Medicine	Parkside G04 C07: Coherent Scattering & Imaging	Parkside Auditorium D07: Theory & Modelling 3
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1650 **Presentation of the Guinier Prize**

1700 **Presentations for SAS2018 Host Site and Voting**

1800 **Day sessions close**

1830 **Conference Party at Doltone House, Jones Bay Wharf**

Friday 23 November

0830 **Parkside Auditorium**
Peter Fischer: Small-Angle Scattering Application in Food

0915 **Tomotaka Oroguchi:** Protein Dynamics Investigated by Small-Angle X-ray Solution Scattering and Molecular Dynamics Simulations

0945 Morning tea

1030	Parkside 110A A08: Complex Fluids 2	Parkside 110B B08: Polymers 3	Parkside G04 C08: Applications & Technology 2	Parkside Auditorium D08: Instruments & Methods 3
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1220 Lunch (Parkside Foyer)

1330	Parkside 110A A09: Liquid Crystals 2	Parkside 110B B09: Structural Biology 5	Parkside G04 C09: Contrast Methods 2	Parkside Auditorium D09: Time Resolved 3
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1440 Afternoon tea

1510 **Parkside Auditorium**
Do Yeung Yoon: Small-Angle X-ray Scattering and Solid-State NMR Study of Linear Low-Density Polyethylenes

1555 **Ilja Voets:** A Small-Angle View on Macromolecular Self-Assembly: from Supramolecular Interactions to Supramolecular Structures

1625 **Conference Closing Ceremony incl. Presentation of Otto Kratky and ANSTO Prizes**

1700 **Conference Close**

Monday – 19 November

8:30	Opening Ceremony			
8:45	<p>Greg Warr <u>Amphiphilicity and Structure in Ionic Liquid Systems</u></p> <p>Sponsored by:</p> 			
9:30	<p>Aaron Eberle <u>A Small-Angle Scattering Characterization of Unconventional Shale-Gas Reservoirs</u></p>			
10:00	Morning Tea			
10:30	A1: Complex Fluids 1	B1: Structural Biology 1	C1: Time Resolved 1	D1: Porous Materials
10:30 Keynote	<p>Peter Lindner Colloidal quasi-crystals with exceptional diffraction symmetry</p>	<p>Dmitri I. Svergun Advanced SAS Data Interpretation with ATSAS</p>	<p>Hideki Seto Formation of a Multiscale Aggregate Structure through Spontaneous Blebbing of an Interface</p>	<p>Cedric J. Gommès Three-dimensional reconstruction of liquid phases confined in disordered porous media: an in situ synchrotron SAS analysis</p>
10:50	<p>Gary Bryant Dynamics of concentrated colloidal suspensions via XPCS and DLS.</p>	<p>Michal Hammel Integrative approach to define accurate macromolecular conformations and flexibility in solution</p>	<p>Wye Khay Fong Light Responsive Liquid Crystalline Nanostructures as On-Demand Drug Delivery Systems</p>	<p>Maxim Erko A combined scattering study on confined water using X-rays, neutrons, and light</p>

11:05	<p>Manja Anne Behrens Tuning Inter-Micelle Interactions by Changing External Parameters</p>	<p>Emre Brookes Parsimonious Spatial Models from Small Angle Scattering of Biological Macromolecules</p>	<p>Christine M. Papadakis Kinetics of collapse and aggregation in thermoresponsivemicellar block copolymer solutions - a time-resolved SANS investigation</p>	<p>Peter Laggner CO₂-sorption and nanostructure of coal - pressure-scanning SAXS</p>
11:20	<p>Victoria Anne Coleman Characterizing nanoparticles in complex matrices</p>	<p>Giancarlo Tria Advanced Ensemble Optimization Method for flexible systems</p>	<p>Uri Raviv RNA encapsidation by SV40-derived nanoparticles follows a rapid two-state mechanism</p>	<p>Gerhard Fritz-Popovski Wood templated inorganic nanoporous materials: formation and water adsorption studied by in situ SAXS experiments</p>
11:35	<p>Tae-Hwan Kim SANS Studies of Self-Assembled Structures of Amphiphilic Molecules Induced by External Conditions</p>	<p>Frank Gabel A simple protocol to refine and evaluate bio-macromolecular rigid-body models based on SAS and NMR restraints</p>	<p>Ben Boyd Using time resolved SAXS to elucidate rapid solvent-mediated polymorphic transitions in solid state pharmaceuticals</p>	<p>Olivier Diat Quantitative small angle scattering on mesoporous silica powders: from morphological features to specific surface estimation</p>
11:50	<p>Pierre Bauduin Design of "green" oxidizing polyphasicmicrodispersed reaction media. SAXS study on microemulsions</p>	<p>Terrence Mulhern Reaching beyond the low hanging fruit: applications of synchrotron SEC-SAXS in structural biology</p>	<p>Lionel Porcar Lipids and Cholesterol Transfer in Model Lipid Membranes: Flip-Flop and Exchange</p>	<p>Alexandra Chumakova Study the artificial opals and inverted oral-like crystals by SAXSS</p>
12:05	<p>Joao Cabral Surfactant mixtures under microflow fields: mechanistic insight into processing by SAXS</p>	<p>Cristiano L. P. Oliveira Modelingpolydisperse flexible systems using small-angle x-ray scattering</p>	<p>Lutz Willner Chain Exchange in Amphiphilic Block Copolymer Micelles - Effect of Morphology</p>	<p>Sabrina Sartori The Role of Small-Angle Scattering on Nano-Confined Hydrides for Hydrogen Storage</p>

12:40

Lunchtime Session:

[Publication Guidelines for SAS-derived
Biomolecular Structural Interpretation](#)

Lunch

14:00

Kazuo Sakurai

[Characterizing Self-assembled Nanoparticles Employed in Drug Delivery](#)

14:45

Daniel Franke

[Automation of Solution SAXS Experiments and Data Analysis](#)

Sponsored by:



15:15

Afternoon Tea

16:00

A2: Polymers 1

**B2: Structural
Biology 2**

**C2: Applications and
Technology 1**

D2: Metals 1

**16:00
Keynote**

Lilana De Campo

Star-Polyphile Liquid Crystals: Experiment and Theory of Bicontinuous Cubic Phases with a Demixed Hydrocarbon/Fluorocarbon Bilayer

Marcus Gallagher-Jones

Development of a Digital Ion Trap (DIT) mass spectrometer for gas phase scattering experiments at SACLA

John White

High internal phase emulsion stability – oil solvency effects

Kuhu Sarkar

Mesoporous zinc oxide morphologies for applications in hybrid photovoltaics

16:20

Ben Kent

Structural uniformity and texture of the gyroid phase in butterfly wing scales

Helmut Durchschlag

Effects of Radiation on Biomolecules

Olivier Diat

Driving forces towards formation of surfactant-free micelles and microemulsions: A combined SANS/WNS contrast variation and SAXS/WAXS study

Heinz Amenitsch

Exploring the self-assembly of mesoporous materials in the gas-phase in situ

16:35	<p>Wei-tsung Chuang New SmCG Phases in a Hydrogen-Bonded Bent-Core Liquid Crystal Featuring a Branched Siloxane Terminal Group</p>	<p>Shuji Akiyama Tracking and Visualizing Intramolecular Feedback in Cyanobacterial Clock Protein KaiC</p>	<p>C. G. (Kees) De Kruijff SANS and SAXS on Casein Micelles</p>	<p>Vikram Singh Raghuwanshi Structural analysis of magnetic Fe/Mn nanoparticles embedded in silicate glass using SANSPOLE and ASAXS</p>
16:50	<p>Akifumi Matsushita Domain Spacing of Microphase-Separated Structures in Triple Selective Solvents</p>	<p>Eleonora Shtykova Solution structure of virus matrix protein M1 revealed by SAXS</p>	<p>Ronald Gebhardt Structure of casein micelles in membrane deposits</p>	<p>Volker Urban Protein Localization in Silica Nanospheres Derived via Biomimetic Mineralization</p>
17:05	<p>Michael Thomas Nematic Director-Induced Switching of Assemblies of Hexagonally Packed Anisotropic Gold Nanostructures</p>	<p>Anthony Duff The structure of the 750 kDa protein complex, magnesium chelatase, by SAXS and SANS</p>	<p>Jorg Stellbrink Neutrons for green polymers: Structural analysis of polymerisation reactions via real-time scattering techniques</p>	<p>Zhonghua Wu SAXS study on size and shape changes of gold and platinum nanoparticles</p>
17:20	<p>Oliver Diat A Theta-Shaped Amphiphilic Cobaltabisdicarbollide Anion</p>	<p>Mahmudul Hasan SAXS Studies on Human and Yeast Leukotriene A4 Hydrolase: Important for Revealing Comparison of a Bifunctional Catalytic Mechanism.</p>	<p>Jitendra Mata Structure of Casein Micelles in Milk Protein Concentrate Powders via Small Angle X-ray Scattering</p>	<p>Craig E. Buckley Nano-Confined Metal Hydrides in Mesoporous Scaffolds</p>
17:35	<p>Leslie Foster Polyhydroxylaknoates and their biopegylated hybrids: characterisation using biodeuteration and sans.</p>	<p>Renata Naporano Bicev Structural investigation of Proteasome Complex</p>	<p>Vasyl Haramus The partitioning of emulsifier in O/W emulsions: a comparative study of SANS, ultrafiltration and dialysis</p>	<p>Andrey Chumakov Using of SANS and SAXS methods at the study of anodic alumina membranes</p>

17:50

Break

19:00

Nigel Kirby, Jan Skov Pedersen and Jill Trehella

[Introduction to Small-Angle Scattering](#)

Tuesday – 20 November

8:30	Alex Holmes <u>Small Angle Scattering Measurements at High Magnetic fields - on Viruses to Superconductors</u>			
9:15	Kathryn Krycka <u>Detecting Magnetic Morphologies and Inter-Particle Correlations Within Nanoparticle Systems Using Polarization Analyzed Small-Angle Neutron Scattering</u>			
9:45	Morning Tea			
10:30	A3: Networks	B3: Membranes 1	C3: Magnetic Materials	D3: Instruments and Methods 1
10:30 Keynote	Stuart W Prescott Structures of confined soft-matter: non-uniform dehydration and odd-even effects in polyelectrolyte multilayers	Sung-Min Choi Neutron Spin-Echo Investigations of Lipid Membranes Interacting with Proteins	Kai Schlage Imaging the structural growth and magnetic birth of self-assembled superferromagnetic iron dots and nanostripes	Charles David Dewhurst D33 – Massive dynamic q-range time-of-flight SANS instrument: Description, Commissioning and First Results
10:50	Karen Edler Hierarchical structure formation from NM to microns in CTAB/SDS solutions	Gianluca Bello Human antimicrobial peptides induce structural changes on rough lipopolysaccharide aggregates	Masayasu Takeda Small-Angle Neutron Scattering Study on Neodymium-Iron-Boron (Nd-Fe-B) Sintered Magnets	Robert Cubitt Refractive Analysis of Interfaces with Neutron Beams Optimized for a White Spectrum (RAINBOWS)
11:05	Markus Ruppel Broken Affinity in Near-Critical Block Copolymer Solutions in the Presence of an Electric Field	Rafael Leite Rubim Effects of fatty acids in structural parameter of lipid membranes by SAXS investigations.	Sabrina Disch Shape dependent magnetization distribution in iron oxide nanoparticles	Markus Strobl Multiple potential of TOF spin-echo induced spatial beam modulation (SEMSANS)

11:20	<p>Mitsuhiro Shibayama Comparison of Tetra-PEG Ion gels and Hydrogels Investigated by Small-angle Neutron Scattering</p>	<p>Jacqueline Knobloch Cellular membrane interactions of plant annexin Gh1 following oxidative stress</p>	<p>Sebastian Muehlbauer Time resolved stroboscopic small angle neutron scattering and TISANE on vortex lattices in superconductors and skyrmion lattices in chiral magnets</p>	<p>Aurel Radulescu Upgrading of the KWS-2 High-Flux / Wide Q-Range Small-Angle Neutron Diffractometer with Tunable Resolution at the FRM II</p>
11:35	<p>Andreas Schmid Structural and dynamic behaviour of zwitterionic microgel suspensions</p>	<p>Dorthe Posselt Small-angle neutron scattering study of reversible chloroplast membrane reorganizations during photosynthesis</p>	<p>Wangchun Chen SANS polarization analysis with a polarized ³He neutron spin analyzer</p>	<p>Andrew Jackson Small angle scattering at the European Spallation Source</p>
11:50	<p>Alexander Ozerin Nanoparticles and polymers. Subtle balance of colloid entities</p>	<p>Reg Rehal Investigation into the membrane defence mechanisms of <i>Staphylococcus aureus</i></p>	<p>Pawel Kozikowski Quantitative analysis of precipitates formation in Fe-Si-Cu-B melt-spun ribbons by small angle X-ray scattering</p>	<p>John M Carpenter Current Status of the Time-of-Flight Ultra-Small-Angle Neutron Scattering (TOF-USANS) Instrument Development at SNS</p>
12:05	<p>Denise Erb Nanopatterning via self-assembly: Highly ordered metal nanostructures grown on diblock-copolymer templates</p>	<p>Selma Maric Development of a stealth carrier-system for SANS studies of membrane proteins</p>	<p>William Anthony Hamilton Ordering of aqueous ferrofluid emulsions under external magnetic fields</p>	<p>Jun-ichi Suzuki Development of the Small and Wide Angle Neutron Scattering Instrument TAIKAN of J-PARC</p>
12:30	POSTER SESSION 1			Lunch
14:00	<p>Michael Gradzielski Applying SANS to the Study of Soft-Matter - Going to More Complexity</p>			
14:45	<p>Adam Perriman Small Angle Scattering from Synthetic Biomaterials</p>			

15:15		Afternoon Tea			
16:00		A4: Surfaces 1	B4: Structural Biology 3	C4: Metals 2	D4: Theory and Modelling 1
16:00 Keynote	Peter Muller-Buschbaum Determination of the inner morphology of organic solar cells with grazing incidence small angle neutron scattering	Matthew Wilce Molecular detection of viral RNA within the cytoplasm by RIG-I.	Masato Ohnuma Cluster strengthening of steels ~ Importance of characterization for the heterogeneities with a few nanometer scale ~	Brian Pauw Monte-Carlo: Now in 2D!	
16:20	Henrich Frielinghaus Dynamics of microemulsions confined by a planar wall	Youli Li SAXS investigation of two-dimensional packing of short-DNA with non-sticky overhangs in cationic liposome-DNA complexes	Hiroshi Okuda Developments of Long Period Stacking Order (LPSO) microstructures with in-plane ordering in Mg-Y-Zn ternary alloys examined by SWAXS.	Roberto Coppola Optimisation of SANS data analysis for modelling microstructural radiation damage in nuclear steels	
16:35	Jianqi Zhang In-situ real-time GISAXS study of diblock copolymer thin films with perpendicular lamellar structure during solvent vapor treatment and drying	Chun-Jen Su Nucleosome-like Structure from Dendrimer-induced DNA Compaction	Eunjoo Shin SANS Study on the Ultrasonic Fatigued Alloys	Sigrid Bernstorff GISAXS analysis of quantum dot lattices	
16:50	Yohei Kamata The hydration and ordering of lamellar block copolymer films prior to the formation of polymer vesicles	Annette Eva Langkilde Structural characterization of pre-fibrillar intermediates and amyloid fibrils	Kirill Napolski Kinetics and Mechanism of Long-Range Orientational Pores Ordering in Anodic Films on Aluminum: Microradian X-ray Diffraction Study	Michael Krumrey X-ray scattering and reflection techniques for dimensional nanometrology	

17:05	Gemma Elizabeth Newby Interface Morphology of Micellar Aggregates	Haydyn Mertens Domain flexibility as a new target for therapeutics: the Urokinase-type plasminogen activator receptor (uPAR).	Matias Rodriguez Ion Tracks in Amorphous Metals: Tracks Relaxation and Recrystallization of the Matrix	Anne Tuukkanen Improved water modeling for calculating solution x-ray scattering intensity of macromolecules
17:20	Guinther Kellermann Formation of thin CoSi ₂ nanohexagon arrays buried in single crystalline Si substrates. Effects of the orientation of the external surface of the Si host	Agata Rekas Structure of dopamine-induced α -synuclein oligomers : A small angle scattering study	Thomas Bierschenk Ion-tracks in swift heavy ion irradiated amorphous germanium	Gunthard Benecke DPDAK: Directly Programmable Data Analyses Kit for online analysis of 2d scattering data
17:35	Tsang-Lang Lin Small-Angle Neutron and X-ray Scattering Studies on the Adsorption of DNA by Cationic Diblockcopolymer/Lipid Complexes and Diblockcopolymer Micelles	Prof Bente Vestergaard Time resolved analysis of an oligomerisation pathway of a novel insulin analogue facilitated by buffer exchange on the on-line hplc setup at 'swing'	Kenneth C Littrell Measuring thermal stability of nano-precipitates in advanced high-strength steel using SANS	Helmut Durchschlag Bridging Crystallography, Electron Microscopy, Small-Angle Scattering and Hydrodynamics

17:50

Break

19:00

Maxim Pethoukov, Jan Ilavsky and Paul Butler
[Advanced Data Interpretation and Validation Workshop](#)

Wednesday – 21 November

8:30	Lise Arleth <u>Using Small-Angle Scattering in studies of membrane proteins</u>			
9:15	Cy Jeffries <u>Insight, Discovery and New Directions: Small-Angle Scattering and Cardiac Myosin Binding Protein C</u>			
	Sponsored by:			
				
9:45	Morning Tea			
10:30	A5: Polymers 2	B5: Membranes 2	C5: Time Resolved 2	D5: Theory and Modelling 2
10:30 Keynote	<p style="text-align: center;">Fumitoshi Kaneko</p> <p>Time-Resolved SANS and SAXS Studies on Guest Exchange Processes in Crystalline Complexes of Syndiotactic Polystyrene</p>	<p style="text-align: center;">Nicholas Skar-Gislinge</p> <p>Using Nanodiscs as a platform for low resolution studies of membrane protein</p>	<p style="text-align: center;">Theyencheri Narayanan</p> <p>Probing Soft Matter Self-Assembly using Millisecond Time-Resolved SAXS</p>	<p style="text-align: center;">Adrian R. Rennie</p> <p>What is learnt about SANS Instruments and Data Reduction from Round Robin Measurements? – A Polymer Latex ‘Standard’</p>
10:50	<p style="text-align: center;">Jean-Bang Jeng</p> <p>Conformational Ordering, Molecular Dynamics and Hierarchically Structural Evolution during Cold Crystallization of Poly(trimethylene terephthalate)</p>	<p style="text-align: center;">Ilaria Idini</p> <p>Phospholipid bilayer nanodiscs</p>	<p style="text-align: center;">Albrecht Wiedenmann</p> <p>Stroboscopic SANS Techniques For Dynamical Studies In Sub-Milliseconds Time Range</p>	<p style="text-align: center;">Richard Heenan</p> <p>Data reduction for time of flight SANS</p>

11:05	<p>Konrad Schneider Investigation of structural changes in semi-crystalline polymers during deformation by online-xray scattering</p>	<p>Grethe Vestergaard Jensen Phospholipid Bicelles for Protein Solubilization Investigated by SAXS</p>	<p>Thomas Zinn “Goldilocks” Polymers – On the Exchange Kinetics of Hydrophobically End-Capped PEO Micelles as seen by TR-SANS</p>	<p>Peter Jemian The canSAS format for storage and interchange of reduced multi-dimensional small-angle scattering data</p>
11:20	<p>Toshiji Kanaya Precursor in Shear-induced crystallization of Polymers by Micro-beam SAXS AND WAXS</p>	<p>Stephanie Phan Real time SAXS studies for understanding nanostructure in digesting lipid systems</p>	<p>Kang Wei Chou Time-Resolved Characterization of the Nanoscale Structure and Morphology of Spin-Cast Bulk Heterojunction Solar Cells</p>	<p>Andreas Thünemann Standardization of Small-Angle Scattering: Current Status and Future Developments</p>
11:35	<p>Shigeru Okamoto Paracrystalline Analysis of Thermoreversible Order-Order Transition between OBDD and OBDG in PS-b-PI / PI Blends</p>	<p>Paul Butler Insights into membrane thickness fluctuations</p>	<p>Aldo Craievich In Situ Study of Phase Separation in a 55PbO-45B2O3-(3SnO) Glass</p>	<p>James Hester The datamodel: key to developing a SAS data transfer framework</p>
11:50	<p>Koichiro Sadakane Periodic distribution of ions confirmed by contrast variation small-angle neutron scattering in water, 2,6-Lutidine, and NaBPh4 mixture</p>	<p>Søren Kynde A hybrid approach to modeling of protein-lipid complexes</p>	<p>Mattia Rocco Structural kinetics of biopolymeric filamentous networks studied by stopped-flow with simultaneous Multi-Angle Laser Light Scattering (MALLS) and Small-Angle X-ray Scattering (SAXS). Set-up and application to fibrin polymerization.</p>	<p>Peter Laggner Quality factor in SAXS instrumentation</p>
12:05	<p>Guiseppe Portale Probing polymer crystallization in processing conditions with synchrotron X-ray radiation</p>	<p>Bruno Demé Probing a Gd-labeled lipid bilayer with an evanescent neutron wave</p>	<p>Bridget Ingham Watching nickel nanoparticles grow in real time: An in situ synchrotron SAXS study</p>	<p>Zohreh Omid Effects of neutron scattering and evaluate its impact on the correct resolution Neutron radiography using Monte Carlo code calculations (MCNPX)</p>

12:40	Lunchtime Session: <u>canSAS: Progress & plans for collaboration on a web portal, data, shared software, and standardisation</u>	Lunch
14:00	Free Afternoon or Visit to OPAL (including Quokka, Bilby, Kookaburra and SAXS instruments) and National Deuterium Facility	

Thursday – 22 November

8:30	Andrew Allen <u>In Situ SAXS and SANS Measurements to Overcome Materials Technology Barriers</u>			
9:15	Yuya Shinohara <u>X-ray Photon Correlation Spectroscopy of Filled Rubber</u>			
9:45	Morning Tea			
10:30	A6: Liquid Crystals 1	B6: Structural Biology 4	C6: Contrast Methods 1	D6: Instruments and Methods 2
10:30 Keynote	Ivan Krakovsky SANS study of the response of nanophase separated epoxy hydrogels to temperature changes	Wouter Habraken A spatially resolved SAXS and spectroscopy study of amorphous calcium carbonate in crayfish gastroliths	Satoshi Koizumi In-situ Observation of Operating Polymer Electrolyte Fuel Cell (PEFC) by Neutron Small-Angle Scattering - Contrast Variation by Using Deuterium Gas	Nigel Kirby Low Instrument Background and Accurate Normalisation for Synchrotron SAXS Analysis of Weakly Scattering Samples
10:50	Yachin Cohen Evidence of a dense water layer on polymers adsorbed onto carbon nanotubes by contrast variation SANS measurements	Naoto Yagi Light-induced Structural Changes in Retinal Rod Outer Segments of Frog and Mouse	U-SerJeng Contrast Variation of Neutron and X-ray Reflectivity for In-depth Distributions of the Conjugate Polymer and Fullerene-derivatives in Bulk Heterojunction Thin Film Solar Cells	Adam Round Upgraded ESRF BioSAXSbeamline (BM29) for highly automated SAXS on proteins in solution
11:05	Laurent Rubatat Structural studies of ionomer membranes made of fluorinated copolymers bearing partially sulfonated polystyrene grafts	Nathan Cowieson SAXS provides a direct assay for plasminogen activation.	Tamim Darwish Molecular Deuteration for Contrast Variation in Neutron Studies of Multi-Component Nanoscale Systems	Clement Blanchet Conventional and microfluidic setups for high throughput synchrotron solution SAXS at EMBL Hamburg.

11:20	<p>Martine Philipp Cononsolvency of thermoresponsive polymer in binary solvents - a kinetic SANS study</p>	<p>Magda Moller A Microfluidic Mixing System For X-ray Solution Scattering: Screening The Structural Space Of Glutaminase C, A Therapeutically Relevant Enzyme In Cancer Research</p>	<p>Søren Roi Midtgaard Elucidating the finer structural details of discoidal lipoprotein particles by selective protein deuteration</p>	<p>Melissa Graewert An in-line biophysical characterization and purification set-up at the P12 SAXS beamline of the EMBL-Hamburg</p>
11:35	<p>Duy Tap Tran Hierarchical Structure Analysis of Poly(ethylene-co-tetrafluoroethylene)-Based Graft-Type Polymer Electrolyte Membranes by Small Angle X-ray Scattering</p>	<p>Martha Elisabeth Brennich Salt induced structural changes in intermediate filaments as investigated by SAXS</p>	<p>Yohei Noda Proton Spin Contrast Variation Approach : from Basic Polymer to Fuel-Efficient Tire Rubber</p>	<p>Thomas Arnold GISAXS measurements on Beamline I07 at Diamond</p>
11:50	<p>Norbert Stribeck Injection-moulded TPU: Effects of melt-temperature on structure evolution under mechanical load and on the mechanical properties</p>	<p>Jørn Døvling Kaspersen A small angle x-ray scattering study of outer membrane-spanning protein a solubilized with the surfactant dodecyl maltoside</p>	<p>Andre Heinemann Contrast Variation in Small Angle Scattering – A Unifying Approach</p>	<p>Nick Terrill From old bones to aerosols – micro focus SAXS at I22</p>
12:05	<p>Tiberio Ezquerra Grazing incidence small angle x-ray scattering of soft and hard nanofabricated gratings</p>	<p>Johannes Möller Exploring the intermolecular interactions and the phase behavior of dense protein solution: high pressure SAXS studies</p>	<p>Cheng Wang Soft X-ray Scattering of Soft Materials</p>	<p>Andreas Kleine Multilayer Optics for Novel Instrumentation in Small Angle X-ray Scattering Applications</p>
12:20	<p>POSTER SESSION 2</p>		<p>Lunch</p>	
14:00	<p>John Tainer <u>Biological Small Angle X-Ray Scattering: Genesis, Misconceptions and Major Strengths Going “Forward”</u></p> <p>Sponsored by:</p>			



14:45

Nozomi Ando

Structural Interconversions Modulate Activity of Escherichia coli Ribonucleotidereductase

15:15

Afternoon Tea

15:45

A7: Surfaces 2

B7: Medicine

**C7: Coherent
Scattering and
Imaging**

**D7: Theory and
Modelling 3**

**15:45
Keynote**

Dale W. Schaefer

Formation And Sealing of
Anodic Aluminum Oxide
(AAO) Films

Nick Terrill

Investigating the Nano-
Structural and Mechanical
Behaviour in the Mineralized
Matrix of Metabolic Bone
Disease Phenotypes using
Synchrotron X-ray
Diffraction

Birgit Fischer

Finding orientational
correlations in hard
sphere glasses beyond
the static structure factor

Michael Weir

Analysing small-
angle-scattering data
using the linear
correlation function

16:05

Matthias Schwartzkop

From atoms to layers: in situ
gold growth kinetics during
sputter deposition

Peter Fratzl

Relation between mineral
particle characteristics and
the osteocyte cell network in
bone – A scanning SAXS
study

Norbert Stribeck

SAXS computed-
tomography of polymer
fibre materials

Gundol Schenk

Normal mode
analysis for flexible
SAXS refinement

16:20

Sebastian Bommel

Real-time and in-situ growth
study of the fullerene C60:
Time-resolved organic thin
film morphology studied by
Grazing Incidence Small-
Angle X-ray Scattering
(GISAXS)

Zoltan Varga

Structural characterization
of unilamellar liposomes by
means of small-angle
scattering

Orsolya Czakkel

Effect of Molybdenum
on Structure and
Dynamics of Resorcinol
– Formaldehyde
Hydrogels

**Stephen Thomas
Mudie**

scatterBrain: An
advanced software
package for small
angle scattering data
acquisition,
reduction, and
analysis.

16:35	<p>Stephan Roth</p> <p>Observing the growth of metal-polymer-nanocomposite thin films in-situ and in real time</p>	<p>Sergey Filippov</p> <p>Macromolecular HPMA-based nanoparticles with cholesterol for solid tumour targeting: how do they look like from inside. The origin of functionality.</p>	<p>Tad Koga</p> <p>Marker grazing-incidence XPCS studies on nanoconfined polymer films - Interplay between the two interfacial effects on local viscosity</p>	<p>Robert Rambo</p> <p>A Quantitative interpretation of biopolymer flexibility using the Porod-Debye Law.</p>
<p>16:50 Presentations for SAS-2018 HOST SITE and VOTING</p>				

Break

18:30	<p>Conference Party</p> <p><u>Doltone House</u></p>			
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Friday – 23 November

8:30	Peter Fischer <u>Small-Angle Scattering Applications in Food</u>			
9:15	Tomotaka Oroguchi <u>Protein Dynamics Investigated by Small Angle X-ray Solution Scattering and Molecular Dynamics Simulations</u>			
9:45	Morning Tea			
10:30	A8: Complex Fluids 2	B8: Polymers 3	C8: Applications and Technology 2	D8: Instruments and Methods 3
10:30 Keynote	<p>Janne-Mieke Meijer Self-Assembly in Sedimentary Crystals of Magnetic Colloidal Cubes</p>	<p>Hideaki Yokoyama Grazing incident small angle x-ray scattering (GISAXS) study of fluctuating block copolymer lamellae in egg carton mode</p>	<p>Matthias Girod The impact of digestion on the physicochemical properties of silver nanoparticles and their toxicity for intestinal cells</p>	<p>Michael Agamalian The Advanced Multi-Wavelength Bonse-Hart Ultra-Small-Angle Neutron Scattering (USANS) Technique for the Study of Hierarchical Structures</p>
10:50	<p>Ellen Moon Deducing the nanostructure of zirconium colloids formed in sulphate-based mineral processing liquors</p>	<p>Taiki Hoshino Study of anomalous diffusion of polystyrene grafted nanoparticles studied by X-ray photon correlation spectroscopy</p>	<p>Patrick Kluth SAXS study of ion tracks: morphology and recovery kinetics</p>	<p>Michihiro Furusaka Small and Intermediate-Angle Neutron Scattering Instruments at a Compact Accelerator Driven Neutron Source</p>
11:05	<p>Andrei Petukhov Order and disorder in colloidal crystals in direct and reciprocal space</p>	<p>Eva M. Herzig Influence of a third component on the morphology of conducting binary polymer blends for photovoltaic applications</p>	<p>David Cookson Using SAXS to shed new light on surface wetting</p>	<p>Jan Ilavsky Combined USAXS/SAXS instrument with nearly 5 decades scattering vector range</p>

11:20	<p>Stephan Roth</p> <p>Gold Nanoparticle Deposition onto Polymer-coated Substrates Using a Flow-Stream Technique</p>	<p>Yuri Melnichenko</p> <p>Partial collapse and reswelling of a polymer in the critical demixing region of good solvents</p>	<p>Dietmar Schwahn</p> <p>Scaling of RO-Membranes in Desalination of Wastewater and the Effect of organic Matter on Calcium-Phosphate Mineralization</p>	<p>Geert Vanhoyland</p> <p>Liquid metal jet micro-focus X-ray source: Highest brilliance for SAXS home lab instrumentation</p>
11:35	<p>Tae Gyu Shin</p> <p>The Self-Assembly of Surfactants in Ordered Mesoporous Silica Studied by Small-Angle Neutron Scattering</p>	<p>Mikihito Takenaka</p> <p>Shear-induced enhancement of density fluctuations in glassy polymers</p>	<p>David Bucknall</p> <p>Effect of Phase Morphology on Device Efficiency in Model Poly(thiophene)-Fullerene Organic Photovoltaics</p>	<p>Chun-Yu Chen</p> <p>Integration and Standardization of SAXS/WAXS Measurements at the NSRRRC BL23A SWAXS Endstation</p>
11:50	<p>Sugam Kumar</p> <p>SANS study of block copolymer induced long range depletion interaction and clustering in silica nanoparticles</p>	<p>Tikhon Kurkin</p> <p>Small-angle X-Ray scattering study of detonation nanodiamond particles morphology: from stable suspensions to bulk polymer nanocomposites</p>	<p>Kristin Høydalsvik</p> <p>In situ SAXS studies of Co Catalyst Nanoparticles in the Fischer-Tropsch Synthesis</p>	<p>Peter Boesecke</p> <p>TRUSAXS, a new time-resolved USAXS station at the ESRF Sztucki, M. Van Vaerenbergh, P. Gorini, J.</p>
12:05	<p>Jan Perlich</p> <p>Pattern formation of colloidal suspensions by dip-coating: An in situ grazing incidence X-ray scattering study</p>	<p>Go Matsuba</p> <p>Stereocomplex crystallization process under shear flow of poly(L-lactic acid)/poly(D-lactic acid) blends</p>	<p>Heiner Santner</p> <p>Fast SAXS Studies of CdSe Quantum Dots Synthesized By Microwave Irradiation</p>	<p>Christine Rehm</p> <p>Ultra-Small-Angle Neutron Scattering in the Southern Hemisphere</p>
12:20	Lunch			

13:30	A9: Liquid Crystals 2	B9: Structural Biology 5	C9: Contrast Methods 2	D9: Time Resolved 3
13:30 Keynote	Anke Leferink Op Reinink Orientation dynamics of the goethite columnar liquid crystal phase studied at the nanoscale using SAXS	Jan Skov Pedersen Enhancement of the secondary structure of a protein by confinement in water-in-oil micro-emulsion studied by SAXS and dynamic light scattering	Sylvio Haas Which ASAXS analysis technique can be used? Comparison of the applicability of various analysis methods.	Andreas Menzel In-situ characterization of nanoparticle formation by pulsed laser ablation
13:50	Marc Malfois Synthesis and characterization of porphyrin rings	Stéphane Longeville Influence of macromolecular crowding on protein folding and stability	Rainer T. Lechner Characterisation of PbS/CdS Nanocrystal Core-Shell Structures by ASAXS	Sebastian Jaksch Kinetics of the collapse transition and aggregation of thermoresponsive poly(2-oxazoline)s in aqueous solution – a time resolved SANS study
14:05	Wim Bras Alignment and phase separation of microtubules in external fields	Javier Pérez Detergent Organization Around Aquaporin-0 Revealed Using Small Angle X-ray Scattering	Armin Hoell Nanocrystallization of BaF ₂ and CaF ₂ from oxy-fluoride glasses studied by ASAXS	Charlie Yao Dong Effect of surfactants on the internal structure and solubilization of cubosomes and hexosomes
14:20	Christian W. Pester Time-Resolved SAXS-Studies of Copolymer Reorientation Mechanisms in Electric Fields	Soren Skou Nielsen A Microfluidic Device For Sample Dialysis In Conjunction With Biological SAXS	P. Klaus Pranzas ASAXS and SANS Investigations of Solid State Hydrogen Storage Materials	Kristian Joy Tangso Investigation of spiropyran derivatives as light responsive liquid crystalline components

14:35	Afternoon Tea
15:10	Do Yeung Yoon <u>Small-Angle X-ray Scattering and Solid-State NMR Study of Linear Low-Density Polyethylenes</u>
16:55	Ilja Voets <u>A Small-Angle View on Macromolecular Self-Assembly: from Supramolecular Interactions to Supramolecular Structures</u>
16:25	Closing Session including Otto Kratky and ANSTO Awards