

Program QENS/WINS 2016

Monday, 5 th September 2016		
09:00	Registration	
12:00	Lunch Break	
13:00	Welcome	<i>Thomas Frederking (Helmholtz-Zentrum Berlin)</i> <i>Margarita Russina (Helmholtz-Zentrum Berlin)</i>
13:30	PlenaryTalk: New Challenges	<i>Oliver Delaire (Duke University)</i> Phonon Scattering Processes in Thermoelectrics Investigated with Neutron Scattering and First-Principles Simulations
Materials for energy conversion		
14:15	Invited Talk	<i>Christopher Stock (University of Edinburgh)</i> Soft excitations in perovskite piezoelectrics and photovoltaics
14:45		<i>Florian Pforr (Technische Universität Darmstadt)</i> Local diffusion and critical scattering in a lead-free relaxor ferroelectric
15:05		<i>Sanghamitra Mukhopadhyay (STFC Rutherford Appleton Laboratory)</i> Application of ab-initio Molecular Dynamics in Modelling of Quasielastic Neutron Scattering on Functional Materials
15:25	Coffee Break	
Materials for energy storage		
15:55	Invited Talk	<i>Stephane Rols (Institut Laue-Langevin)</i> Hydrogen motions in defective graphene: the role of surface defects
16:25		<i>Alexander J. O'Malley (University College London)</i> Sorbate Dynamics in Zeolite Catalysts: Tandem QENS and Simulation Studies
16:45		<i>Ian Silverwood (STFC Rutherford Appleton Laboratory)</i> Investigation of Zeolite Pore Blocking with QENS
17:05		<i>Heisi Kurig (University of Tartu)</i> The pore size and shape of nanoporous carbons and influence of porosity on hydrogen adsorption kinetics
17:25		<i>Iain Hitchcock (Johnson Matthey Technology Centre)</i> Measuring the diffusion of ammonia in zeolite NOx emissions control catalysts
17:45		<i>Wiebke Lohstroh (Technische Universität München)</i> Hydrogen dynamics in β-Mg(BH₄)₂ on the picosecond timescale
18:05	End	

Tuesday, 6 th September 2016		
Materials for energy conversion		
09:00	Plenary Talk: New Challenges	<i>Piers R. F. Barnes (Imperial College London)</i> Movement and disorder in methylammonium lead halides for solar cells
09:45	Invited Talk	<i>David Djurado (CNRS)</i> Lattice and local dynamics in disordered solid materials for organic and hybrid (opto)electronic applications
10:15	Invited Talk	<i>Michael Koza (Institut Laue-Langevin)</i> Relaxation Processes in Thermoelectric Materials

10:45	Coffee Break	
Ionic and proton conducting systems		
11:00	Invited Talk	<i>Kazuhiro Mori (Kyoto University)</i> Direct observation of fast lithium-ion diffusion in a superionic conductor: $\text{Li}_7\text{P}_3\text{S}_{11}$ metastable crystal
11:30		<i>Fanni Juranyi (Paul Scherrer Institut)</i> Ionic diffusion in battery cathods, e.g. $\text{Na}_{0.7}\text{CoO}_2$
11:50		<i>Daria Noferini (Chalmers University of Technology)</i> Proton dynamics in hydrated acceptor-doped barium zirconates investigated with neutron spectroscopy
12:10		<i>Artur Braun (Empa)</i> On the metafunction of protons in ceramic electrolytes
12:30	Lunch	
Electrolytes and ionic liquids		
13:30	Invited Talk	<i>Natalie Malikova (University Pierre and Marie Curie)</i> Interactions in polyelectrolyte solutions probed by neutron scattering: charge, hydrophobicity and ion-specific effects
14:00	Invited Talk	<i>Eugene Mamontov (Oak Ridge National Laboratory)</i> Microscopic Dynamics of Confined Electrolytes for Energy Storage Applications
14:30		<i>Antonio Benedetto (Paul Scherrer Institute)</i> Biomolecules, Water and Room-Temperature Ionic Liquids: a Neutron Scattering and Computational study
14:50		<i>Tatsiana Burankova (Paul Scherrer Institute)</i> Dynamic Heterogeneity and Flexibility of the Alkyl Chain in Pyridinium-Based Ionic Liquids
15:10		<i>Jean-Marc Zanotti (LLB (CEA-CNRS))</i> Ionic liquids in bulk and under 1D nanometric confinement: a multiscale analysis
15:30		<i>Tommy Hofmann (Helmholtz-Zentrum Berlin)</i> Quasi-elastic neutron scattering study of a room-temperature ionic liquid confined in nanoporous carbon
15:50	Postersession incl. Refreshments and Snacks	
18:00	End	

Wednesday, 7th September 2016		
Fuel Cells		
09:00	Invited Talk	<i>Jan-Patrick Melchior (Max-Planck-Institut für Festkörperforschung)</i> From the unique proton diffusion in neat phosphoric acid to fuel cell membranes – A QNS and NMR study of model systems unveiling chemical influences on proton dynamics and its consequence for fuel cell applications
09:30		<i>Nicolas Martinez (CNRS)</i> Nanoscale water dynamics in operando fuel cells
09:50		<i>Oxana Ivanova (Jülich Centre for Neutron Science)</i> Proton dynamics in high temperature polymer electrolyte fuel cell membranes

10:10		<i>Marina Khanef</i> (Jülich Centre for Neutron Science) Exploring proton mobility in the catalytic layer of High Temperature Fuel Cells
10:30	Coffee Break	
	Water and aquatic solutions I	
10:50	Invited Talk	<i>Marie-Louise Saboungi</i> (University Pierre and Marie Curie) Relaxation in a prototype ionic liquid and its mixture with water
11:20		<i>Paula Malo de Molina</i> (Materials Physics Center) Microscopic Insights from Coherent and Incoherent Neutron Scattering on the Dynamics of Liquid Water and Amino-Acid Solutions
	Water and aquatic solutions II	
11:40	Invited Talk	<i>Alberto Striolo</i> (University College London) Transport Mechanisms in Confinement: Are Molecular Simulations Helpful?
12:10		<i>Souleymane Diallo</i> (Oak Ridge National Laboratory) Characteristic Features of Water Dynamics in Confined Geometries
12:30		<i>R. Gregor Weiß</i> (Humboldt-Universität zu Berlin) Anomalies of hydrophobic solvation extend into water dynamics
12:50		<i>Jose M. Borreguero</i> (Oak Ridge National Laboratory) Fast Water Exchanges on Aqueous Ions and a Mineral Surface Resolved Using Molecular Dynamics Validated by Quasi-Elastic Neutron Scattering
13:10	Lunch	
	Polymers and membranes	
14:10		<i>Henrich Frielinghaus</i> (Forschungszentrum Jülich) Amphiphilic Polymers with a Continuous Philicity Profile in Bicontinuous Microemulsions Studied by Quasielastic Neutron Scattering
14:30		<i>Fabrizia Foglia</i> (Imperial College London) Neutron backscattering study of polyamide and water dynamics in reverse osmosis (RO) membranes
14:50		<i>Daniela Russo</i> (Institut Laue-Langevin) Investigation into the relaxation dynamics of polymer-protein conjugates reveals surprising role of polymer solvation on inherent protein flexibility
	Biosystem I	
15:10	Invited Talk	<i>Tilo Seydel</i> (Institut Laue-Langevin) High-resolution spectroscopy of proteins in solution
15:40		<i>Tatsuhito Matsuo</i> (National Institutes for Quantum and Radiological Science and Technology) Picosecond dynamics of F-actin, myosin subfragment-1, and their hydration water studied by quasielastic neutron scattering
16:00	Coffee Break	
16:20	Invited Talk	<i>Ramaprosad Mukhopadhyay</i> (Bhabha Atomic Research Centre) Dynamical Features in Self Assembled Molecular Aggregates
16:50		<i>Judith Peters</i> (Institut Laue-Langevin) Pressure adaptive strategies in prokaryotes studied by quasi-elastic neutron scattering
17:10		<i>Maksym Golub</i> (Université Grenoble Alpes) Combined SANS-QENS studies of low-density lipoprotein under high hydrostatic pressure
17:30		<i>Beate-Annette Brüning</i> (Bielefeld University) Structure and dynamics of phospholipid vesicles around the main phase transition
17:50	End	

18:30 - 20:30	Potsdam Tour
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Thursday, 8th September 2016

08:00	Registration for WINS	
		Postersession for WINS in the breaks
	Biosystem II	
09:00	Invited Talk	<i>Andreas Stadler (Forschungszentrum Jülich)</i> Internal Protein Dynamics Investigated with Quasielastic Neutron Scattering
09:30		<i>Tilo Seydel (Institut Laue-Langevin)</i> Quasi-elastic and Inelastic Neutron Scattering: Revealing confined liquid dynamics in dental cements
09:50		<i>Stéphane Longeville (Laboratoire Léon Brillouin)</i> Diffusion of hemoglobin in concentrated solutions and in blood cells: a Physiological implication
10:10	Closure	
10:30	Coffee Break	

WINS 2016

	New Sources	
10:50	Invited Talk	<i>Ulrich Rücker (Forschungszentrum Jülich)</i> The High-Brilliance Neutron Source Project HBS
11:10		<i>Kenneth Herwig (Oak Ridge National Laboratory)</i> Prospects at the Oak Ridge National Laboratory Spallation Neutron Source Second Target Station
11:30		<i>Nico Bernt (University of Technology Dresden)</i> The Training and Research Reactor AKR-2
11:50		<i>Tetsuya Yokoo (J-Parc)</i> Recent progress on the spectrometers in J-PARC
12:10		<i>Rasmus Toft-Petersen (Technical University of Denmark)</i> Status of the spectroscopy instrument suite at the ESS
12:30		<i>Russel Ewings (STFC Rutherford Appleton Laboratory)</i> Developments at the ISIS Pulsed Neutron and Muon Source
12:50	Lunch Break	
	New instruments	
13:50	Invited Talk	<i>Paul Steffens (Institut Laue-Langevin)</i> Performance of the cold Three-Axis Spectrometer Thales @ ILL
14:10		<i>Rasmus Toft-Petersen (Helmholtz-Zentrum Berlin)</i> MultiFLEXX: A new multiplexing back-end for the FLEXX cold triple axis spectrometer
14:30		<i>Shinichi Itoh (KEK Japan)</i> High Resolution Chopper Spectrometer HRC and Neutron Brillouin Scattering
14:50		<i>Russell Ewings (STFC Rutherford Appleton Laboratory)</i> Status of the MAPS time-of-flight spectrometer upgrade
15:10		<i>Margarita Russina (Helmholtz-Zentrum Berlin)</i> New NEAT - design concept and commissioning results

15:30		<i>Markus Appel (Friedrich-Alexander Universität Erlangen-Nürnberg)</i> The Backscattering And Time-of-flight Spectrometer Option BATS for IN16B: Concept, Design & Future Developments
15:50		<i>Nicolas R. de Souza (Australien Nuclear Science and Technology Organisation)</i> Design and first results from EMU, the high-resolution backscattering spectrometer at ANSTO
16:10	Coffee Break	
16:30	Invited Talk	<i>Ingo Hoffmann (Institut Laue-Langevin)</i> The IN15 Upgrade
16:50		<i>Tatsuro Oda (Kyoto University)</i> Experimental study on TOF-MIEZE type neutron spin echo spectroscopy at BL06 at J-PARC/MLF
Data collection and instrument simulations		
17:10	Invited Talk	<i>Yukinobu Kawakita (J-Parc Center)</i> Challenge on data analysis for inelastic and quasielastic neutron scattering for functional materials with structural disorder in real space and time
17:30		<i>Emmanuel Farhi (Institut Laue-Langevin)</i> Integrated simulation infrastructure for experiment planning: phonons
17:50		<i>Mads Bertelsen (University of Copenhagen)</i> McStas component for simulating multiple scattering in sample environment
18:10	End	
20:00 - 23:00		Dinner (Boat trip) (Shuttle departs 19:00 in front of the Kutschstall)

Friday, 9th September 2016		
10:00 - 12:00		Guided Tour around the neutron guide hall
12:00	Lunch Break	
Instrument components and new concepts		
13:00	Invited Talk	<i>Péter Harmat (ANTE Innovative Technologies)</i> Turn-key large area modular detector system with event recording time-of-flight data acquisition for spectrometer NEAT: concept, design, performance
13:20		<i>Eugene Mamontov (Oak Ridge National Laboratory)</i> WAVES concept and steps toward its practical implementation at the SNS
13:40		<i>Felix Groitl (École Polytechnique Fédérale de Lausanne)</i> CAMEA — A novel multiplexing analyzer for neutron spectroscopy
14:00		<i>Stéphane Longeville (Technical University of Munich)</i> C-SPEC- a cold time of flight spectrometer for the ESS
14:20		<i>Nicolo Violini (JCNS)</i> T-REX: a bispectral chopper spectrometer for the ESS
14:40		<i>Antonio Benedetto (Paul Scherrer Institute)</i> An Instrument-Concept for Dynamics of Complex (Bio-) System from Elastic Scattering
15:00		<i>Feri Mezei (University of Messina)</i> Correlation spectrometer for filtering of (quasi)elastic neutron scattering with variable resolution
15:20		<i>Ramil Gainov (Helmholtz-Zentrum Berlin)</i> Concept of hybrid polarizing guide compressor for neutron spectrometers
15:40	Closure	
16:20	End of QENS/WINS	