

Session Program

Sep 16 – 18, 2024



Deutsche Neutronenstreutagung

Mounting Posters, Beer and light Dinner

RWTH Aachen, Hörsaalgebäude PPS

Professor Pirllet Str. 12 52074 Aachen The Postersession and Social Evening on the 17th of September will take place in the Forum M (Mayer'sche Buchhandlung), Buchkremerstraße 1-7, 52062 Aachen.

Tue, September 17

5:00 PM

Mounting Posters, Beer and light Dinner

Poster Session | Location: Mayersche Buchhandlung, Forum M

Magnetic microstructure of nanocrystalline Fe-Nb-B alloys as seen by small-angle neutron and X-ray scattering

Speaker

VENUS RAI

Combined X-ray and Neutron Powder Diffraction Study on B-Site Cation Ordering in Complex Perovskite $\text{La}_2(\text{Al}_{1/2}\text{MgTa}_{1/2})\text{O}_6$

Towards the Development of a Compact Very Cold Neutron Source for the Small-Angle Scattering Instrument for the High Brilliance Neutron Source

Interdiffusion of polymer and water in waterborne polymer latex films

Speaker

Debasish Saha

Mechanisms for Multiferroicity in Rare Earth Orthoferrites: An Overview

Speaker

Piotr Fabrykiewicz

Exploring Spin Crossover Compounds for Barocaloric Application

Investigating the Influence of Cyclic Ageing on the Structure of NCM Cathodes and Graphite Anodes in 21700 Li Ion Batteries

Application of Multidimensional Rietveld Refinement of Neutron Data

In situ simulation of a hydrogen storage material on the nanometer level driven by SANS measurements to explain the performance at engineering scale

Speaker

Arnab Majumdar

Microstructure and in-situ tensile behavior of CNTs reinforced Mg composites using neutron diffraction

Neutron radiography investigations of the diffusion of liquid organic hydrogen carrier (LOHC) molecules in porous systems

Distribution of Cross-linkers in Microgels obtained by Contrast variation in Small Angle Neutron Scattering

Neutron reflectometry with micro-second time resolution

Advancing Spectroscopic Insights: Inelastic and Quasielastic Neutron Scattering for the Study of Hydrogen-Rich Materials

Quasielastic neutron scattering to study the diffusion of water molecules on the surface of iron oxide nanoparticles at different relative humidities

Fe self-diffusion in Fe-Al-Si melts – A combined ab initio molecular dynamics and experimental study

N-H \cdots π Bonding in Benzene-Ammonia Solution

Targeted residual stress in electrical steel – Towards novel electric drives

Speaker

Tobias Neuwirth

Neutron Scattering on Magnetic Multilayers Deposited onto highly ordered nanosphere arrays

Speaker

Dr Asmaa Qdemat

GEMS unique synchrotron & neutron dilatometer for in-situ scattering studies

Origins of polysaccharide conformation and viscoelasticity in miscible heterogeneous solvent

Conformation and Microscopic Dynamics of Ring Polymers

Signature of surface anisotropy in the spin-flip neutron scattering cross section of spherical nanoparticles: Atomistic simulations and analytical theory

Spin Correlations in Assemblies of Iron Oxide Nanoparticles

The influence of dipolar interactions on the critical dynamics in Ni investigated by high-resolution neutron spectroscopy

Speaker

Dr Lukas Beddrich

Impact of Coating Type on Structure and Magnetic Properties of Biocompatible Iron Oxide Nanoparticles: Insights into Cluster Organization and Oxidation Behaviour

Influence of SrIrO₃/SrRuO₃ Multilayer Interface on Magnetic Skyrmions Formation

Dy incommensurate magnetic order in DyFeO₃ single crystal

Non-trivial Spin Structures and Multiferroic Properties of the DMI-Compound $Ba_2CuGe_7O_{17}$

Speaker

Peter Wild

Bayesian approach for fitting Molecular Dynamics simulations to neutron and X-ray diffraction and spectroscopy data simultaneously

Speaker

Veronika Reich

Elucidating the strong entanglement between spin and orbital degrees of freedom in $CaCu_3Ti_4O_{12}$ and its Influence on magnetism.

Applications and Perspectives of Hot Neutron Single Crystal Diffraction at HEIDI

Relocation of the cold triple axis spectrometer FLEXX to MLZ, Munich: Larmor diffraction and inelastic scattering

Speaker

Markos Skoulatos

New software for analysing neutron total scattering in 2-axis diffractometers

The Concept of a Novel Para-Hydrogen Based Cold Neutron Source with Simultaneously Increased Flux and Brightness

JULIC Neutron Platform, a testbed for HBS

Shielding performance of the prototype target station for the High Brilliance neutron Source (HBS) project

Low-dimensional para-hydrogen moderators

Speaker

Ulrich Ruecker

In-situ small angle neutron scattering under thermal-mechanical coupled field loading

Polyelectrolytes: Interchain hydrodynamic interaction and internal friction

Speaker

Ralf Biehl

A Colloidal Approach to the Microplastic Bane: Small Angle Neutron Scattering Studies on Model Microplastic Floccs

Speaker

Brijitta Joseph Boniface

Developments in the transfer program of neutron scattering instrumentation from BER II

Understanding in vivo bilayer organization in photosynthetic algae with small angle neutron scattering

Timescales of Cell Membrane Fusion Mediated by SARS-CoV2 Spike Protein and influence of an antiviral drug candidate

Interface structure and dynamics of protein stabilized food emulsions

Deuteration Service for Users of the MLZ Neutron Scattering Instruments

Lattice dynamics of $\text{Pb}(\text{Mn}_{1-x}\text{Fe}_x)\text{BO}_4$ ($x = 0, 0.5, 1.0$) studied by inelastic neutron scattering

Complexes of Oppositely Charged Microemulsions and Polyelectrolytes are Highly Dynamic

KWS-1: Polarisation analysis on a high-flux SANS instrument

Structural evolution of a model colloidal gel in a simple shear field

Speaker
Christopher Garvey

Foams in the view of SANS

Design concept of a diffractometer for the HBS Science Demonstrator

The cold neutron three-axis spectrometer IN12 at the ILL

HYMN – A novel unified toolbox for in-situ magnetic hyperthermia experiments using neutron scattering

Polarized SANS and GISANS at the ESS

Recommendation system for small angle neutron scattering models based on machine learning from Monte Carlo virtual experiments

Learning self-supervised representations of powder diffraction patterns

Speaker
Shubhayu Das

Surface Charged Polymeric Micelles - A Tunable Model System Studied by SANS

Speaker
Jörg Stellbrink

The Engineering Diffractometer BEER at ESS - Features and Status Update

Upgrade concept of the instrument TOFTOF

Speaker
Marcell Wolf

Draft recommendations on metadata capture and specifications

Validation of a Polyethylene Thermal Moderator for accelerator-driven neutron source

Small-angle Neutron Scattering Instrument and Applications at China Spallation Neutron Source

Printed Neutron Converter Foils

Combination of Small Angle Neutron Scattering and Quantum Cascade Laser-based Infrared Spectrophotometer for the Investigation of Amyloid Formation

Speaker
Tobias Schrader

High-efficiency diffractometer ERWIN

Speaker
Markus Hölzel

Innovative approach for sustainable and low-waste production of ⁹⁹Mo for radiodiagnostics using an accelerator based neutron source

Newly developed aerodynamic levitation device for neutron scattering experiments

SKADI - Small-Angle Neutron Scattering @ ESS

Using Light to see Scattered Neutrons: an efficient technology applied to neutron scattering

Sample environment for control of temperature and gas phase composition during the neutron spectroscopy of soft materials

Development of Modular Sample Environment for Simultaneous SANS and Spectroscopic Characterization of Non-Equilibrium Soft Matter

Speaker

Avik Das

SANS data reduction and analysis QtiSAS: current status

Scientific applications with the high resolution neutron backscattering spectrometer SPHERES

Speaker

Michaela Zamponi

Transitions in Fe₃O₄/Nb:STO heterostructures investigated by Polarized Neutron Reflectometry

Signature of magnetic skyrmions in the chiral function

KOMPASS – the polarized cold neutron triple-axis spectrometer at the FRM II

Development of a GEM based neutron detector with VMM readout

Novel Application of Volume Detectors Improving Data Quality in Neutron Powder Diffraction

Investigation of proximity effects in a YBa₂Cu₃O_{7-x}/SrRuO₃ bilayer heterostructure by magnetotransport measurements and neutron scattering techniques

Comparison of experimental and simulated neutron cold spectra for para- and ortho-hydrogen

Speaker

Norberto Schmidt

Magnetic hypertermia investigation of nanoparticles with SANS

Machine learning based Optimization of Measurement Strategies for Small Angle Neutron Scattering

Unconventional magnetic excitations and complementary neutron scattering sum rule on spin-1/2 triangular antiferromagnets

Background from sample cryostat on three-axis spectrometer: can it be reduced?

Influence of Synthesis Conditions on the Microgel Structure

Deep Learning Approaches for Neutron Diffraction Crystalline Phase Identification**New options on the polarized neutron single crystal diffractometer POLI at MLZ**

Speaker
Jianhui Xu

Neutron sensitive Microchannel Plate with a Timepix3 readout

Speaker
Saime Gürbüz

Invitation to the MLZ User Meeting

Speaker
Ina Lommatzsch

Diffusivity Investigation of Hydrogen Isotopes in Flexible MOFs by Quasi-Elastic Neutron Scattering

Speaker
Jitae Park

Focusing with a nested mirror optic on the thermal triple-axis spectrometer PUMA at MLZ

Speaker
Frank Weber

OSCARS: Taking science research to the next level

Speaker
Melanie Nentwich

The Macromolecular Neutron Single Crystal Diffractometer BIODIFF for Proteins at the Heinz Maier-Leibnitz Zentrum MLZ**Calibration of the neutron optical path of the engineering materials neutron diffractometer "EMD" at the China Spallation Neutron Source**

11:00 PM