

PROGRAM

SMART LIGHTHOUSE Workshop on Atomic Structure of Functional Materials



Monday, June 14th

10.00 – 11.30 **Arrival at Sandbjerg Estate & Poster Placement**

11.30 - 12.25 Lunch

12.25 - 12.30 **Bo Brummerstedt Iversen, Aarhus University** “Welcome”

12.30 - 13:15 **Introduction to Synchrotron Radiation and DanMAX**

Mads Ry Vogel Jørgensen, MAXIV and Aarhus University

13.15 - 14.00 **Introduction to NMR in Materials Research**

Jørgen Skibsted, Aarhus University

14.00 - 14.30 Coffee break

14.30 - 15.15 **Introduction to Electron Microscopy and Diffraction**

Espen Bøjesen, Aarhus University

15.15 - 16.00 **Introduction to X-ray Imaging and Tomography**

Henning Friis Poulsen, Technical University of Denmark

16.00 - 16.30 Coffee break

16.30 - 17.15 **Introduction to XFEL & Time Resolved X-ray Science**

Martin Meedom Nielsen, Technical University of Denmark

17.15 - 18.30 **Poster Presentations (3 minutes, 3 slides) P01-P20**

18.30-19.30 Dinner

19.30 - 21.00 **Poster Presentations (3 minutes, 3 slides) P20-P40**

21:00 - 22.00 **Poster Session**

Tuesday, June 15th

7.30 - 8.30 Breakfast

8.30 - 9.10 Powder Diffraction

Poul Norby, Technical University of Denmark

9.10 - 9.50 Total Scattering and Pair Distribution Function

Kirsten Jensen, University of Copenhagen

9.50 - 10.10 Coffee break

10.10 - 10.50 High Pressure Diffraction

Martin Bremholm, Aarhus University

10.50 - 11.30 Operando X-ray and Neutron Studies

Dorthe Ravnsbæk, University of Southern Denmark

11.30 - 14.00 Lunch break (Lunch 11.30 – 13.00)

14.00 - 14.40 2D/vdW quantum materials

Yong Chen, Aarhus University

14.40 - 15.20 Scanning Probe Measurements and Operando Catalysis

Jeppe Vang Lauritsen, Aarhus University

15.20 - 16.20 Coffee break

16.20 - 17.00 Ionic Liquids in Materials Research

Anja-Verena Mudring, Aarhus University

17.00 - 17.40 Conformational Gap Control in CsTaS₃

Maarten Goesten, Aarhus University

17.40 - 17.50 Coffee break

17.50 - 18.30 3D Pair Distribution Function

Nikolaj Roth, Aarhus University

18.30 - 19.30 Dinner

19.30 - 21.00 Poster session

Wednesday, June 16th

7.30 - 8.30 Breakfast

8.30 - 9.10 Introduction to Neutrons in Materials Research and Danish Beamlines

Kim Lefmann, University of Copenhagen

9.10 - 9.40 Industrial Use of Large Facilities

Lars Fahl Lundegaard, Haldor Topsøe

- 9.40 - 10.00 Coffee break**
- 10.00 - 10.30 **High Entropy Alloys**
Jan Rossmeisl, University of Copenhagen
- 10.30 - 11.00 **ARPES, XPS and Topological Insulators**
Marco Bianchi, Aarhus University
- 11.00 - 11.30 **Amorphous Materials and Glasses**
Shuai Wei, Aarhus University
- 11.30 - 14.00 Lunch break (Lunch 11.30 – 13.00)**
- 14.00 - 14.30 **Catalysis**
Søren Kegnæs, Technical University of Denmark
- 14.30 - 15.00 **Electron Density and Molecular Magnets**
Jacob Overgaard, Aarhus University
- 15.00 - 15.30 **Solid State Electrolytes**
Torben Jensen, Aarhus University
- 15.30 - 16.00 Coffee break**
- 16.00 - 16.30 **Solar Cells**
Morten Madsen, University of Southern Denmark
- 16.30 - 17.00 **Hydrogels**
Aleksy D. Drozdov, Aalborg University
- 17.00 - 17.30 **Ionic Liquids as Glass-Forming Materials**
Kristine Niss, Roskilde University
- 17.30 - 18.00 **Metal Organic Framework Materials**
Kasper Steen Pedersen, Technical University of Denmark
- 19.00 - Conference dinner**

Thursday, June 17th

- 7.30 - 8.45 Breakfast**
- 8.45 – 11.30 **Student and postdoc talks**
- 8.45 – 9.00 **Mariam Ahmad, University of Southern Denmark** "Functional Interlayers in Organic Solar Cells: Surface Studies and Device Performance"
- 9.00 – 9.15 **Thorbjørn E. K. Christensen, Aarhus University** "Hierarchical Structure of the Stomatopod Dactyl Club"
- 9.15 – 9.30 **Andy S. Anker, University of Copenhagen** "Machine Learning for Automated Modelling of Pair Distribution Function Data"

- 9.30 – 9.45 **Frederik Gjørup, Aarhus University** “A New Approach to Evaluating Parameter-Resolved Diffraction Data”
- 9.45 - 10.00 **Christian Jacobsen, University of Southern Denmark** “Irreversible Disorder in NaCrO₂ Positive Electrodes for Na-ion Batteries”
- 10.00 - 10.15 Coffee break**
- 10.15 - 10.30 **Eoghan Rattigan, Aarhus University** “Observing the Active Phase of Cobalt Oxide Nanoislands with AP-XPS During Preferential CO Oxidation Conditions”
- 10.30 - 10.45 **Jonas Beyer, Aarhus University** “Powder Diffraction Peak Shapes and Their Effect on the Pair Distribution Function”
- 10.45 - 11.00 **Andreas Ø. Drejer, University of Southern Denmark** “Hybrid O3/P2 Layered Transition Metal Oxides as Electrode Materials for Rechargeable Na-ion Batteries”
- 11.00 - 11.15 **Emil A. Klahn, Aarhus University** “Field-Dependent Magnetic Anisotropy in a Single-Ion Magnet Measured Using Polarized Neutron Powder Diffraction”
- 11.15 - 11.30 **Sounak Sarkar, Aarhus University** “Thermal Stability of Glass Forming Metal Organic Framework: Role of Metal – Ligand Bonding”
- 11.30 - 11.35 **Bo Brummerstedt Iversen, Aarhus University** “Concluding remarks”
- 11.35 - 12.30 Lunch**
- 12.30 **Departure from Sandbjerg Estate**