**Advanced Material Network: Multiscale Tuning of Interfaces and Surfaces for Energy Applications (MISE)**

**2nd Annual Workshop Programme – 23rd October 2018**

**University of Birmingham**

**“Fundamental Properties of Interfaces for Energy Storage and Conversion”**

1000 – 1020 Arrival, Registration, Coffee and Poster Set up.

1020 – 1030 Introduction and Welcome

 *Jon Binner and John Irvine*

**Session 1 – Chair tba**

1030 – 1110 **Keynote Talk 1**: Lithium ion battery manufacturing; insights into formation and conditioning

 *Emma Kendrick, University of Warwick*

**Project Updates 1**

1110-1130 Atomistic Simulation Techniques for Understanding of the Structure, Stability and Reactivity of Ceramics and Minerals.

*Steve Parker, Jonathan Skelton– University of Bath*

1130-1145 Photoelectrochemical hydrogen production with bimetallic phosphide electrocatalysts (BIMEPEC)

*Salvador Eslava, University of Bath*

1145-1200 Enhancing Thermoelectrics through Graphene-Oxide Interactions

*Bob Freer, University of Manchester*

1200-1220 Fabrication, Processing and Characterisation of Structural and Functional Ceramic Powders, Materials and Devices.

*Ji Zou, Tim Button and Jon Binner – University of Birmingham*

1220-1235 Nanomechanical property evaluation of lead zirconium titanate ceramics with and without iron doping

*Yu-Lung Chiu, University of Birmingham*

1235 – 1340 Lunch and Posters

**Session 2 – Chair tba**

1340 – 1420 **Keynote Talk 2**: Lanthanide oxides for low temperature magnetocalorics

 *Dr Siân Dutton, University of Cambridge*

**Project Updates 2**

1420 – 1440 Discovery, Characterisation and Evaluation of Energy Materials

*JinGoo Lee, John Irvine – University of St Andrews*

1440 – 1455 Investigation of the Electrical Properties of the Novel Oxide Ion Conductor Ba7Nb4MoO20

*Abbie Mclaughlin and Jan Skakle, University of Aberdeen*

1455 – 1510 Metal exsolution from apatite materials

 *Peter Slater, University of Birmingham*

1510 – 1530 Coffee and Posters

**Session 3 – Chair tba**

1530 – 1550 Energy Materials Landscape

 *Marianne Rolph, EPSRC*

**Project Updates 3**

1550 – 1610 Tailored bicontinuous soft solids for energy applications

*David French – University of Edinburgh*

1610 – 1625 Low-cost, Stable, Non-toxic, Solution-processed Materials for Supercapacitors

*Tianyue Li, Neil Robertson, University of Edinburgh*

1625 – 1640 Using dilation and self-lubrication to improve concentrated particulate flow applications in energy device manufacture

*Mark Haw, Strathclyde University*

1640 – 1650 Final Discussion and Departure