



4th Metal-Air Workshop – The Road Ahead

Magleås Conference Center, Høsterkøbvej 6, 3460 Birkerød, Danmark, phone: (+45) 45 81 07 15
September 14th-15th, 2015

09:00-10:00 *Registration & breakfast*

10:00-11:45 *Introduction and invited lectures*

10:00-10:15 Welcome by Prof. Tejs Vegge (DTU)

10:15-11:00 Invited lecture - Prof. Kristina Edström (Uppsala)

11:00-11:45 Invited lecture - Prof. Harry Hoster (Lancaster)

11:45-13:20 *Lunch*

13:20-14:00 *Presentations I – Fundamentals of lithium-air (15+5 min.)*

13:20-13:40 Mie Møller Storm (DTU): *“Capillary based Li-air batteries for in situ synchrotron X-ray powder diffraction”*

13:40-14:00 Rune Christensen (DTU): *“Reducing Systematic Errors in Oxide Species with Density Functional Theory Calculations”*

14:00-14:20 Dr. Jonathan Højberg (Haldor Topsøe): *“Fundamental mechanisms in Li-air battery electrochemistry”*

14:20-14:40 Yedilfana Setarge Mekkonen (DTU): *“Cathode-Electrolyte Interface Studies in Li-Air Batteries”*

14:40-15:10 *Coffee break*

15:10-16:30 *Presentations II – Practical aspects of lithium-air (15+5 min.)*

15:10-15:30 Andreas E. Christensen (Lithium Balance): *“Impedance-Based Battery Management for Metal-O₂ Systems”*

15:30-15:50 Dr. Rajnish Dhiman (SDU): *“To be announced”*

15:50-16:10 Dr. Supti Das (DTU): *“Screening of Ionic Liquid Based electrolytes in Li-O₂ batteries”*

16:10-16:30 Kristian B. Knudsen (DTU): *“Revealing the Surface- and Solution-Based Mechanisms in the Li-O₂ Battery by Electrochemical Impedance Spectroscopy”*

16:30-17:00 *Break*

17:00-18:00 *Invited, pre-dinner e-lecture*

17:00-17:45 Invited ‘e-lecture’ - Prof. Bryan McCloskey (Berkeley): *“Li-O₂ cathode electrochemistry: mechanisms, challenges, and the path forward”*

17:45-18:00 First day wrap-up - Prof. Juan Maria Garcia Lastra (DTU)

18:00 – 19:00 *Walk and talk + Reliable Steering Committee Meeting*

18:00 – 19:00 Walk and talk

18:00 – 19:00 ReLiable Steering Committee meeting

19:00 – Dinner

Program – September 15th

08:00-09:00 *Breakfast*

09:00-10:30 *Invited lectures*

09:00-09:45 Invited lecture: Dr. Jens Hummelshøj (Stanford): “*Na-O₂ batteries*”

09:45-10:30 Invited lecture: Dr. Kaushik Jayasayee (SINTEF): “*ZAS!: Zinc Air Secondary innovative nanotech based batteries for efficient energy storage*”

10:30-11:00 *Coffee break*

11:00-12:00 *Presentations III – Beyond Li-air*

11:00–11:20 Leanne Chen (Stanford): “*Kinetic Modeling of Corrosion in Mg-Air Batteries*”

11:20–11:40 Reza Younesi (Uppsala): “*Novel anodes for Zn-air batteries*”

11:40–12:00 Tim Brandt van Driel (DTU): “*Dynamic studies of the ferroelectric polymer poly(vinylidene-fluoride)*”

12:00-13:30 *Lunch*

13:30-14:30 *New project presentations (10+5 min.)*

13:30–13:45 Nicolai R. Matiesen (DTU): “*Mat4BAT: Transport in metal-air batteries*”

13:45–14:00 Dr. Marko Melander (DTU): “*Mat4BAT: New electrode materials*”

14:00–14:15 Dr. Vladimir Tripkovic (DTU): “*ZAS!: Zn-air – the air electrode*”

14:15–14:30 Dr. Steen Lysgaard (DTU): “*ZAS!: Zn-air – the negative electrode*”

14:30-14:45 *Coffee break*

14:45-16:00 *Round table discussions*

14:45–15:15 The Road Ahead – New Perspectives (1 slide only and 5 min. each)

Senior Scientist Poul Norby, Prof. Eivind Skou (SDU), Senior Scientist Johan Hjelm (DTU), Senior Scientist Keld Johansen (Haldor Topsøe), Director of R&D Karl Vestin (Lithium Balance)

15:15–15:45 Open discussion – All participants

15:45–16:00 Round-up (Tejs Vegge)