Materials Chain
UA RUHR

Digital Workshop
MATERIALS FOR ENERGY
Programme

Thursday - February 25, 2021

12:00 p.m. Welcome

12:10 p.m. Session 1 – Materials for chemical energy conversion: Catalysis

12:10 p.m. – 12:35 p.m. Corina Andronescu

"CO_2 electroreduction for chemical synthesis. Mitigation of competing reactions via electrode design."

12:35 p.m. – 1:00 p.m. Kristina Tschulik

t.b.a.

1:00 p.m. – 1:10 p.m. Short Break

1:10 p.m. Session 2 – Materials for physical energy conversion, 2D and hybrid functional materials

1:10 p.m. – 1:35 p.m. Alexander Tartakovskii

"Van der Waals materials: from few-atom-thick 2D layers to nano-photonic structures."

1:35 p.m. – 2:00 p.m. Manfred Bayer

"Exploring the potential of novel materials."

2:00 p.m. – 2:30 p.m. Break

12:30 p.m. Session 3 – Data-driven and combinatorial materials discovery

2:30 p.m. – 2:55 p.m. Jan Rossmeisl

"Electrocatalysis on High entropy alloys."

2:55 p.m. – 3:20 p.m. Alfred Ludwig

"High throughput methods for materials discovery."

3:20 p.m. – 3:30 p.m. Short Break

3:30 p.m. Session 4 – Processing and Plasma Technology

3:30 p.m. – 3:55 p.m. Doris Segets

"Nanoparticle processing for energy materials."

3:55 p.m. – 4:20 p.m. Achim von Keudell

"Plasmas for catalysis."

4:20 p.m. – 4:45 p.m. Peter Awakowicz

"VOC conversion in industrial processes."

4:45 p.m. Closing Remarks

5:00 p.m. End of Day 1

Friday - February 26, 2021

9:00 a.m. Beginning of Day 2

9:05 a.m. Session 5 – Magnetic materials for energy conversion

9:05 a.m. – 9:30 a.m. Claudia Felser

"Materials for energy conversion, can topology help?"

9:30 a.m. – 9:55 a.m. Victorino Franco

"Magnetic materials for energy efficient refrigeration."

9:55 a.m. – 10:20 a.m. Michael Farle

"Magnetic MAX Phases: perspectives and challenges."

10:20 a.m. – 10:30 a.m. Short break

10:30 a.m. Session 6 – Metals and alloys

10:30 a.m. – 10:55 a.m. Jörg Neugebauer

t.b.a.

10:55 a.m. – 11:20 a.m. Philipp Nörtershäuser

"Materials in Gas Turbines"

11:20 a.m. – 11:45 a.m. Jan Frenzel

"Using shape memory alloys for cooling processes."

11:45 a.m.– 12:15 p.m. Break

12:15 p.m. Session 7 – Materials for chemical energy conversion: Batteries

12:15 p.m. – 12:40 p.m. Harry Hoster

"Towards a battery materials supply chain: what's in it for a research lab?"

12:40 p.m. – 1:05 p.m. Christof Schulz

"Materials for energy through gas-phase synthesis. Examples for battery materials."

1:05 p.m. Final Discussion

1:50 p.m. Closing Remarks

2:00 p.m. End of Day 2

2:00 p.m. – 4:00 p.m. Internal Discussion amongst UA Ruhr Materials for Energy Committee