Leverhulme Research Centre for Functional Materials Design
Materials Discovery Symposium, September 2022

Location: Anfield Stadium

Registration: Main Stand reception, Anfield Stadium

Oral Presentations: The Dugout, 2nd Floor, Main Stand

PROGRAMME: DAY ONE – Wednesday 21st September 2022

09.00 – 10.00	**Registration and Coffee**
10.00 – 10.15	**Welcome & Intro to the LRC** Professor Andrew I Cooper *Director, Leverhulme Research Centre for Functional Materials Design*
Session 1:	**Chaired by: TBC**
10.15 - 10.45	**Translating the enormous promise of complex oxides to working devices** Professor Judith Driscoll *University of Cambridge, UK*
10.45 – 11.15	**Data-driven Materials Discovery** Professor Jacqui Cole *University of Cambridge, UK*
11.15 – 11.45	**Coffee break**
11.45 – 12.15	**Coordinating and reconfiguring swarms of objects at extreme dimensions** Professor Sándor Fekete *Braunschweig University of Technology, Germany*
12.15 – 12.45	**Designing a Programmable Material Made of Autonomous Robots** Professor Julien Bourgeois *Universtė Bourgogne Franche-Comtė, FEMTO-ST Institute, France*
12.45 – 14.00	**Lunch and Poster Session**
Session 2:	**Chaired by: TBC**
14.00 – 14.30	**Structure design and band gap engineering from mixed anion building blocks** Dr. Houria Kabbour *Unité de Catalyse et Chimie du Solide, France*
14.30 – 15.00	**Employing Chemical Heuristics in Computational Materials Design of Functional Materials** Professor David Scanlon *University College London, UK*
15.00 – 15.30	**Scheduling Theory and Its Application to Chemical Production** Professor Prudence Wong *University of Liverpool, UK*

15.30 – 16.00	**Coffee Break**
16.00 – 16.30	**Materials that compute: 21 Molecular algorithms using reprogrammable DNA self-assembly** Professor Damien Woods *Maynooth University, Ireland*
16.30 – 17.00	**Self-Optimising Industry 4.0 Chemical Reaction Platforms for Multi-objective and Multistep Process Development** Professor Richard Bourne *University of Leeds, UK*

PROGRAMME: DAY TWO – Thursday 22nd September 2022

Session 3:	**Chaired by: TBC**
09.00 – 09.30	**Coffee Breakfast**
09.30 - 10.00	**Exploring Catalyst-Support Interfaces with Faceted Perovskite Nanoparticles** Professor Kenneth R. Poeppelmeier *Northwestern University, USA*
10.00 – 10.30	**Defects and Disorder in Electronic Oxides** Professor Elizabeth C. Dickey *Carnegie Mellon University, USA*
10.30 – 11.00	**Getting into shape – Precision polymer nanoparticles** Professor Rachel O'Reilly *University of Birmingham, UK*
11.00 – 11.30	**Coffee Break**
11.30 – 12.00	**Designing polymers for energy in the digital age** Dr. Brett Helms *Lawrence Berkeley National Laboratory, USA*
12.00 – 12.30	**Designing High Performing Semiconducting Polymers** Professor Ian McCulloch *University of Oxford, UK*
12.30 – 14.00	**Lunch & poster session**
Session 4:	**Chaired by: TBC**
14.00 – 14:30	**Accelerating the discovery and evaluation of sorbents for sustainable gas separations** Professor Camille Petit *Imperial College London, United Kingdom*
14.30 – 15.00	**Flexible Automation: A New Approach to Meet Evolving Challenges** Dr. Jason Hein *University of British Columbia, USA*
15.00 – 15.30	**New Ways in Automating Research and Development Laboratories** Professor Kerstin Thurow *University of Rostock, Germany*

15.30 – 16.00	**Coffee Break**
16.00 – 16.30	**It's a machine's world: How automation and machine learning reshapes polymer chemistry** Professor Tanja Junkers *Monash University, Australia*
16.30 – 17.00	**Billions upon billions of molecules** Professor Alan Aspru Guzik *University of Toronto, Canada*
17.00 – 18:45	**Anfield Stadium Tours (Pre-booked) & Networking Drinks**
19:00 – 22:00	**Conference dinner for seating at 19:00 in The Chemistry Suite, 3rd Floor, Main Stand, Anfield Stadium**

PROGRAMME: DAY THREE – Friday 23rd September 2018

Session 5:	**Chaired by: TBC**
09.00 – 09.30	**Coffee Breakfast**
09.30 - 10.00	**Superconductivity in infinite-layer nickelates** Professor Harold Y. Hwang *Stanford University, USA*
10.00 – 10.30	**Meta-learning adaptive deep kernel Gaussian processes for molecular property prediction** Professor José Miguel Hernández-Lobato *University of Cambridge, UK*
10.30 – 11.00	**Towards molecular design in allosteric processes through unsupervised, multiscale learning on atomistic graphs** Professor Sophia Yaliraki *Imperial College London, UK*
11.00 – 11.30	**Coffee Break**
11.30 – 12. 00	**Complementary Artificial Intelligence for Sustained Innovation** Professor James Evans *University of Chicago, USA*
12.00 – 12.30	**Advancement of Zintl Phases from Curiosities to Thermoelectric Materials** Professor Susan Kauzlarich *University of California, Davis Campus, USA*
12.30 – 14.00	**Lunch & poster session**
Session 6:	**Chaired by: TBC**
14.00 – 14:30	**Voltage & Current Controlled Nanomagnetism for Memory and Logic** Professor Lucas Caretta *Brown University, USA*
14.30 – 15.00	**Topology and Chirality** Professor Claudia Felser *Max Planck Institute Chemical Physics of Solids, Germany*

15.00 – 15.30	**Excitement in Materials Research: from material design to social implementation** Professor Hideo Hosono *Tokyo Institute of Technology, Japan*
15.30 – 16.00	**Poster Prize Presentation & Close**