

# XMat Industry Day – Final Report

## *Programme*

Institute of Materials  
297 Euston Road, London, NW1 3AD

**16 November 2017**  
10:00 am – 16:00 pm

10:00 – 10:30	<b>Arrival and Refreshments</b>
10:30 – 10:40	<b>An introduction to the XMat programme</b> <i>Jon Binner</i>
10:40 – 11:10	<i>Ultra-high temperature ceramic composite materials</i> , V Rubio Dias & J Binner, University of Birmingham, UK
11:10 – 11:30	<i>Current assisted processing, including flash sintering</i> , S Grasso, T Saunders & M Reece, Queen Mary University London, UK
11:30 – 11:50	<i>High Entropy Transition Metal Carbides</i> , EG Castle & M Reece, Queen Mary University London, UK
11:50 – 12:20	<i>Creep of HfB<sub>2</sub>-based UHTCs up to 2000°C</i> , E Zapata-Solvas, C Liu & WE Lee, Imperial College London, UK
12:20 – 12:50	<i>Theory and simulation of ultra-high-temperature ceramics</i> , T Mellan, T Davey, A Duff, S Azadi & MW Finnis, Imperial College London, UK
12:50 – 14:00	<b>Lunch</b>
14:00 – 14:20	<i>Electronic structures and thermal properties of 312-MAX phases</i> , S Azadi & MW Finnis, Imperial College London, UK
14:20 – 14:40	<i>Measuring and Modelling the Thermo-mechanical Behaviour of Ceramics in Extreme Environments</i> , L Larrimbe, S. Humphry-Baker, M.Pettina, J. Wang, D.D. Jayaseelan, WE Lee & L Vandeperre, Imperial College London, UK
14:40 – 15:00	<i>Gel casting UHTC ceramics</i> , J Zou & J Binner, University of Birmingham, UK
15:00 – 15:20	<i>Optimisation of SiC<sub>f</sub>/SiC<sub>p</sub>/SiC preforms for microwave enhanced chemical vapour infiltration</i> , M Porter, A D'Angiό & J Binner, University of Birmingham, UK
15:20 – 15:30	<b>Tea</b>
15:30 – 16:00	Open discussion: Where we are going next
16:00	<b>Departure and optional visit to The Wellcome Collection</b>
19.00	<b>Dinner at Number Twelve, Bloomsbury</b>