

VIRTUAL

2 Day Research Meeting on Advanced Ceramics



FREE ONLINE EVENT
18 – 19 AUGUST 2020
14.00 – 17.00 BST

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Virtual-2-DRAC
18th & 19th August 2020, 2-5 pm (BST)

We welcome you to attend the Virtual 2 Day Research Meeting on Advanced Ceramics. This is a free event open to all and hosted by IoM³ on Zoom. Please register for the event at (<https://www.iom3.org/ceramics-society/event/virtual-2-day-research-meeting-advanced-ceramics>) where you will be given the link to participate in the Zoom-meeting with the presentations. Please mute your microphone upon joining and use the raise your hand utility after a talk to indicate questions. The full list of speakers and their talk titles are given below:

18 August 2020

2.00	Welcome – Emma Claxton, Chair Ceramic Science Committee
2.10	Impacts of dopants on diffusion in crystalline and amorphous zirconia, Megan Owen ¹ , Michael W.D. Rushton ¹ , Lee J. Evitts ¹ , William E. Lee ^{1,2} , Antoine Claisse ³ , Mattias Puide ³ , Simon C. Middleburgh ¹ . ¹ Nuclear Futures Institute, Bangor University, Bangor LL57 1UT, ² Department of Materials, Imperial College London, London SW7 2AZ, ³ Westinghouse Electric Sweden AB, Västerås, Sweden
2.30	Novel dielectric relaxation in BiFeO₃-BaTiO₃ ceramics. Ziqi Yang & David Hall Department of Materials, University of Manchester, UK
2.50	Finite element modelling of micro-contact impedance spectroscopy of electroceramics Kai Ma & Derek Sinclair Department of Materials, University of Sheffield, UK
3.10	Modelling and simulations of UHTC degradation under hypersonic flow Carmine Zuccarini, Samireh Vahid, Jian Wang and Doni Daniel Department of Aerospace and Aircraft Engineering, Kingston University London, UK
3.30	break
3.40	Microwave-induced-metal-plasma synthesis of zintl phases Mg₂X (X=Si, Ge, and Sn) Zhen Fan & Duncan Gregory School of Chemistry, University of Glasgow
4.00	Silicon oxycarbide-based bioactive glasses for bone tissue engineering Marcela Arango-Ospina ¹ , Isabel Gonzalo Juan ² , Emanuel Ionescu ² , Aldo R. Boccaccini ¹ ¹ Institute of Biomaterials, University of Erlangen-Nuremberg, Germany ² Research Group Dispersive Solids, TU Darmstadt, Germany
4.20	Microstructure of alumina ceramics sintered under ultra-high pressure R. Crookes ¹ , Pei Xiang ¹ , Houzheng Wu ¹ & Wei Ji ² ¹ Department of Materials, Loughborough University ² Wuhan Science and Technology University
4.40	Invited Flash sintering and other novel ceramics processing technologies: the scientific questions and technological opportunities. Jian Luo, Materials Science & Engineering, University of California, San Diego, USA
5.05	End of day 1

19 August 2020

2.00	Additive Manufacturing of Ceramics George Chi-Tangyie & Bala Vaidhyanathan Department of Materials, Loughborough University, UK
2.20	Embedded 3D printing of multimaterial composites Shitong Zhou & E. Saiz Centre for Advanced Ceramics & Department of Materials, Imperial College London, UK
2.40	Atom probe tomography of YSZ J. Singh & R. Todd Department of Materials, University of Oxford
3.00	Engineering microporosity within oxide-oxide CMCs using aluminium phosphates Erin Valenzuela & Jon Binner School of Metallurgy and Materials, University of Birmingham, UK
3.10	break
3.20	Oxidation behaviour and subsequent mechanical properties of SiCf/BN/SiBCN composite after exposure in steam at high temperature Zhongmin Li, Ping Xiao and Philip J Withers. Department of Materials, University of Manchester, UK
3.40	Micromechanical testing of the BN interphase in SiCf/SiC ceramic matrix composites for aero-propulsion Robin De Meyere ¹ , Louise Gale ² , Stephen Harris ² , Ian Edmonds ² , T. James Marrow ¹ , David E. J. Armstrong ¹ ¹ Department of Materials, University of Oxford, UK, ² Rolls-Royce plc
4.00	Invited In situ full-field characterisation of the high-temperature deformation and fracture of ceramic-matrix composites using X-ray computed tomography Dong Liu, School of Physics, University of Bristol, UK
4.25	Invited Irradiation damage mechanisms in high-entropy carbide ceramics Bai Cui ¹ , Fei Wang ¹ , Xueliang Yan ¹ , Tianyao Wang ² , Yaqiao Wu ³ , Lin Shao ² , Michael Nastasi ² , Yongfeng Lu ¹ ¹ University of Nebraska–Lincoln, Nebraska, USA ² Texas A&M University, Texas, USA ³ Boise State University, Idaho, USA
4.50	Closing remarks – Emma Claxton, Chair Ceramic Science Committee
5.00	End of day 2

This virtual-2-DRAC event is organised by the Ceramic Science Committee of the British Ceramic Society, a division of the Institute of Materials Minerals and Mining (IoM3).

The Ceramic Science Committee wishes to thank Jon Binner, Emma Claxton, Doni Daniel, Luc Vandeperre, James Wade-Zhu, Ji Zou and the technical support team from IoM3 for helping to organise this virtual edition of 1DRAC, and all contributors for helping to create a day with an interesting programme.