

CAMS2021: Program				Day 1		Wednesday June 01	
		7:30	8:30	Registration Open in Foyer			
		8:30	9:00	Opening of CAMS2021 in Auditorium			
		9:00	10:00	Plenary (Auditorium) Professor Amanda Barnard			
		10:00	10:30	Morning Tea (30 mins): Networking in ATC Foyer			
			Room 1	Room 2	Room 3	Room 4	
			A1: Additive, advanced & future manufacturing, processes and products	B1: Advances in materials characterisation	H1: Materials simulation & modelling	G1: Materials for energy generation, conversion & storage	
1	10:30	10:45	S. Primig: The role of interfaces during metal additive manufacturing	S. Ringer: Novel Phase Transformations and Microstructural Evolution in Additively Manufactured Alloys	Y. Gan, S. Suo, Z. Wang: Pore-scale Modelling of Multiphase Flow in Heterogeneous Porous Materials	B. Jia: Graphene for advanced manufacturing and functional devices	
2	10:45	11:00					
3	11:00	11:15	D. Bayoumy, A. Huang, Y. Zhu, X. Wu: Development of High Strength, High Ductility Al-Mn-Sc Alloy Produced by Selective Laser Melting	M.S. Hazarabedian, M. Iannuzzi: Quantification of Nanosized and Cr- and Mo-rich Precipitates at Nickel Alloy's Grain Boundaries	D. Bhattacharyya, M. Saleh, A. Xu: Effect of hole shape and pattern orientation on mechanical behaviour of two-dimensional micro-lattice through in situ micro-tensile testing	M.F.P Alihassan, P. Selvarajan, CI Sathish, M. Li, D Chu, X Yu, M. Breesec, J. Yi, A. Vinu: Activated Graphene Nanoplatelets Decorated with Carbon Nitrides for Efficient Electrocatalytic Oxygen Reduction Reaction	
4	11:15	11:30	J. Otte, J. Zou, M. Dargusch: Selective Laser Melting of High Aspect Ratio TiB Nanowire Reinforced Titanium Matrix Composites	R. Marceau, A. Taylor, Y. Qiu, N. Birbilis, A. Ceguerra: Lattice Site-Occupancy Studies of Compositionally Complex Alloys by Atom Probe Tomography	Y. Tsumura, G. Proust, A. Paradowska: A numerical method for predicting the laser melting and ablation thresholds of metals and alloys	R. Bahadur, G. Singh, A. Vinu: Fabrication of ordered mesoporous BCN-C60 composite with high surface area for energy storage applications	
5	11:30	11:45	M. Moyle, N. Haghdadi, V. Luzin, X. Liao, S. Ringer, S. Primig: Laser Powder Bed Fusion of 17-4 PH Stainless Steel: From Nano structure to Macro texture	A. Breen, F. Theska, B. Lim, A. Day, S. Primig, S. Ringer: Microstructural Characterisation of Gamma Prime in an Electron Powder Bed Fusion Produced Inconel-738 Build Using Atom Probe Tomography	K.S Ram, D. Ompong, H. Mehdizadeh-Rad, D.D.Y Setsoafia, J. Singh: Simulating Power Conversion Efficiency of Nanowires And Metal Grid Incorporated Non-fullerene Based Bulk Heterojunction Organic Solar Cells With Graded Index Antireflection Coating	X. Li, H. Mai, D. Chen, R. Caruso: One-pot Synthesis of Defect Engineered Graphitic Carbon Nitride for Highly Efficient Visible Light Photocatalysis	
6	11:45	12:00	Z. Qiu, B. Wu, H. Zhu, Z. Wang, D. Wexler, S. Van Duin, Z. Pan, H. Li: Effects of heat treatment on microstructure and mechanical properties of wire arc additively manufactured Hastelloy C276 alloy	C.P. Nguyen, P. Schoenherr, L. Juli, J. Seidel: In-depth atomic force microscopy investigation of nanoscale mechanical properties of PÁua nacre	H. Peng, Y. Liu, W. Ye, S. Wu, C.V.S. Lim, Y. Zhu, A. Huang: A novel model for describing the Statistic Distribution of Grain Boundary Phase Length in Titanium Alloys	C. Cementon, T. R. Ramireddy, A. Glushenkov: The power prospects of energy storage post-lithium: Li vs. K intercalation kinetics in graphitic electrodes	

7	12:00	12:15	A. Hatem, C. Schulz, A. Roccisano, T. Schlaefer, C. Hall: Tensile properties of Additive Manufactured AISI 316L thick walls produced by Laser Metal Deposition	J.Y.C. Ting, A. Barnard: Characterising Metallic Nanoparticle Surfaces using Unsupervised Machine Learning	B. Kahl, S. Yang, C. Berndt, A. Ang: Porosity evaluation of plasma sprayed ceramic coatings using multi-energy X-ray computed microtomography and data constrained modelling	C. Garibello: A catalyst for reduction or a chemical reductant? The Redox Properties of Iron Sulfides and their Importance to Catalyst Design
8	12:15	12:30	W. Davids, H. Chen, K. Nomoto, H. Wang, S. Babu, S. Primig, X. Liao, A. Breen, S. Ringer: Phase transformation pathways in Ti-6Al-4V manufactured via electron beam powder bed fusion	A. Gillen, H. Mucha, E. Post, R. Sehling, H. Deckmann, J. Blumm: High Temperature Dynamic Mechanical Analysis of Nickel-based Superalloys to 1200°C	A. Mairizal, A.Y. Sembada, K.M. Tse, M.A. Rhamdhani: Thermodynamic Analysis of Recycling of Waste Printed Circuit Board through Hydrogen Reduction in Black Copper Route	L. Oppong-Antwi, J. Hart: CuXS semiconductor thin film for visible light activity
	12:30	13:45	LUNCH BREAK (1 h 15 mins) Networking Opportunity			

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			Room 1	Room 2	Room 3	Room 4
			A2: Additive, advanced & future manufacturing, processes and products	B2: Advances in materials characterisation	H2: Materials simulation & modelling	G2: Materials for energy generation, conversion & storage
9	13:45	14:00	A. Kingsbury, M. Benoit, M. Easton, A. Molotnikov, D. Qiu: Strategies for Enhancing Wire + Arc Additive Manufacturing Material Properties	V. Luzin: Neutron stress analysis for advanced materials and manufacturing	Y.P. Zhang, M.C. Elford, A.J.E. Stephan: Accelerating Multi-scale Metal Forming Simulation Using Neural Networks	J. Hart: Computational design of photoactive materials for solar fuel production
10	14:00	14:15				
11	14:15	14:30	E. Farabi, S. Babaniaris, M. R. Barnett, D.M. Fabijanic: Solid State Additive Manufacturing of Ti6Al4V Alloy Using Additive Friction Stir Deposition Technology	M. Brand, E. Obbard, B. Gludovatz, C. Windsor, C. Wilson, J. Astbury, P. Burr: Modelling the Spatial Distribution of Primary Radiation Damage Generation in Heterogeneous Materials	D. Chen, R. Das, S. Lu, Q. Ma, D. Qiu: An improved thermal model for temperature field simulation during laser metal deposition	S. Shahrokhi, T. Wu: Coexistence of Multiple Structures and Glassy Phase Transitions in Mixed-Halide Hybrid Perovskites
12	14:30	14:45	K. Zhang, W.H. Kan, Y. Liu, X. Gao, Y. Zhu, S. Lim, H. Peng, A. Huang: Microstructure control by heat treatment for better ductility and toughness with strength combination of Ti-6Al-4V produced by laser powder bed fusion	A. Hadigheh, Z. Wang: Micro-CT based analysis of 3D-printed continuous and short carbon fibre reinforced polymer (CFRP) composites	C. Brandl, K. Deck: Predicted kink energies link to the ductile-brittle transition in body-centred cubic metals and high-entropy alloys	M. Kamel, M. Oelgemöller, M. Jacob: Efficient encapsulation layers for organic photovoltaics based on sustainable plant extracts
13	14:45	15:00	N. Haghdadi, Z. Chen, H. Chen, C. Ledermueller, X. Liao, S. Ringer, S. Primig: Advanced duplex stainless steels with	R. Niu, Y.S Chen, H. Li, P.Y Liu, J. Cairney: Direct Observation of Hydrogen Atoms at Cementite-Ferrite Interface	Y. Zhang, G. Proust, Y. Gan: Numerical Simulations of Surface Mechanical Attrition Treatment with Rough Sonotrode	P. Kribbe: TRA

14	15:00	15:15	Advanced duplex stainless steels with ultrafine austenite manufactured by laser powder bed fusion and heat treatment	A. Juri, L. Yin, A. Basak, L. Yin: Quasi-Plastic Deformation Behavior of Porous Zirconia	P. O'Toole, M. Benoit, M. Easton, E. Theil, H. Drexler, A. Horr: Modelling of solidification cracks in Wire Arc Additive Manufacturing (WAAM) processed aluminium.	R. RIMMEL: TBA
	15:15	15:45	Afternoon Tea (30 mins)			

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			A3: Additive, advanced & future manufacturing, processes and products	B3: Advances in materials characterisation	H3: Materials simulation & modelling	G3: Materials for energy generation, conversion & storage		
15	15:45	16:00	M. Zhang, Y. Liu: Laser Additive Manufacturing of Pure Copper	M. Preuss: TBA	A. de Vaucorbeil, V.P. Nguyen, C. Hutchinson, M. Barnett: A new material point method for the simulation of solids under large deformation: application to wear and impacts.	J. Jasieniak: TBA		
16	16:00	16:15						
17	16:15	16:30	D. Qiu, D. Chen, R. Das, S. Lu, M. Qian: In-situ elimination of micro-segregation in a Ti-3.5wt%Fe alloy fabricated by laser metal deposition	E. Chen, J. Cairney: Atom probe observation of hydrogen in steel microstructures	G. Hunter, L. Djumas, L. Brassart, A. Molotnikov: Modelling and Design of Additive Manufactured 'Brick-and-Mortar' Structures	D.P. Simunec, A. Sola, A. Trinchi, J. Jacob, L. Kyrtziz: On the production of soft and 3D printable piezoelectric sensors		
18	16:30	16:45	M. J. Paul, Q. Liu, J.P. Best, X. Li, J.J. Kruzic, U. Ramamurty, B. Gludovatz: Resistance curve behavior of AISi10Mg fabricated by laser powder bed fusion	H. Wang: A new oxygen-stabilized face-centred cubic phase in additively manufactured Ti-6Al-4V	P.Y Liu, P. Burr, R. Niu, Y.S Chen, J. Cairney: Hydrogen trapping in steels: The roles of hypo-stoichiometric cementite and its strain field at ferrite interface	P. Sherrell, N. Shepelin, R. Su, L. Huang, V. Lussini, G. Dicinoski, J. Bullock, J. Shapter, A. Ellis: Vertically Integrated Energy Harvester and Storage Devices for Next Generation Wearable & Implantable Electronics		
19	16:45	17:00	J. Chen, D. Fabijanic, T. Zhang, L. Jiang, E. Lui, M. Brandt, W. Xu: Microstructural quantification and control in Ti-6Al-4V made by laser powder-bed fusion additive manufacturing	M. Garcia: The role of Niobium in control of Heat-Affected Zone performance of high strength linepipe steels	M. Yang, Y. Wei, J. Li, P. Reineck, H. Ebendorff-Heidepriem, R. McLaughlin: Fabrication of a novel glass-based imaging phantom to model the optical properties of tissue in fluorescence-guided surgery			

20	17:00	17:15	I. Katti, D. Zhang, D. Qiu, M. Weiss, J. Forsmark, M. Barnett, M. Easton: Heat Treatment of laser powder bed fusion Al10SiMg alloy	D. Bhattacharyya, A. Xu, M. Ionescu, T. Wei, M. Saleh: In situ micro-tensile Studies on the effects of ion irradiation on the mechanical properties of small-grained alloys	C. Brandl, C. Baruffi: Vacancy segregation to grain boundaries in diamond	
21	17:15	17:30	X. Tian, Y. Zhu, K. Zhang, X. Wu, A. Huang: Hybrid additive manufacturing of Ti-6Al-4V for better mechanical properties	S. Huang, L. Yang, I. McCarroll, Y.S. Chen, P. Burr, J. Cairney: Direct observation of hydrogen trapping at second phase particles in Zircaloy-4	P. O'Toole, Z. Wu, M. Brandt, Q. Ma, N. Matthews: Challenges in fluid dynamics modelling of high speed laser metal cladding.	
22	17:30	17:45	M. Haines, N. Haghdadi, S. Primig: Development of Testing Geometries for Variations in Residual Stress on Phase Formations in Ti-6Al-4V	B. Gludovatz, L. Kramer, B. Li, K. Nomoto, A.V. Ceguerra, S. Ringer, C. Gammer,A. Hohenwarter, J. Eckert, J. Kruzic: Structural Modifications and their Effect on the Mechanical Properties of a Zr-based Metallic Glass		
	18:00	20:00	Evening Reception, Poster Session, Awards			