

UKCSCST2020 Conference Programme

The conference will be hosted using MS TEAM platform.

There are TWO meeting rooms:

1) One meeting room for **Opening and Plenary talks** and Parallel -01 session (left column) including: **Sustainability Session 1, Sustainability Session 2, Sustainability Session 3, Materials & Catalysis Session 2, Manufacturing session 1**
[Please click here to access the meeting room and the TEAM link](#)

2) Another meeting room for Parallel -02 session (right column) including: **Energy storage session, Low Carbon Technologies, Materials & Catalysis Session 1, Materials & Catalysis Session 3, Manufacturing session 2**
[Please click here to access the meeting room and the TEAM link](#)

[You can click each session title in the Programme to access the TEAM link](#)

Poster Session

For Poster Session, each poster has a specific link. Please move to the list of posters. You can click each title to access the link.

For example, P01-P08 happen at 16:35 – 17:05 (11 Sep). During this period, you can click the titles of P01-P08. The presenter will be there to discuss and answer any questions.

Friday 11th September 2020 (Day One)

09:15 – 09:30 [Opening \(Dr Chunfei Wu and Dr Xiaolei Fan\)](#)

09:30 – 10:15 [Plenary 1](#)

(Chair – Dr Xiaolei Fan)

10:15 – 11:00 [Plenary 2](#)

(Chair – Professor Xin Tu)

11:00 – 11:20 Morning break

[Sustainability Session 1](#)

(Chair – Dr Xiaolei Zhang)

11:20 – 11:50 Keynote 1

11:50 – 12:05 talk 01

12:05 – 12:20 talk 02

12:20 – 12:35 talk 03

12:35 – 12:50 talk 04

[Energy storage session](#)

(Chair – Dr Hui Zhou)

11:20 – 11:50 Keynote 2

11:50 – 12:05 talk 05

12:05 – 12:20 talk 06

12:20 – 12:35 talk 07

12:35 – 12:50 talk 08

12:50 – 14:00 Lunch break

[Sustainability Session 2](#)

(Chair – Professor Ben Xu)

14:00 – 14:30 Keynote 3

14:30 – 14:45 talk 09

14:45 – 15:00 talk 10

15:00 – 15:15 talk 11

15:15 – 15:30 talk 12

[Low Carbon Technologies](#)

(Chair – Dr Dan Sun)

14:00 – 14:30 Keynote 4

14:30 – 14:45 talk 13

14:45 – 15:00 talk 14

15:00 – 15:15 talk 15

15:15 – 15:30 talk 16

15:30 – 15:50 Afternoon break

15:50 – 16:15 [Invited Keynote talk](#)

16:15 – 16:35 [Bryony Parker -SCI](#)

16:35 – 17:05 **Poster session 1 (see list of posters for links)**

17:05 – 17:35 **Poster session 2 (see list of posters for links)**

Saturday 12th September 2020 (Day two)

09:10 – 09:30 [CSCST emerging researcher lecture award ceremony](#)

09:30 – 10:15 Plenary 3 (Chair – Dr Jiawei Wang)	
10:15 – 11:00 Plenary 4 (Chair – Dr Chunfei Wu)	
11:00 – 11:20 Morning break	
Sustainability Session 3 (Chair – Dr Xiaolei Fan) 11:20 – 11:50 Keynote 5	Materials & Catalysis Session 1 (Chair – Dr Weiping Wu) 11:20 – 11:50 Keynote 6
11:50 – 12:05 talk 17	11:50 – 12:05 talk 21
12:05 – 12:20 talk 18	12:05 – 12:20 talk 22
12:20 – 12:35 talk 19	12:20 – 12:35 talk 23
12:35 – 12:50 talk 20	12:35 – 12:50 talk 24
12:50 – 13:20 Lunch & Poster session 3 (see list of posters for links)	
13:20 – 13:50 Lunch & Poster session 4 (see list of posters for links)	
Materials & Catalysis Session 2 Early career session (Chair – Dr Bo Xiao) 13:50 – 14:20 Keynote 7	Materials & Catalysis Session 3 Early career session (Chair – Dr Meilan Huang) 13:50 – 14:20 Keynote 8
14:20 – 14:35 talk 25	14:20 – 14:35 talk 27
14:35 – 14:50 talk 26	14:35 – 14:50 talk 28
14:50 – 15:05 Afternoon break	
Manufacturing session 1 (Chair – Dr Shaojun Xu) 15:05 – 15:35 Keynote 9	Manufacturing session 2 (Chair – Dr Yeshui Zhang) 15:05 – 15:35 Keynote 10
15:35 – 15:50 talk 29	15:35 – 15:50 talk 33
15:50 – 16:05 talk 30	15:50 – 16:05 talk 34
16:05 – 16:20 talk 31	16:05 – 16:20 talk 35
16:20 – 16:35 talk 32	
16:35 – 16:45 Short break	
16:45 – 17:05 James Kong – ALP Technologies	
17:05 – 17:20 Concluding remarks and Award Ceremony	

18:00 [UKCSCST Annual General Meeting \(AGM\)](#)

List of Oral Presentations

Plenary 1	9:30-10:15 Am, 12 September 2020		
Professor Sai Gu	Transformation For A Century Old Chemical Engineering	University of Warwick	UK
Plenary 2	10:15-11:00 Am, 11 September 2020		
Jun Huang	Acid Cooperation And Nanoporous Optimization On Zeolites For Catalytic Conversion In Bio-Refining	The University of Sydney	Australia
Plenary 3	9:30 – 10:15, 12 September 2020		
Professor Beibei Yan/ Professor Guanyi Chen	Biomass/Wastes Gasification: Updated Research	Tianjin University	China
Plenary 4	10:15-11 Am, 12 September 2020		
Boxiong Shen	Technologies Development For Air Pollution Control	Hebei University of Technology	China
Invited Keynote	15:50-16:15, 11 September 2020		
Wenjin Ding	Material Research on Molten Salts for Grid-Scale Energy Storage	German Aerospace Center	Germany

[Sustainability Session 1 \(11:20-12:50, 11 Sep 2020\)](#)

Keynote 1			
Yijiao Jiang	Waste-To-Energy Conversion Using A 2-Stage Sorption-Enhanced Thermochemical Technology	Macquarie University	Australia
Talk 1			
Bo Zhao	Preparation of aromatics from lignin by biochar catalytic pyrolysis	Southeast University	China
Talk 2			
A. Bieniek	A Discrete Element Method Investigation Of Biomass Fast Pyrolysis In A Free Fall Reactor	AGH University of Science and Technology	Poland
Talk 3			
M. Mukamwi	Catalytic Steam Reforming Of Syngas Hydrocarbons To Maximise Hydrogen Production - A Thermodynamic Study	University of Strathclyde	UK
Talk 4			
Ifeoluwa Zainab Akande	A Pyrolysis Study Of Biomass By Thermogravimetric Analysis And Auger Reactor	Aston University	Ifeoluwa Zainab Akande

Sustainability Session 2 (14:00-15:30, 11 Sep 2020)

Keynote 3			
Shogo Kumagai	Pyrolysis-Gas Chromatography For Feedstock Recycling Of Waste Plastic	Tohoku University	Japan
Talk 9			
Su He	Waste Plastics Recycling For Producing High-Value Carbon Nanotubes: Investigation Of The Influence Of Manganese Content In Fe-Based Catalysts	Queen's University Belfast University	UK
Talk 10			
Qingyu Liu	Performances Of Deposited Carbon Nanotubes Regulation During Pyrolysis And In-Line Catalytic Decomposition Of Polypropylene Over Fe- And Ni-Based Catalysts	Southeast University	China
Talk 11			
M. Sieradzka	Energy Potential Of Refuse-Derived Fuel (RDF) From Municipal Solid Waste Via Pyrolysis Process	AGH University of Science and Technology	Poland
Talk 12			
X. Ou	Microwave-Based Methanol To Hydrocarbon Process Over ZSM-5/Sic Foam Catalyst	The University of Manchester	UK

Sustainability Session 3 (11:20-12:50, 12 Sep 2020)

Keynote 5			
Jiawei Wang	Slow Pyrolysis Of Reclaimed Plastic Waste From Active Landfill Sites: The Mining Of An Unsanitary Arid Landfill	Aston University	UK
Talk 17			
Yihan Wang	Low Chlorine Oil Production Through Fast Pyrolysis Of Mixed Plastics Combined With Hydrothermal Dechlorination Pretreatment	Southeast University	China
Talk 18			
Yiyun Liu	Electron Paramagnetic Resonance (EPR) Study Of Cu-CHA Catalysts For Selective Catalytic Reduction (SCR) Reaction	University College London	UK
Talk 19			
Rui Wang	The Application Of Chemical Looping Technology For The Separation Of Ethylene Glycol And 1,2-Butanediol Azeotropic Mixture	Tianjin University	China
Talk 20			
Kai Wu	Enhanced Levoglucosan Yield From Dilute Alkali Pretreatment Of Different Biomass Coupled With Fast Pyrolysis	Southeast University	China

Energy Storage Session (11:20-12:50, 11 Sep 2020)

Keynote 2			
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Weiping Wu	Multifunctional Carbon Materials For Energy Applications	City, University of London	UK
Talk 5			
J. J. Bailey	Use Of X-Ray Micro-Computed Tomography To Investigate The Impact Of Drying Temperature On Inhomogeneity In Lithium-Ion Battery Electrodes	University College London	UK
Talk 6			
Ansu Sun	A Novel Bio-Inspired Optic Technology With Switchable Focal Length By Morphing Gel Lens	Northumbria University	UK
Talk 7			
Abdullah Mustapha	Microencapsulation Of Phase Change Materials For Cryogenic Energy Storage: Exploring The Reaction Mechanisms	University of Birmingham	UK
Talk 8			
Y. Wen	Electrode Modifications For The All-Vanadium Redox Flow Battery: A Kinetics And Degradation Study	University College London	UK

Low Carbon Technologies Session (14:00-15:30, 11 Sep 2020)

Keynote 4			
Hui Zhou	Hydrogen Production From Biomass With In-Situ Carbon Capture	Ames Laboratory	USA
Talk 13			
Shuzhuang Sun	The Morphologies Effect Of Ceo2 Over Ru-Ceo2/Mgo Dual Functional Materials On In-Situ CO2 Capture And Methanation	Queen's University Belfast University	UK
Talk 14			
Jerry Pui Ho Li	Development Of An Optimised Catalyst For The Conversion Of CO2 To Methanol	Queen's University Belfast University	UK
Talk 15			
V. Zsinka	Adsorption Based CO2 Capture With Diverse Featured Zeolites	University of Pannonia	Hungary
Talk 16			
Yuanting Qiao	Nitrogen-Doped Hypercrosslinked Polymers Used For CO₂ Capture	Queen's University Belfast University	UK

Materials & Catalysis Session 1 (11:20-12:50, 12 Sep 2020)

Keynote 6			
Yilai Jiao	Structure Regulation Of Structured Zeolite Catalyst	Institute of Metal Research, Chinese Academy of Sciences	China

Talk 21			
S. Sridhar	Liquid Marbles In Liquid	Northumbria University	UK
Talk 22			
Zong-Yi Yu	Rose Bengal As Photocatalyst: Visible Light-Mediated Friedel–Crafts Alkylation Of Indoles With Nitroalkenes In Water	Dalian University of Technology	China
Talk 23			
Laishun Shi	Synthesis And Characterization Of Mono-Quaternary Ammonium Salt Type Sodium Hydroxypropyl Phosphate Asphalt Emulsifier	Shandong University	China
Talk 24			
Jingnan Zhao	Visible Light Mediated Switchable Selectivity In C-O, C-C And C-S Bond Formation Induced By Disulfide	Dalian University of Technology	China

[Materials & Catalysis Session 2 \(13:50-14:50, 12 Sep 2020\)](#)

Keynote 7			
Yeshui Zhang	Fine Structural Change Of Fluid Catalytic Cracking Catalysts Study Incorporate With Coke Characterization Formed In Heavy Oil Volatilization/Decomposition	University College London	UK
Talk 25			
Chunchun Li	Directing Molecular Adsorption On Nanoparticles Surfaces For Engineering Advanced Functional Materials	Queen's University Belfast University	UK
Talk 26			
Tianchao Xie	Photoresponsive Amine-Functionalized Polymers Delivering Bioactive Nitric Oxide	Queen's University Belfast University	UK

[Materials & Catalysis Session 3 \(13:50-14:50, 12 Sep 2020\)](#)

Keynote 8			
Shaojun Xu	Non-Thermal Plasma Catalysis For Sustainable C1 Chemistry	Cardiff University	UK
Talk 27			
G. He	Transition Metal Materials For High-Performance Electrocatalysts	University of Lincoln	UK
Talk 28			
Jiangnan Li	Capture Of Nitrogen Dioxide And Conversion To Nitric Acid In A Porous Metal Organic Framework	University of Manchester	UK

[Manufacturing Session 1 \(15:05-16:35, 12 Sep 2020\)](#)

Keynote 9			
Xuebin Ke	Honeycomb Channels Made From Metal-Organic-Framework Particles For Industrial Separation And Catalysis	University of Hull	UK

Talk 29			
Lina Yang	Scalable Production Of Nanomaterials In Continuous Flow Reactors	University of Leeds	UK
Talk 30			
Yaolin Wang	Novel Insight Into The Plasma-Enhanced Catalytic Synthesis Of Ammonia Over Transition Metallic Catalysts	University of Liverpool	UK
Talk 31			
Yingjie Ma	Novel Feasible Path Optimisation Algorithms Using Steady-State And Pseudo-Transient Simulations For Optimal Process Design And Intensification	University of Manchester	UK
Talk 32			
E. Omotosho	Coupling Dynamics Of Magnetic Shape Memory Alloys	Northumbria University	UK

Manufacturing Session 2 (15:05-16:20, 12 Sep 2020)

Keynote 10			
Xin Gao	Retrofit Application Of Microwave Energy On Process Intensification Of Green Chemical Separation	Tianjin University	China
Talk 33			
Huadong Peng	Metabolic Engineering Of Yeast For Enhanced Microbial Industrial Oil Production And The Mechanism Of Heavily Engineered Cells Suffered From Reduced Cell Viability	Imperial College London	UK
Talk 34			
Honghao Zhou	Sheathing Fluid In The Bending Tube For Energy-Saving Liquid Transportation	Northumbria University	UK
Talk 35			
Xin Xiao	Investigation On Flow Boiling Heat Transfer Characteristics Of R1234yf Seeded With Nanoparticles	University of Hull	UK

List of poster presentations

Poster will be presented using MS TEAM platform in the poster session. A specific TEAM link will be provided for each poster who can answer questions from visitors.

Poster session 1 - 16:35 – 17:05, 11 September

P01	Chen Zhang	Carbon Dioxide Photoreduction And Hydrogen Photocatalytic Production By Multichemical Optimized Titanium Dioxide	Queen's University Belfast	UK
P02	Chuang Zhu	Pi-Pi Modification On Fiber Surfaces For Smart Textiles	University of Manchester	UK
P03	Tabi, Maloba K	Corrosion Resistant Polycaprolactone/Graphene Oxide Coating For 316L Stainless Steel	Queen's University Belfast University	UK
P04	Adefami Olusegun	Assessment Of Thermal Energy Storage With Concentrated Solar Power	Queen's University Belfast University	UK
P05	Wenpu Wang,	Metal Organic Frameworks Controlling Active Pharmaceutical Ingredient Storage And Release	Queen's University Belfast	UK
P06	Hanhui Lei	Machine Learning Assisted Discovery Of Mass Transfer Enhancement For Electrochemical CO2 Reduction Reactions	Northumbria University	UK
P07	Haodong Dai	Study Of Heat Generation Of Lithium-Ion Battery During Discharging	Queen's University Belfast	UK
P08	Yusheng Qiu	Functionalized Porous Organic Polymers For Antimicrobial Nitric Oxide Delivery	Queen's University Belfast	UK

Poster session 2 - 17:05 – 17:35, 11 September

P09	J. Reding	The Effects Of Halide Replacement In Hybrid Two Dimensional Perovskites Using DFT	University of Surrey	UK
P10	Yang Li	PtCu Nanowires In Application Of The Anodes For Direct Formic Acid Fuel Cells (DFAFC)	University of Birmingham	UK
P12	WeiJun Li	Fault Diagnosis Based On Transfer Learning And Computer Simulations	University of Surrey	UK
P13	Yucheng Wang	Mass Transfer Effect To CO2 Electrochemical Reduction Reaction Through Different Gas Diffusion Mechanism	Northumbria University	UK
P14	S. Sridhar	Programmable Morphing Polyelectrolyte Gel Structure Enabled By Localized Wetting Pattern	Northumbria University	UK
P15	Qi Huang	Different Steric Hindrance Of Azobenzene Contained Photo-Switching Metal Organic Frameworks For Light Triggered CO2 Uptake And Release	Queen's University Belfast	UK
P16	Yaoguang Song	Thermochemical Conversion of Biomass Lignin into Mesoporous Carbon Materials	Queen's University Belfast	UK

Poster session 3 - 12:50 – 13:20, 12 September

P11	Kailong Liu	Feature Analyses And Modelling Of Lithium-Ion Battery Electrode Production Based On Interpretable Machine Learning Technique	The University of Warwick	UK
P17	Siyu Zhao	The Role Of Phosphate Group In Doped Cobalt Molybdate: Improved Electrocatalytic Hydrogen Evolution Performance	University College London	UK
P18	B. Suleiman	Unveiling The Mechanisms Of Cold Sintering Of Alumina-NaCl Composite: Proposed Defect Chemistry Mechanism	University of Birmingham	UK
P19	Tong Yu	Microstructure And Electrical Properties Of Indium Tin Oxide Ceramics Produced By Cold Sintering Process	Loughborough University	UK
P20	Wei Jiang	The Study Of Cyclopropane Fatty Acids Metabolism In Saccharomyces Cerevisiae To Enhance Production By Metabolic Engineering Strategy	Monash University	Australia
P21	Shuming Zhang	Autothermal Cao Looping Biomass Gasification To Increase Process Energy Efficiency And Reduce Ash Sintering	Queen's University Belfast	UK
P22	Kai Wang	Pyrolysis Of Single Large Biomass Particle: Simulation And Experiments	Southeast University	China
P23	Dan Xu	Performances Of Syngas Production And Deposited Coke Regulation During Co-Gasification Of Biomass And Plastic Wastes Over Ni/γ-Al₂O₃ Catalyst: Role Of Biomass To Plastic Ratio In Feedstock	Southeast University	China
P24	Haowei Huang	Synergistic Effect Of Mxene On The Flame Retardancy And Thermal Degradation Of Intumescent Flame Retardant Biodegradable Poly (Lactic Acid) Composites	South China University of Technology	China

Poster session 4 - 13:20 – 13:50, 12 September

P25	Z. Guo	Bringing Multi-Functionality To Tissue Scaffolds Through Deposition Of Hybrid Coating	China University of Mining and Technology	China
P26	H. Chekkouchi	The Energy Optimization Model For Microalgae Culture By Recovering Liquid And Gaseous Waste From Factories, Via Direct Solar Harvest Systems For Day Lighting	Mohammed V University	Morocco
P27	Li Liu	Selective And Recyclable Biomass Conversion	Dalian University of Technology	China
P28	M. Śliz	Dewaterability Performance And Fuel Properties Of Hydrothermally Treated Sewage Sludge Enhanced By Filtration Additives	AGH University of Science and Technology	Poland
P29	Warispreet Singh	Origins Of Regioselectivity Displayed By T6ODM And CODM Non-Heme 2-Oxoglutarate Dependent Enzymes	Northumbria University	UK

P31	Han Wu	<u>Fenton Pretreatment Of Lignin To Remove Methoxyls In Pyrolytic Bio-Oil</u>	Southeast University	China
P32	Fenghua Liu	<u>Nanomaterials And Structural Designs For Solar Thermal Evaporation</u>	Shanghai Institute of Optics and Fine Mechanics	China
P33	Jianqiao Wang	<u>Enhanced Hydrogen Production From Catalytic Biomass Gasification With In-Situ CO2 Capture</u>	Hebei University of Technology	China