

5th Asia-Oceania Symposium on Fire Safety Materials Science and Engineering (AOFSM5) 2023 PROGRAM

Open Registration 26/08/2023

10:00AM	5:00PM	Onsite registration
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DAY 1 27/08/2023 – Colombo Theatre A

9:00 AM	9:30 AM	Opening Ceremony	
9:30 AM	10:00 AM	Plenary 1 Prof. Serge Bourbigot	INTUMESCENCE IN O2 RICH ENVIRONMENT: DESIGN OF FIRE RETARDED MATERIALS FOR SPACECRAFT
10:00 AM	10:30 AM	Plenary 2 Prof. Liming Dai	TBC
10:30 AM	11:00 AM	MORNING REFRESHMENTS	
11:00 AM	11:20 AM	Keynote 1 Prof. Yuan Hu	Synthesis of Phosphorus Containing Compounds with Different Oxidation States and Their Flame Retardant Applications
11:20 AM	11:40 AM	Keynote 2 Prof. Tao Tang	RATIONAL DESIGN OF INTRINSIC HIGH FIRE-SAFE POLYCARBONATE WITH PROCESSABILITY VIA MATERIAL GENOME APPROACH
11:40 AM	12:00 PM	Keynote 3 Prof. Jun Ma	Tackling smoke and fire hazards of thermoplastic polyurethane by mechanochemical combination of Cu ₂ O and nanosheets
12:00 PM	12:15 PM	Oral 1 A/Prof. Ye-Tang Pan	Dual nucleation sites induced by ZIF-67 towards dimensional mismatch of polyphosphazenes in flame retardant epoxy
12:15 PM	12:30 PM	Oral 2 Dr. Nam Kyeun Kim	INVESTIGATION OF FIRE REACTION BEHAVIOUR OF COMPOSITES FOR AIRCRAFT INTERIOR APPLICATIONS
12:30 PM	1:30 PM	LUNCH	

1:30 PM	2:00 PM	Plenary 3 Prof. Yuzhong Wang	INVESTIGATION OF FIRE REACTION BEHAVIOUR OF COMPOSITES FOR AIRCRAFT INTERIOR APPLICATIONS
2:00 PM	2:30 PM	Plenary 4 Prof. Baljinder Kaur Kandola	FLAMMABILITY, THERMAL STABILISATION AND CARBONISATION BEHAVIOURS OF LIGNIN- POLYAMIDE BLENDS FOR VALUE ADDED APPLICATIONS
2:30 PM	2:50 PM	Keynote 4 Prof. Richard Yuen	Advancements for Lithium-Ion Batteries Utilising Machine Learning Assisted Thermal Management Systems Integrating Smart Materials
2:50 PM	3:10 PM	Keynote 5 A/Prof Weiyi Xing	Production of Bioinspired MXene/Black Phosphorene Nanocoatings for Hydrophobic and Fire-safe Textiles
3:10 PM	3:25 PM	Oral 3 Dr Javad Mohammadpour	A Predictive Model for Hydrogen Jet Fire within Tunnels
3:25 PM	3:40 PM	Oral 4 Dr. Prabhakar M.N.	EFFECT OF BIO FLAME RETARDANT COATING ON FLAME RESISTANT AND THERMAL PROPERTIES OF BAMBOO FABRIC
3:40 PM	4:10 PM	AFTERNOON REFRESHMENTS	
4:10 PM	4:40 PM	Plenary 5 Prof. Sheng Zhang	Durable Flame-Retardant Fabrics: Fabrication Strategies and Challenges
4:40 PM	5:00 PM	Keynote 6 Prof. Debes Bhattacharyya	Fire Characteristics of Bio-Based Composites with Novel Flame-Retardant Materials
5:00 PM	5:15 PM	Oral 5 Dr Vinny Gupta	Chemically Enhanced Water Mist Suppression of the Sydney Turbulent Buoyant Fire Burner
5:15 PM	5:50 PM	2-min Poster Presentation Session	

DAY 2 28/08/2023 - Colombo Theatre A

9:00 AM	9:30 AM	Plenary 6 Prof. Jaime Grunlan	POLYELECTROLYTE-BASED FLAME RETARDANT SURFACE TREATMENTS FOR POLYMERIC MATERIALS
9:30 AM	10:00 AM	Plenary 7 Prof. Yuji Nakamura	DIFFICULTIES AND CHALLENGES TO OBTAIN "UNIQUE" BURNING CHARACTER OF THERMOPLASTIC MATERIALS
10:00 AM	10:15 AM	MORNING REFRESHMENTS	
10:15 AM	10:35 AM	Keynote 8 Prof. Zhengzhou Wang	Flame-retardant and Thermally-Conductive Epoxy Resin Composites Containing Metal Phosphinates/Nanofiller Hybrids with Good Comprehensive Properties
10:35 AM	10:55 AM	Keynote 9 Prof XIAOYU Gu	Interfacial architecting of high-efficiency and long-acting hyperbranched flame retardant toward smoke-suppressed flexible polyurethane foam
10:55 AM	11:10 AM	Oral 5 A/Prof Yongchun Kan	Ultra-thin, ultra-low flame-retardant addition, noncombustible solid polymer electrolyte for highly safe lithium batteries
11:10 AM	11:25 AM	Oral 6 A/Prof Wenwen Guo	Environmentally Benign Cardanol-derived products and their applications in flame retardant epoxy resins
11:25 AM	11:40 AM	Oral 7 Dr Jingwen Weng	TBC
11:40 AM	11:55 AM	Oral 8 Dr Ao Li	STUDY OF BATTERY THERMAL BEHAVIOUR UNDER ABNORMAL HEAT GENERATION
11:55 AM	12:10 PM	Oral 9 M. Sc. Daniel Rockel	SAVE YOUR SKIN WITH SKIN – UTILIZING LEATHER WASTE FIBERS IN FLAME RETARDANT BIO COMPOSITES
12:10 PM	1:10 PM	LUNCH	
1:10 PM	1:30 PM	Keynote 10 Prof Gaëlle Fontaine	Metallosalen complexes as novel fire retardants for polymers
1:30 PM	1:50 PM	Keynote 11 Prof. Saihua Jiang	Arbitrarily and repeatedly programmable flame-retardant soft actuators via “stress-caching” strategy
1:50 PM	2:05 PM	Oral 10 Prof Sherman CP Cheung	TRANSFERRING FIRE SCIENCES INTO AUGMENTED REALITY
2:05 PM	2:20 PM	Oral 11 Dr. Tong Chen	PHOSPHORUS/NITROGEN-HYBRIDIZED MAGNESIUM HYDROXIDE FOR FLAME RETARDANT EPOXY POLYMERS
2:20 PM	2:35 PM	Oral 12 Dr. Yunxian Yang	MULTIFUNCTIONAL FLAME RETARDANT FOR HIGH-PERFORMANCE EPOXY RESIN AND ITS FIBER REINFORCED COMPOSITE

2:35 PM	2:45 PM	Y-Oral 13 Mr Jingwen Wang	Intrinsic ionic confinement dynamic engineering of ionomers with fire safety, high healing, and stretchability
2:45 PM	2:55 PM	Y-Oral 14 Mr Jinhan Lu	A Durable Flame-Retardant Plywood with Low Hygroscopicity and Leaching Resistance
2:55 PM	3:05 PM	Y-Oral 15 Mr Song Gu	Neighbouring Molecular Engineering in Diels-Alder Chemistry towards Recyclable and Fire Safe Thermoset and Its Composites
3:05 PM	3:15 PM	Y-Oral 16 Mr Wenmu Yang	Enhancing flame retardancy and mechanical properties of epoxy by functionalizing ammonium polyphosphate using amine-based hardener
3:15 PM	3:25 PM	Y-Oral 17 Ms Jing Liang	Design of A Peanut Shell-Based IFR System and its Fire Performance in EP
3:25 PM	3:40 PM	Oral 18 TBC	TBC
3:40 PM	3:55 PM	AFTERNOON REFRESHMENTS	
3:55 PM	4:15 PM	Keynote 12 Prof. Pingan Song	STRONG, TOUGH AND SELF-EXTINGUISHING THERMOPLASTIC POLYURETHANE ELASTOMERS
4:15 PM	4:35 PM	Keynote 13 A/Prof. Bibo Wang	Construction of hybrid flame retardants: An efficient strategy for flame-retardant flexible polyurethane foam composites
4:35 PM	4:50 PM	Oral 19 Dr. Kunpeng Song	Construction of bird's nest-like capsules for phosphorous small molecules towards flame retardant polyurea composites
4:50 PM	5:05 PM	Oral 20 Dr. Jingyu Wang	From physical mixtures to block copolymer: impose outstandingly toughening and flame retardant effect to polypropylene
5:05 PM	5:20 PM	Oral 21 Dr Wang Xi	Alloying synergistic flame retardant effect improving fire resistance and mechanical properties of polyamide 6
5:20 PM	5:35 PM	Oral 22 Dr Imrana Kabir	Optimisation of additives to maximise performance of expandable graphite based intumescent flame retardant polyurethane composites
5:35 PM	5:50 PM	Oral 23 Dr. Fukai Chu	Exploration on structural rules of highly efficient flame retardant unsaturated polyester resins

DAY 2 28/08/2023 - Colombo Theatre B

9:00 AM	10:00 AM		
10:00 AM	10:15 AM	MORNING REFRESHMENTS	
10:15 AM	10:35 AM	Keynote 14 Prof Eric Lee Wai Ming	Developments in Building Evacuation Models by Implementing Psychological Theories
10:35 AM	10:55 AM	Keynote 15 A/Prof Kate Nguyen	Post-Fire Integrity and Damage of Bushfire Exposed Cross-Laminated Timber
10:55 AM	11:10 AM	Oral 24 Dr Hengrui Liu	Numerical investigation of the interaction between thin water mist sheet and horizontal hydrogen jet flame
11:10 AM	11:25 AM	Oral 25 Mr Ivan Miguel De Cachinho Cordeiro	THE ATOMISTIC INSIGHTS INTO THE FLAME RETARDANCY MECHANISM OF PHOSPHOROUS-BASED INTUMESCENT COATING ON POLYETHYLENE
11:25 AM	11:40 AM	Oral 26 Ms Yuying Chen	Thermal Stability of Wildland Fuels: Data Review and Machine Learning Prediction
11:40 AM	11:55 AM	Oral 27 Mr Sensen Xing	IMPACT OF LOCAL PEDESTRIAN DYNAMICS ON EXIT CHOICE IN FLOOR-FIELD EVACUATION SIMULATIONS
11:55 AM	12:10 PM	Oral 28 Mr. Zhongwei Chen	Using Machine Learning for Guiding the Design of Organic Flame Retardants for Epoxy Resin Composites
12:10 PM	1:10 PM	LUNCH	
1:10 PM	1:30 PM	Keynote 16 Prof. Jixin Zhu	Lithium batteries storage and fire safety
1:30 PM	1:50 PM	keynote 17 Dr Tariq Nazir	FLAME RETARDANCY AND ELECTRICAL TRACKING RESISTANCE PERFORMANCE OF SILICONE RUBBER FOR HIGH VOLTAGE INSULATION
1:50 PM	2:05 PM	Oral 29 Dr Timothy Chen	Reactive Molecular Dynamics in Pyrolysis Modelling of Flame Retardant Polymer
2:05 PM	2:20 PM	Oral 30 Dr. Esmaeel Eftekharian	Numerical Simulation on the Effects of Fire-Wind Enhancement on Buildings
2:20 PM	2:35 PM	Oral 31 Mr. Tarun Grover	UNDERSTANDING THE DYNAMICS OF FIRE AND ITS EVALUATION METHODS IN TEXTILES

2:35 PM	2:45 PM	Y-Oral 32 Mr Qian Chen	INVESTIGATING THERMAL OXIDATION AND FLAME-RETARDANT POTENTIALS OF GRAPHYNE-TYPE CARBON NANO MATERIALS BY REACTIVE MOLECULAR DYNAMICS
2:45 PM	2:55 PM	Y-Oral 33 Mr. Maksym Li	RESEARCH ON ECO-FLAME RETARDANT LIQUID FOR NATURAL FIBERS UTILIZED FOR THE PREPARATION OF GREEN COMPOSITES
2:55 PM	3:05 PM	Y-Oral 34 Mr. Longfei Han	Non-flammable sandwich-structured TPU gel polymer electrolyte for high performance lithium ion batteries
3:05 PM	3:15 PM	Y-Oral 35 Mr Yuze Zhang	DESIGN, SYNTHESIS AND APPLICATION OF MAGNESIUM BASED LAYERED DOUBLE HYROXIDES FLAME RETARDANT
3:15 PM	3:25 PM	Y-Oral 36 Mr Heng Yu	Sandwich structured ultra-strong-heat-shielding aerogel/copper composite insulation board for safe lithium-ion batteries modules
3:25 PM	3:35 PM	Y-Oral 37 Mr. Zhoumei Xu	Hydrophobic SiO ₂ /ADP coated PU foam for efficient oil spills remediation and exceptional flame-retardant performance
3:35 PM	3:55 PM	AFTERNOON REFRESHMENTS	
3:55 PM	4:15 PM	Keynote 18 Prof. Bin Yu	High-performance Bio-inspired Flame Retardant Nano-coatings
4:15 PM	4:35 PM	Keynote 19 Dr. Wei Wang	MXene Networks Design and Preparation for Advanced Polymer Composites
4:35 PM	4:50 PM	Oral 38 Sebastian Goller	Avoiding antimony – effect of Ca(H ₂ PO ₄) ₂ on smoke emission and fire behavior in bromated ABS
4:50 PM	5:05 PM	Oral 39 Dr. Teklebrahan Gebrekrstos Weldemhret	FLAME RETARDANT AND ELECTROMAGNETIC INTERFERENCE SHIELDING COMPOSITE COATINGS ON FLEXIBLE POLYURETHANE FOAM
5:05 PM	5:20 PM	Oral 40 Shenghe Zhang	High-performance flexible polyurethane from renewable castor oil: Preparation, properties and mechanism
5:20 PM	5:35 PM	Oral 41 Mr Haoxin Niu	Synthesis of a vanillin-derived bisDOPO co-curing agent for the preparation of transparent flame-retardant epoxy thermosets
5:35 PM	5:50 PM	Oral 42 Mr MD DELWAR Hossain	LIMITATIONS OF CRURENT FIRE TESTING APPROACH OF COMPOSITE CLADDING PANELS

DAY 3 29/08/2023 - Colombo Theatre A

9:00 AM	9:30 AM	Plenary 8 Dr. Sabyasachi Gaan	FIRE SAFE RECYCLABLE EPOXY THERMOSETS FROM PHOSPHORUS BASED MONOMERS
9:30 AM	10:00 AM	Plenary 9 Prof. Guan Heng Yeoh	TBC
10:00 AM	10:20 AM	MORNING REFRESHMENTS	
10:20 AM	10:40 AM	Keynote 20 Prof. Bin Fei	SUSTAINABLE COMPOSITES WITH FLAME RETARDANTS FROM BIOMASS
10:40 AM	11:00 AM	Keynote 21 Prof. Juan Li	Flame Retarding and Strengthening Poly (ethylene 2,5-furandicarboxylate-co-ethylene terephthalate) Using Phosphinates
11:00 AM	11:20 AM	Keynote 22 A/Prof. Xin Wang	Bio-Based, Anti-Flammable and Recyclable Epoxy Thermosets and Fiber-Reinforced Composites
11:20 AM	11:40 AM	Keynote 23 Dr. Siqi Huo	THE FLAME-RETARDANT EPOXY RESINS VIA INTRODUCING A BIO-BASED, PHOSPHORUS-PHOSPHORUS, HYPERBRANCHED OLIGOMER
11:40 AM	12:00 PM	Keynote 24 Dr Maryam Ghodrat	Numerical modeling of fire intensity effect on wildfire interaction with multiple buildings in Wildland-Urban Interface
12:00 PM	12:20 PM	Keynote 25 A/Prof. Anthony Yuen	Developing Deeper Understanding via Atomistic Realisation of Molecular Breakdown of Carbon-based Nanomaterial Flame-retardant Polymer Composites
12:20 PM	12:50 PM	Closing Ceremony	
12:50 PM	1:40 PM	LUNCH	

Poster Exhibition – Colombo LG01

Poster 1 Dr Jing Zhan	A Bridge-Linked Phosphorus-Containing Flame Retardant for Endowing Vinyl Ester Resin with Low Fire Hazard
Poster 2 Professor Lijuan Li	SYNTHESIS OF A NOVEL HYBRID-STRUCTURE SYNERGISTIC FLAME RETARDANT TMSMA-DOPO-MDH AND ITS APPLICATION IN EPOXY RESIN
Poster 3 Dr Zhao Tian	Experimental study of solid fire suppression with the use of a water mist system
Poster 4 Dr. Wenyan Zhang	Iron-containing silsesquioxane supported by boron nitride and its application for thermal-conductive and flame-retardant epoxy resins
Poster 5 Dr. Daisy Li	Polymeric & sustainable flame retardant solutions to meet fire safety of electrical vehicles
Poster 6 Dr Bo LIN	Multifunctional Coating for Polyurethane Foam towards Excellent Flame Retardant and Antibacterial Performances
Poster 7 Mr Qinyong Liu	Constructing a novel synergistic flame retardant by hybridization of ZIF-67 and graphene oxide for TPU
Poster 8 Doctor Bingtao Wang	HIGH FLAME RETARDANCY ENHANCEMENT OF PP/IFR COMPOSITES FACILITATED BY CERIUM PHENYLPHOSPHONATE
Poster 9 Mrs Xuexue Song	PREPARATION OF HEXAGONAL FLAKE MAGNESIUM HYDROXIDE FLAME RETARDANT FROM WASTEWATER GENERATED FROM PHOSPHATE ORE INDUSTRY
Poster 10 Mr. Jingfan Zhang	To improve flame retardancy, mechanical properties and degradation rate of poly(3-hydroxybutyrate-co-4-hydroxybutyrate) by divinylbenzene-maleic anhydride microsphere
Poster 11 Mr Xiaolu Wu	Synthesis of potassium chloride doped octaphenylsilsesquioxane and its flame retardancy and mechanism in polycarbonate
Poster 12 Mr Jian Liu	Eco-friendly flame retardant and smoke suppression coating for nylon/cotton blend fabrics
Poster 13 Mr Peng Qi	Improving the flame retardancy of polyethylene terephthalate fabric by foam finishing

Poster 14 Mr Chengfei Cao	Biomimetic, Mechanically Strong Supramolecular Nanosystem Enabling Solvent Resistance, Reliable Fire Protection and Ultralong Fire Warning
Poster 15 Mr Wen-Xiong Li	HIGHLY EFFICIENT FLAME-RETARDANT AND SMOKE-SUPPRESSING SILICONE FOAM
Poster 16 Mr Guan-Qi Zheng	MECHANICALLY STRONG, ULTRAVIOLET-SHIELDING, AND FIRE-SAFETY POLYMER
Poster 17 Ms Dan-Xuan Fang	FLAME-RETARDANT AND RECYCLABLE FLEXIBLE POLYURETHANE FOAMS
Poster 18 Dr. Bin Liu	Research on the combustion characteristics and mechanism of biomass-based flame-retardant wood

*The PDF Program was last updated at 12PM on 11 August 2023.