1. **FLAME RETARDANTS AND FIRE SAFETY RESEARCH IN AUSTRALIA**
2. ***COMPOSITES PART B*: WORLD No 1 JOURNAL IN COMPOSITES**

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In the last several decades advanced materials, including polymers, fibre-reinforced composites, and aluminium composite panels, are rapidly increasing utilised across a wide range of industries such as civil infrastructure, transportation, fabrics, mining, oil and gas. Many polymers and polymer composites are highly flammable, which pose significant fire risks impacting people, environment and economy [1,2]. Indeed, polymers have recently been identified as the root cause of a number of severe fire incidents worldwide, including the Melbourne Lacrosse Building fire in 2014, the Dubai skyscraper fires in 2015 and 2016, and the Grenfell Tower fire in 2017. Responding to this significant new challenge, the Australian Governments, university researchers and industries are working together to develop new flame retardant materials and technologies, and new fire safety regulatory standards and practices.

From the government side, in 1989 Australia conducted the first Warrant Centre Project on Fire Safety Engineering. It paved the way for the creation of the Fire Code Reform Centre to co-ordinate fire research nationally in 1994, and gave major impetus to the development of the performance based Building Code of Australia (now part of the National Construction Code (NCC)), published in 1996. After the Lacrosse fire in 2014, the Australian Government in 2015 commissioned a Senate inquiry on the fire safety regulatory standards, the materials used in buildings and the practices in placed in the industry. In 2018, the government and industry founded the second Warren Centre Project to report the state of FSE regulation, control and accreditation, the current and future practice of performance-based FSE, and the effective professionalization of FSE in Australia. The results are expected to lead some changes to the new NCC in 2019.

From the research side, The University of Queensland started to establish its fire laboratory from 2012 led by Professor Jose Torero. The lad has state-of-the art equipment for testing from the small scale materials compositions to full scale structural fire testing. University of New South Wales was founded an ARC Training Centre for Fire Retardant Material and Safety Technologies in 2018. The key research areas include novel green and bio-inspired flame retardants, multi-scale fire modelling, advanced fire suppression and control strategies, and new fire testing and standards. University of Southern Queensland is organising an ARC Hub for advanced flame retardants and fire safety technologies. USQ currently has been found the prestigious ARC Future Fellowship and ARC DECRA Fellowship to conduct research on new flame retardants and coatings for polymers, polymer foams and polymer composites. USQ has established extensive collaborations with international leaders include Prof Sere Bourbigot from France, Prof Jaime Grunlan from USA, and Prof Yuzhong Wang and Prof Yan Hu from China.

*Composites Part B: Engineering* now has the highest Impact Factor (6.864) and the largest publication volume among the all composites journals. After over 20 years the journal had a major restructure of its editorial team. As the new Editor-in-Chief, I will introduce the new strategies for the journal, including its priority publishing areas. *Composites Part B* has identified flame retardants and flame-retardant polymer/composites as one of its 20 focused topics for the journal. We are working hard to establish a “Journal-Authors-Readers” partnership, with the aim to better serve our composites community.

**References**

[1] A. B. Morgan and J. W. Gilman, An overview of flame retardancy of polymeric materials: application technology, and future directions, *Fire and Materials*, 2013, 37, 259-279. [2] F. Evegren and T. Hertzberg, , Proceeding of Institute of Mechanical Engineering Part M: Journal of Engineering for the Maritime Environment. 2015