



**UNSW**  
SYDNEY



## Fire Retardant Materials and Structures

**Expertise in fire retardant materials and structures, including advanced fire models for coupled pyrolysis of solid materials with gas flame propagation and impact to structural integrity, development of novel fire suppression technologies, and both reduced- and full-scale flammability testing for compliance with fire safety regulatory standards.**

### Competitive advantage

- A consortium of local and international researchers, providing expert fire safety advice and technology
- Strong strategic partnerships and collaborations within universities, government bodies and domestic and global industries in fire safety
- Expertise in development of fire retardant materials and structures across a range of environments, including maritime platforms
- Creating new high-level fire safety Standards

### Impact

- Improved fire safety for materials and structures for Defence

### Successful applications

- Forensic analysis of fatal fire scenarios including Quakers Hill nursing home fire, Fire and Rescue NSW
- Risk characterisations of building claddings using big data analytics, Finance, Services & Innovation NSW

### Capabilities and facilities

- A range of bench-top and full-scale experimental equipment for multi-scale flammability assessments with realistic fire conditions, and detailed measurement of fire effluents including gas toxicity, smoke density and particles.

### Our partners

- Fire and Rescue NSW
- Finance, Services & Innovation NSW

### More Information

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