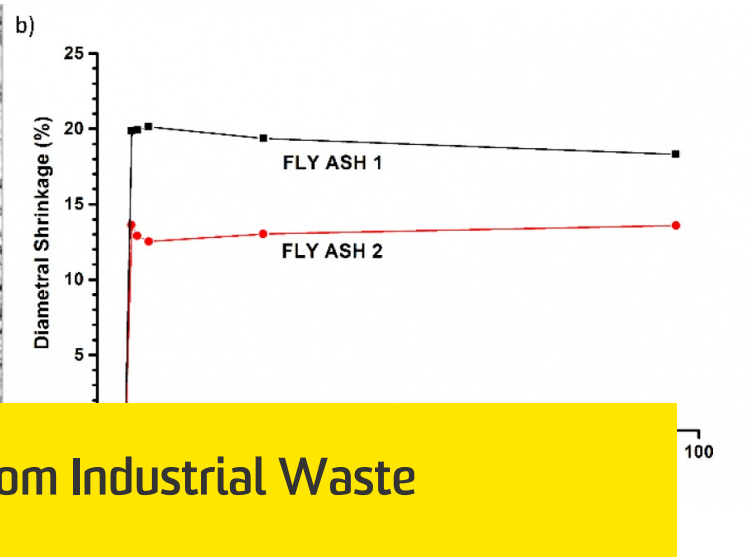

High-Performance Materials from Industrial Waste

Industrial waste products (fly ash and slag) and by-product minerals (topaz) typically are disposed of by storage in landfill. However, these aluminosilicate materials can be transformed into a range of value-added high-performance devices for uses in the chemical, metallurgical, mining, construction, transport, nuclear, and defence industries.

More Information

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Competitive advantage

- Global patent protection
- Environmental remediation from removal of waste materials from landfill
- High-volume utilisation of low-cost waste materials
- Capacity to normalise compositional variations of materials and so standardise performance

Impact

There is an increasing risk of ecosystem damage from large-scale industrial by-products that are stored in landfill and tailings ponds. Although these materials, which include fly ash, blast furnace slag, and waste minerals, have little commercial value, they can be transformed into high-performance materials with significant economic value while diverting them from storage sites.

Successful outcomes

- Global patent protection for refractories and aggregates from waste materials
- Ongoing product development with three industrial partners

Capabilities and facilities

- Capacity and facilities required to design, fabricate, characterise, and test materials with properties suitable for a wide range of applications
- 10 years of industrial funding underpinning relevant product development experience

Our partners

- Vecor Australia
- Chase Mining Ltd