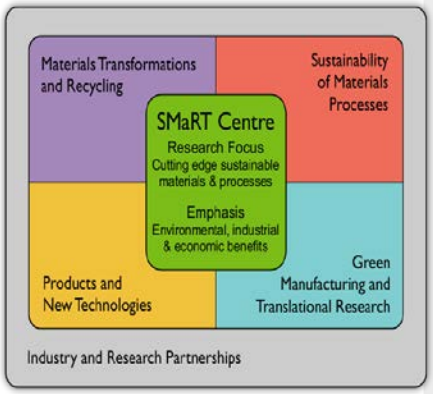
Grenew® Ti and V Microfactory

Centre for Sustainable Materials Research and Technology (SMaRT)

GreNew Ti and V microfactory is a new low cost technique for directly transform residue of waste Ti and V in the waste materials into value added components, using waste as a resource and demonstrating the successful transformation of serious waste burden into valuable resources in the production of high performance, value-added new products.



SMaRT Centre Capabilities

Competitive advantage

Cost effective and environment friendly

This innovative and economical new approach marries industry demands for more cost-effective and sustainable source for Ti and V with global imperatives to address resource depletion and environmental degradation through the recovery of resources from waste.

Recent research projects

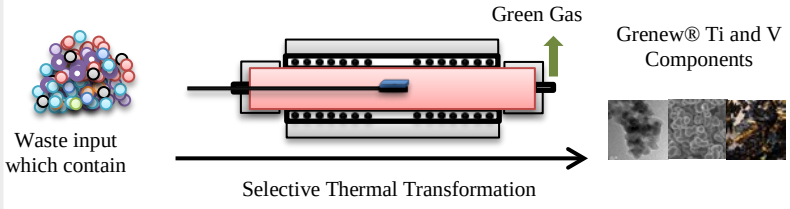
- In this research, Ti and V in the waste materials will directly transform to high value added components through innovative selective thermal transformation. This approach is an innovative and effective way to produce Ti and V based components such as TiN and Vanadium steels with enhanced properties at low cost.

Successful applications

- This technique has been used to directly transform automotive shredded residue to TiN ceramic which can be used for coating of cutting tools.

Facilities and infrastructure

- UNSW's SMaRT Centre is an internationally recognised pioneer into the transformation of complex waste into value-added resources and is equipped with purpose-built state of the art laboratories, specialist furnaces, dedicated analytical equipment are the best available in



By modifying the composition of the waste input and the processing parameters, different Ti and V components can be produced.

Our experts

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