

# Silex World Advances Low-Carbon Critical Materials Processing Technologies for Global Supply Chains

*University of Leeds spin-out Silex World advances low-carbon technologies for critical materials, rare earths and sustainable supply chains.*

LEEDS, WEST YORKSHIRE, UNITED KINGDOM, June 10, 2026 /EINPresswire.com/ -- [Silex](#) World Ltd, a University of Leeds spin-out focused on [critical materials](#) processing and sustainable manufacturing technologies, has announced further progress in the development of its low-carbon industrial processing platform aimed at supporting future supply chains for critical minerals, advanced materials, and strategic manufacturing sectors.

The company is currently advancing a portfolio of technologies designed to recover, upgrade, and refine high-value materials from both primary and secondary resources. These activities form part of Silex World's wider strategy to create sustainable alternatives to traditional energy-intensive processing routes.

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Future manufacturing depends on secure, sustainable access to critical materials. Silex World is developing practical technologies to support resilient and circular supply chains.”

*Michael Hodges*



Silex World Advances Low-Carbon Critical Materials

Recent development work has focused on high-temperature thermal processing systems, advanced materials upgrading, industrial mineral treatment, and technologies capable of supporting the circular economy for strategic materials. The company is also continuing work on processes relevant to rare earth elements, titanium-bearing materials, industrial waste streams, and future battery material supply chains.

Silex World's approach combines process innovation,

industrial scalability, and digital traceability concepts to create integrated solutions that can be deployed across multiple jurisdictions. The company believes future supply chain resilience will depend on regional processing capability, reduced reliance on imported refined materials, and

the creation of new circular manufacturing ecosystems.

Professor Animesh Jha, Chief Scientific Adviser to Silex World and Professor at the University of Leeds, said:

"The challenge facing modern industry is not simply securing access to critical materials, but developing economically viable and environmentally responsible methods for processing them. Our work is focused on creating technologies that can improve resource efficiency while supporting future manufacturing supply chains."

Michael Hodges, Managing Director of Silex World, commented:

"Global demand for critical materials continues to increase across sectors including energy, electronics, defence, and advanced manufacturing. Silex World is developing practical industrial technologies designed to help address these challenges while supporting more sustainable and resilient supply chains."

Alongside its technology development programmes, Silex World continues to engage with industrial partners, academic institutions, and government stakeholders in the United Kingdom and internationally to explore opportunities for future deployment and commercialisation. The company expects to announce further technical milestones and industrial developments during the second half of 2026.

#### About Silex World Ltd

Silex World Ltd is a University of Leeds spin-out company developing technologies for critical materials recovery, rare earth recycling, advanced materials processing, industrial minerals upgrading, and sustainable manufacturing systems. The company is focused on creating scalable solutions that support resilient and circular supply chains for strategic materials.

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