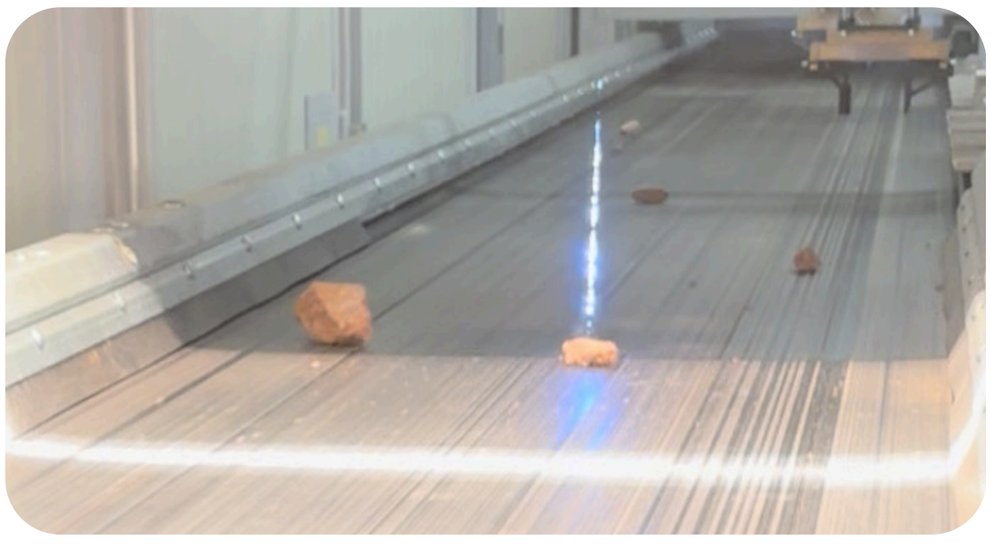
Dual Integrated LIBS Systems for Real-Time, High-Precision Material Classification

Fact sheet

Description of the result

Two integrated LIBS systems deliver high-precision, spectroscopic real-time analysis and classification of a broad range of materials. By performing multiple measurements at different surface locations, the systems maximise reliability and reproducibility. In addition, a powerful cleaning pulse can be applied to remove oxide layers or contaminants, ensuring consistently accurate, reliable, and truly representative analytical results under even the most demanding industrial conditions.



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Problem addressed

Real-time analysis of LIBS spectra on moving targets ensures high material throughput, even when dealing with strongly inhomogeneous materials featuring diverse chemical compositions, surface irregularities, or dust deposits, thereby guaranteeing accurate classification under challenging industrial conditions.

Main features & benefits

Fully automated classification of materials for sorting, adaptable to varying grain sizes, weights, and surface conditions. The system offers flexible throughput rates depending on the applied separation methodology, ensuring optimal performance, efficiency, and precision across a wide range of industrial sorting applications.

Contact & Further Information

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Target users /stakeholders

Spent refractories, demolition waste, general recycling or sorting application in industries and R&D.

Who Is Leading the Development?

LSA

Scan to learn more about LSA

Exploitation potential

Sorting applications in recycling and raw materials industries

Technical facts

- CO_2 Reduction: Up to 15 kt annually, based on the currently installed equipment.
- Achieves 15 GWh in energy savings per year.
- Reduces landfill volume by approximately 5,000 m³ annually.
- Significant increase in measuring accuracy and repeatability, enabling more consistent process control.

Scan to learn more about LIBS across industries

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