



Imperial College
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Poster 4

Alloy design for impurity tolerance



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ABSTRACT:

Designated a strategic asset, steel scrap, through maximised recycling, would allow the iron and steel industry to cut massively on emissions, reduce mining activity and overall, attain circularity. However, the quality of recycled steel is degraded due to the accumulation of residual elements with continuous recycling, a problem limiting the use of recirculated steel in high-value applications in industries like the automotive industry. It is therefore important that we understand how multiple scrap-related contaminants act on steels and use this knowledge in the development of sustainable alloys. One way of doing this is by focusing on the design of impurity-tolerant alloys and the aim of this project is to investigate how elemental additions can help achieve this.



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