



Contribution ID: 9

Type: **not specified**

## Closing the loop for permanent magnets

*Tuesday 7 February 2023 13:30 (25 minutes)*

Magnetic materials are key components in our everyday life. They are used in a variety of applications in robotics and information technology, as well as in the ongoing “green” energy and mobility transition. Here, materials with the highest demand on performance are needed, making rare earth magnets like Nd-Fe-B the benchmark material of choice. However, sustainability and stability of supply have to be taken into account, whenever this material is used.

One option to reduce the dependency on the Asian supply monopoly and to increase sustainability of the material, is the implementation of the circular economy for Nd-Fe-B permanent magnets. The recycled magnets compete well with those made from primary materials, that is, in terms of magnetic properties and in terms of production costs. They excel by far rare earth permanent magnets made from primary materials regarding the environmental footprint. Questions to be solved for a circular economy are the dismantling of products after their end-of-life, for bringing scrap magnets back to the market.

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**Session Classification:** Working session on recycling (Intro)