

IMEM-CNR, Webinar – 10/12/2021, ore 11:00

Seminario su

The project INSPIRES: INtelligent and Sustainable Processing of Innovative Rare-Earth magnetS

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The recent world, EU and Italian plans to develop a more sustainable, resilient and clean society pass through the development of Green technologies and the circular economy. A criticality of some of these technologies is that they are based on the the-so-call “critical raw materials” (CRM), that is a list of elements and materials that being each time scarcer or are produced by few countries. Green technologies like wind energy generation and storage, for the electric mobility and industrial robots use rare-earth based magnets, elements that are considered the most CRM. This is because the extraction of rare-earth raw materials and the magnets production are completely controlled by China. EU promotes thorough different projects and plans the research and innovations in the ambit of CRM. One is the Knowledge Innovation Community on Raw Materials (EIT KIC Raw Materials), part of the European Institute of Innovation and Technology, both supported by the European Union. The mission of the EIT KIC Raw Materials is to increase the competitiveness, growth and attractiveness of the European CRM sectors through radical innovation and entrepreneurship.

The INSPIRES project aims at recovering and supplying rare-earths within the EU through radical innovations in the recycling of permanent magnets, focusing on one of the most readily available sources: home appliances. INSPIRES will optimize methods at industrial scale for sustainable extraction and recycling and use of recycled magnets in new motors.

In the presentation I will introduce the problem of the “rare-earth”-magnets, the solutions and activities and plans that are performed by the EIT-KIC Raw Materials. I will present the objectives of INSPIRES, the working structure and the role of the CNR.

INSPIRES is financed by EIT-RAW MATERIALS (2021-2024), proposal number: 20090.