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WASTE-01-2014

CABRISS

Full Title: Implementation of a CirculAr economy Based on Recycled, reused and recovered Indium, Silicon and Silver materials for photovoltaic and other applications

Aim:

The main vision of CABRISS project is to develop a circular economy mainly for the photovoltaic, but also for electronic and glass industry. It will consist in the implementation of: (i) recycling technologies to recover In, Ag and Si for the sustainable PV technology and other applications; (ii) a solar cell processing roadmap, which will use Si waste for the high throughput, cost-effective manufacturing of hybrid Si based solar cells and will demonstrate the possibility for the re-usability and recyclability at the end of life of key PV materials. The developed Si solar cells will have the specificity to have a low environmental impact by the implementation of low carbon footprint technologies and as a consequence, the technology will present a low energy payback (about 1 year).

Concept:
The originality of the project relates to the cross-sectorial approach associating together different sectors like the Powder Metallurgy (fabrication of Si powder based low cost substrate), the PV industry (innovative PV Cells) and the industry of recycling (hydrometallurgy and pyrometallurgy) with a common aim : make use of recycled waste materials (Si, In and Ag). CABRISS focuses mainly on a photovoltaic production value chain, thus demonstrating the cross-sectorial industrial symbiosis with closed-loop processes.

Start date:
01/06/2015

End date:
31/05/2018