

Incineration of organic solar cells: Efficient end of life management by quantitative silver recovery - DTU Orbit (08/11/2017)

Incineration of organic solar cells: Efficient end of life management by quantitative silver recovery

Recovery of silver from the electrodes of roll-to-roll processed organic solar cells after incineration has been performed quantitatively by extraction with nitric acid. This procedure is more than 10 times faster than previous reports and the amount of acid needed for the extraction is reduced by a factor of 100-150. LCA studies show that the resulting environmental impacts from silver extraction of incinerated ashes are more favourable on almost all standard factors compared to extraction from shredded organic solar cells. The so lessened environmental impacts by efficient recovery fully justify the use of Ag as an electrode in scaled production of organic solar cells.

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