

## عنوان مقاله:

Recovery of precious metals from spent catalysts (solid waste) using electrometallurgy method: A review

## محل انتشار:

پنجمین کنفرانس بین المللی نوآوری های اخیر در شیمی و مهندسی شیمی (سال: 1396)

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## خلاصه مقاله:

This investigation presents an overview the use of electrometallurgy as a method for valuable metal recovery from spent catalyst. Precious metals recovery is interesting due to their vast industrial applications, high market prices and the limited resource of these metals. With the increase in environmental awareness, the disposal of any form of hazardous waste has become a great concern for the industrial sector. Spent catalysts contribute to a significant amount of the solid waste generated by the petrochemical and petroleum refining industry. The catalysts lose their effectiveness over time, and when the activity of catalysts decline below the acceptable level, they are usually regenerated and reused but regeneration is not possible every time. Recycling of some industrial waste containing base metals (such as Ni, V, Co, Mo, Pt, Pd and etc) is estimated as an economic opportunity in the exploitation of these wastes. Several techniques are possible to separate the different metals, among those selective precipitation and solvent extraction are the most used. Pyrometallurgical treatment and bio-hydrometallurgical leaching were also proposed in the scientific literature but up to now they did not have any industrial application. The state of art in recovery of metals from spent sources by electrometallurgy (as an environmentally friendly technology and performance with high efficiency and purity) highlighted and existing advantages and disadvantages of this technique .are analyzed in this study

## کلمات کلیدی:

Electrometallurgy, Precious metals, Recovery, Spent catalyst

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/739914>

