

PLATIRUS Newsletter no 5 – November 2018



A word from the coordinator

The PLATIRUS project has now reached the two-year mark (M24). The project is running up to its speed.

In M24 a meeting was held that mainly focused on the preselection of technologies for PGM recovery from autocatalysts. The selected technologies are MW assisted leaching (partner VITO), split-anion extraction for separation of PGMs (partner KUL) and Gas Diffusion Electrocrystallisation (partner VITO), for recovery of Pd, Pt and Rh metals. Those selected processes have patent applications in preparation.

In the next 6 months, the mass balance data will be provided by selected processes to WP6 – industrial validation and also the optimized conditions will be applied to other waste streams such as WEEE and slags. Other non-selected technologies (TECNALIA and VUT processes) will be further optimized until M30 of the project. In M30, LCA and LCI will be further applied in order to see the each processes' profits. Finally, in the next 6 months, dissemination and communication activities will be strongly focused on publications, media-sharing and stakeholder outreach.

PLATIRUS selected Technologies for validations in the industrial environment

Extraction: key target materials (PGMs) are extracted into a liquid

The PLATIRUS partners have investigated several types of lixivants, leaching conditions and combinations thereof for optimising the following techniques:

- Microwave-assisted leaching
- Leaching with Deep Eutectic Solvents (DESs)
- DES leaching in WEEE and slag



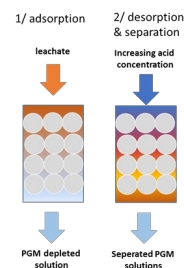
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Separation: the desired solute is extracted from PGMs-containing solutions

Two different approaches have been investigated by the PLATIRUS partners:

- Separation via hybrid structured sorbents
- Non-conventional liquid-liquid extraction

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Recovery: "Single-step" process to obtain PGMs in organic/aqueous matrices

PLATIRUS has studied several direct recovery processes for obtaining PGMs that are either diluted in a liquid medium or deposited on a solid separator. The following methods have been considered as the most promising:

- Gas-Diffusion Electrocrystallization
- PGM recovery from PGM-containing wastes
- Electrodeposition process

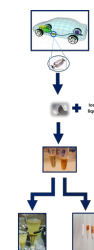
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Ionic liquid based PGM extraction from autocatalyst and separation

The innovation refers to a dual ionic liquid-based extraction and separation process, allowing to leach PGM from spent autocatalysts and other input materials using hydrophilic and low-costs choline-based ionic liquids.

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PLATIRUS stakeholders and technology market

PNO and Tecnia have already submitted to the EC two background studies that aim to prepare for future replication and upscale of the PLATIRUS concept.

The **Value Chains Stakeholders Analysis Report** provided a helicopter view on the most relevant stakeholders (mainly European) who are connected to the European value chain of PGMs in general and more specifically, those that are active in one of the key sectors impacted by PLATIRUS (primary production/smelting/refining/end-use/recycling).

This **Market Analysis** report analysed and compared the current and prospective markets of selected End of Life products which have the potential to become feedstocks for PGM recovery at industrial scale (namely WEEE, mining and metallurgical waste and spent autocatalysts). The report also included insights from industrial stakeholders in PLATIRUS consortium about future opportunities and benefits in valorising secondary PGM resources.

Join PLATIRUS and create impact

Are you looking into making impact within the PGM recovery activities?

PLATIRUS project is seeking stakeholders interested in valorising Platinum Group Metals (PGMs) entrapped in waste/slugs from smelting activities or complex ores/tailings.

By sharing samples with us, you will get direct insights into the value you can obtain from low-grade resources when treated by PLATIRUS' cutting-edge PGM technologies. If you are interested in the latest PGM-recovery technologies and what they could mean for your activities, then contact us directly and we will set up a free consultation and benchmark

your samples with our technologies. All details and findings will remain strictly confidential.

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Upcoming events

- [EIT RawMaterials at Mines & Money London | 26-29 November 2018 | London, United Kingdom](#)
- [EIT RawMaterials @ G-STIC 2018 | 28 – 30 November 2018 | Brussels, Belgium](#)
- [Industry challenge: From mining through to smelting | 29 November 2018 | Oulu, Finland](#)
- [The Stakeholder's day | 29 November 2018 | Luleå, Sweden](#)
- [Raw Materials Summit 2019 | May 2019 | location not known yet](#)



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