

# SUP - Steelslag Upgrading into Products

Residues of different industries are combined for sustainable production of value products.

**Project number** WP 20-12

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**Partners** ArcelorMittal, Innovation Concepts

ISPT, KUL - Katholieke Universiteit Leuven, Nouryon

**Budget** 430 k€

**Duration** 2018-2019

## Incentive

Often residues of industrial processes are seen as waste. In this project CO<sub>2</sub>, Steelslag and mineral acids are used as a feedstock for the production of value materials.

## Objective

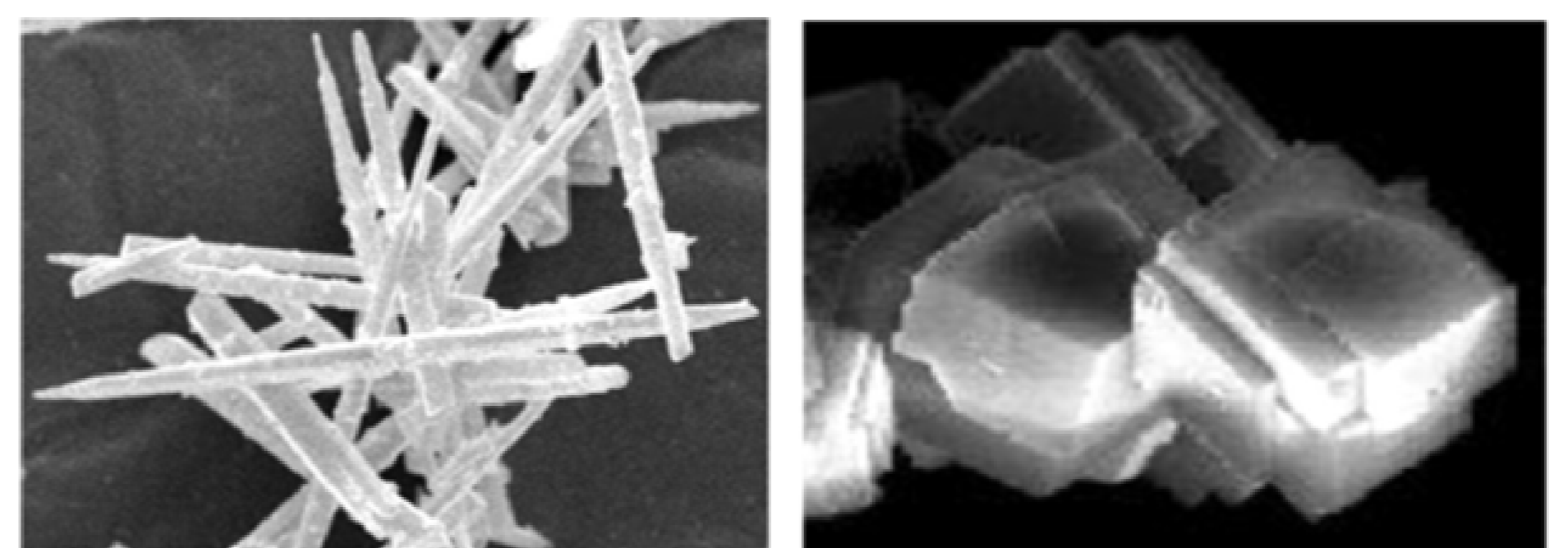
The goal of this project is a sustainable and financially positive process, in order to decrease the waste streams and CO<sub>2</sub> emissions.

## Approach

- Combination of residual streams from the metallurgic industry (steel slags) with CO<sub>2</sub> gas to produce a high value chemical product (precipitated calcium carbonate, PCC) and simultaneously sequester CO<sub>2</sub>.
- The PCC produced by this innovative new process requires less energy compared to conventional methods, as intensification technologies are being applied.

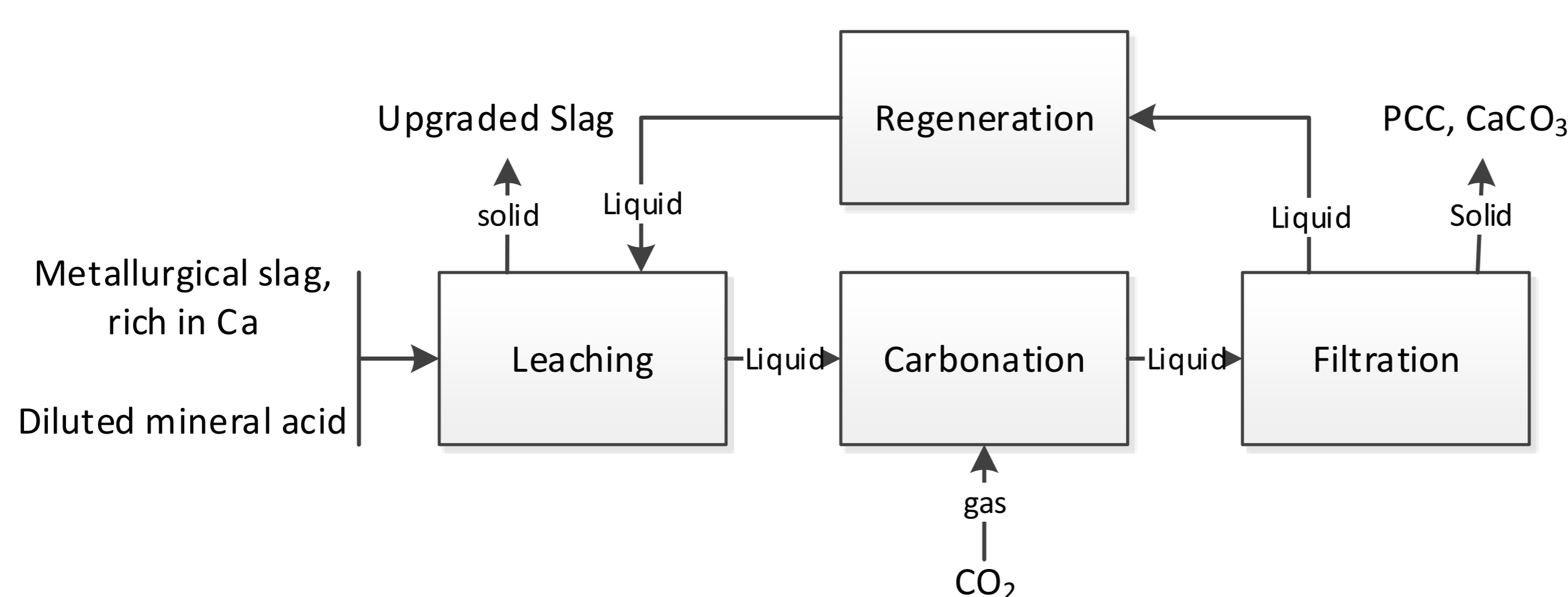
## Results

The produced PCC (CaCO<sub>3</sub>) can be divided into 2 anhydrous polymorphs: calcite and aragonite. Both value materials for several applications.



## Next steps

The consortium will be extended with specialized partners and involve process modelling, optimizing parameters, continue lab-scale tests and detailed sustainable and financial research.



simplified process schedule



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