UNIVERSITÀ DEGLI STUDI DI BRESCIA

University of Brescia

TECHNOLOGY

Innovative thermochemical process for phosphorus recovery

ABSTRACT

The thermochemical treatment of sewage sludge ash made by using microwaves, associated with a devoted patented chamber, was realised. It promotes the formation of bioavailable $CaNaPO_4$ compound, offering a new breakthrough in recovering phosphorus from sewage sludge ash and providing new possibilities in terms of sustainability.

REFERENCE

A new breakthrough in the P recovery from sewage sludge ash by thermochemical processes
https://pubs.rsc.org/en/content/articlelanding/2022/gc/d2gc02328h

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PROJECT

DEASPHOR - Design of a product for SUBSTITUTION of phosphate rocks

ABSTRACT

The project DEASPHOR aims phosphorus-recycling from poultry litter ash since the direct utilization of poultry litter has eight times more P than plants need. However, further P-concentration is needed to make poultry litter capable of substituting phosphate rocks. Therefore exploratory and innovative solutions are proposed.

REFERENCES

https://www.fc.up.pt/deasphor/
https://www.unibs.it/en/node/6476

PROJECT

PHIGO -Thermal Processing of P-rich ashes aiming for HIGH-GRADE PHOSPHORUS Products

ABSTRACT

The project proposes an innovative solution to optimize biowaste incineration and to develop a sustainable technology for efficient P-extraction from the P-rich ashes and thereby enabling closing the P loop in the EU P-strategy.

REFERENCES

https://www.swerim.se/en/phigo
https://www.unibs.it/it/ateneo/comunicazione/tutte-le-news/phigo-il-progetto-il-recupero-di-fosforo-da-scarti-di-ceneri-anche-unibs-nel-nuovo-progetto-di ricerca finanziato dalla Commissione Europea