



# Method for recovery of valuable struvite mineral from municipal wastewater for treatment of acid mine drainage wastewater

***Transformative solution for sustainable wastewater management, emphasizing resource recovery and circular economy principles.***

## Technology Overview

The North-West University has developed a method in which municipal wastewater is treated to remove ammonia and phosphate while simultaneously recovering struvite as a byproduct.

Struvite is used to reduce the acidity of acidity of the acid mine drainage water which leads to precipitate metal pollutants. This innovative solution effectively addresses the challenge of acid mine drainage and industrial wastewater pollution, providing a comprehensive approach to environmental care and public health protection. With its versatility in treating various sources of pollution, including acid mine drainage from coal and metal mining activities, the technology showcases a significant breakthrough in sustainable water management.

By delivering clean water while minimising environmental impact, it sets a new standard for responsible water treatment practices.

## Technology Benefits

- The process is environmentally friendly.
- The process is cost-efficient compared to traditional techniques.
- The process can also recovery both ammonia and phosphates from wastewater.

## Technology Status

A patent for the technology was filed and granted in South Africa (ZA202109608B).

We currently seeking partners for licensing of the technology.

### Contact Details

Technology Transfer & Innovation Support Office

Ntiyiso Shabangu

+27 18 299 4535

[Ntiyiso.Shabangu@nwu.ac.za](mailto:Ntiyiso.Shabangu@nwu.ac.za)