



Producing Phosphoric Acid and Ammonium Phosphates from Phosphate-Containing Minerals in Wastewater

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The Wisconsin Alumni Research Foundation is seeking commercial partners interested in a method to convert struvite and brushite from wastewater streams into known and well accepted phosphorous sources for fertilizers and fertilizer precursors.

The Invention

A UW-Madison researcher has developed a cost-effective method to convert struvite and brushite (naturally occurring, phosphate-containing minerals that can be a problem in wastewater treatment) into ammonium phosphates or phosphoric acid for use as fertilizers and fertilizer precursors. In contrast to the conventional method of dissolving brushite or struvite in a strong acid solution, which often results in contaminants, in this method the brushite/struvite is contacted with a solid, acid-charged cation exchanger to yield a liquid product that contains phosphoric acid without solid contaminants. The method is easily implemented in municipal, commercial or industrial wastewater treatment plants to remove phosphorous and reduce maintenance complications associated with unwanted buildup of struvite in pipes. It results in non-contaminated, non-radioactive phosphate solutions and byproducts like gypsum that can be readily used.

Additional Information

For More Information About the Inventors

- [Phillip Barak](#)

Tech Fields

- [Animals, Agriculture & Food : Plant biotech](#)
- [Clean Technology : Monitoring, remediation & waste reduction](#)

For current licensing status, please contact Emily Bauer at emily@warf.org or 608-960-9842