



SYNTHESIS OF AMMONIA USING CYCLE-GENERATED HYDROGEN SULFIDE

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The Invention

UW-Madison researchers have developed an improved method of synthesizing ammonia from hydrogen sulfide and lithium nitrate. This process, currently embodied in a continuous cycle, leverages hydrogen sulfide reactant cycling via an elemental sulfur intermediate in conjunction with a water-containing or water and carbon-containing feedstock. Ultimately, this new process could be used to produce ammonia at scale while decreasing the amount of external energy required, particularly when compared to the Haber Bosch process.

Key Benefits

- Potential energy and cost improvements to Haber Bosch
- Reduced carbon footprint for a more green ammonia production route

Additional Information

For More Information About the Inventors

- [Robert Hamers](#)

Tech Fields

- [Materials & Chemicals : Synthesis](#)

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854