



Making fertilisers from nitrogen in air

Slide by Neil Goalby. Available from rsc.li/3Sp30ql

Fertilisers are made from nitrate (NO_3^-) and are usually formed from ammonia using the Haber process. The Haber process uses high temperatures and pressures, needing huge amounts of energy.

A new electrochemical process could be a less energy-intensive way to produce fertilisers. The process involves applying an electric current or potential difference between electrodes to oxidise nitrogen from the air and form nitrate at room temperature and pressure.



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Time to rethink fertiliser factories and find a sustainable solution

Questions

1. Write a word equation for the reaction in the Haber process.
2. Why are nitrogen molecules unreactive?
3. Explain why the new process uses less energy than the Haber process.