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Showcasing research from Professor Deuss's laboratory, Department of Chemical Engineering (ENTEG), University of Groningen, Groningen, The Netherlands.

Organonitrogen platform chemicals and pharmaceutical precursors: a perspective on sustainable chitin utilization

This review explores the chemical conversion of chitin to valuable bio-based products, focusing on the synthesis of nitrogen-containing chemical compounds. It provides a concise overview of chitin deacetylation, depolymerization, and pyrolysis, along with strategies for producing nitrogen-rich compounds such as furans, heterocycles, polyols, amines, and amino acids. Special attention is given to recent advancements in expanding the chemical space attainable from these platforms, particularly the development of benzenoid aromatic compounds. By emphasizing these transformations, this review highlights chitin's potential as a renewable feedstock for nitrogen-containing chemical production.

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