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PENDING

(IN202211070150) A reagentless method of preparing (e)-β-iodoalkenyl sulfides

NEED

Current chemical synthesis methods often rely on excess reagents or generate unwanted by-products, increasing environmental impact. What if there was a way to synthesize important compounds with perfect atom economy, using minimal reagents?

MARKET ANALYSIS

The global fine chemicals market is projected to grow at a 6.3% CAGR, reaching USD 26.5 billion by 2033. Sustainable synthesis methods are a key driver, especially in pharmaceutical and agrochemical sectors. (Source: Grand View Research, 2023)

TECHNOLOGY OVERVIEW

This patent presents a reagent-less method for preparing (E)-β-iodoalkenyl sulfides with 100% atom economy. The process uses iodine in the presence of disulfides, operating under ambient conditions to yield high-purity products with minimal waste.

Target Industries

Chemical manufacturers; pharmaceutical companies focused on eco-friendly synthesis; enterprises in agrochemical and fine chemical industries exploring sustainable methods

TECHNOLOGY KEY FEATURES

The method uses iodine and disulfides under ambient conditions for high-yield, environmentally friendly synthesis of (E)-β-iodoalkenyl sulfides. It avoids excess reagents and by-products, offering a cleaner alternative for industrial applications.

AT A GLANCE

- SDG 12: Responsible Consumption and Production; SDG 9: Industry, Innovation, and Infrastructure

Read more here

Technology is available for licensing/ co-development.

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