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Green Chemistry in Colombian Industry: An Overview

Abstract:

The increasing global emphasis on sustainability and environmental protection has catalyzed the integration of green chemistry principles into industrial culture and projects. This paper explores the current state and essentials of green chemistry within the Colombian industry. The analysis begins with an overview of green chemistry principles and their relevance to industrial applications, including regulatory frameworks, technological advancements, and market dynamics, highlighting the environmental and economic benefits achieved. Key sectors such as food, materials, pharmaceuticals, agriculture, and petrochemicals are examined to illustrate the adoption of green chemistry practices. The role of academic, government and societies institutions improve the discussion, emphasizing collaborative efforts to foster innovation and solutions for the humanity. This work concludes and identify critical factors for the widespread adoption of green chemistry in Colombia, including the need for more access to knowledge, policy support, investment in research, development an environmental structure, and industry-academia partnerships. Green chemistry, define focus challenges on designing products and processes that minimize hazardous substances and provide tools to accelerate the transition towards to enhance sustainability and economic efficiency in Colombia's diverse industrial sectors. Finally, positioning a Colombia industry segment as a leader in sustainable industrial innovation in Latin America.

Biography

Passionate about business models supported by green processes, technology, process industry and the advancement of humanity towards a sustainable industrial revolution. Professional in Chemical Engineering (UIS-Co), MSc. and PhD. in Chemical Engineering (UNICAMP-Br), expertise in Direction, Lidership and Management around the industrial processes, chemical process and education sector. Expert in process and product development. Skills: C2C, Business StartUp, Chemical Process, Oil&Gas, Biofuels, Food, Process Design, Energy Approach, Intensification Process, Water Treatment, Industrial Safety, Intellectual Property, Modeling&Simulation, Technology Transfer and Environment Projects.