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PL2. Stereochemistry of volatiles–the status and perspectives

Daniel Jan Strub[1]*, Stanisław Lochyński[1]

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Stereochemistry is an important subject in various areas of fundamental chemistry, chemical-producing industries, medicine, and life in general. A huge effort has been undertaken over the last century to analyze and synthesize complex natural and synthetic compounds [1].

Optically pure plant-derived low-molecular compounds are important raw materials for the development of potential new products for the flavor and fragrance (F & F) industry [2,3]. Nowadays, studies towards innovations in the F & F field are focused not only on one new molecule but preferably on the whole process related to that molecule's production. Modern approaches in optically pure compound preparation involve the use of enzymes, whole-cell native and bioengineered microorganisms instead of toxic chemical catalysts, maximal atomic economy over the synthetic route, and a shift from batch to flow processes.

This presentation will provide a brief overview of modern "green" approaches in the F & F field with emphasis on the stereochemical processes involved in F & F development.

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[1]Department of Bioorganic Chemistry, Faculty of Chemistry, Wrocław University of Science and Technology, Wyb. Wyspiańskiego 27, 50-370 Wrocław, Poland.
*Corresponding author: daniel.strub@pwr.edu.pl