

Chemistry 2019: Can innovative chemical technologies improve radical chemistry?- Estelle Banaszak Leonard, C Imbs and V Jeux- ESCOM-UTC, France

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Abstract

Radical chemistry is of great interest in many chemical areas, such as medicinal chemistry, material chemistry or polymers, or even formulation, in order to understand and prevent radical disorders. However, despite the lasting interest in performing radical syntheses, the use of innovative techniques for a more eco-friendly approach remains occasional. We will focus on examples showing how natural products can undergo radical transformations under innovative techniques. It will be shown that the combination of uncommon energetic devices with greener solvent can shorten reaction times, or even promote the envisioned reaction. By using aromatic aldehydes, (un)modified amino acids or fatty acids, the molecules from such radical processes can be used in a wide range of applications. Biocides, surfactants, electron-transfer materials or even synthons are real options for molecules valorization.

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