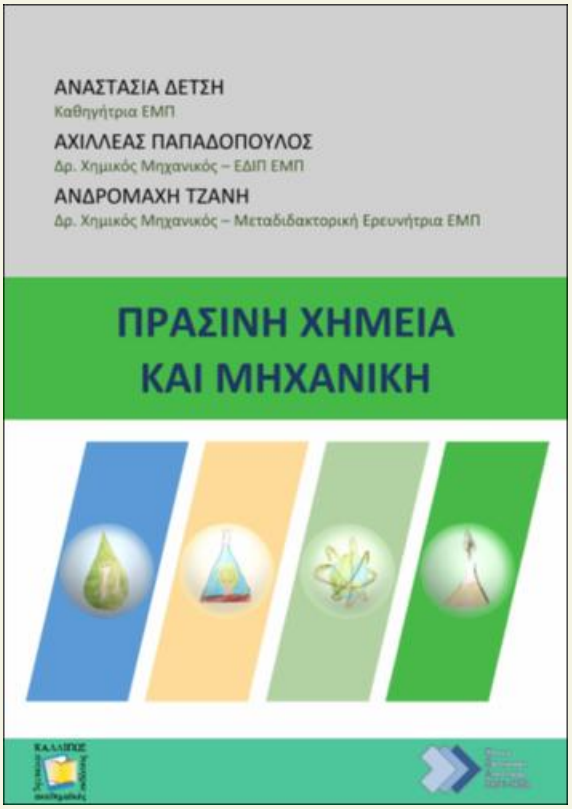

METADATA

Title: Green Chemistry and Engineering

Other Titles: -

Language: Greek

Authors: Detsi, A., Professor, NTUA, Papadopoulos, A., Laboratory and Teaching Staff, NTUA, Tzani, A., Postdoctoral, Researcher, NTUA

ISBN: 978-618-228-231-1

Subject: NATURAL SCIENCES AND AGRICULTURAL SCIENCES, ENGINEERING AND TECHNOLOGY

Keywords: Green Chemistry and Engineering / Green processes / Inherently Safer Design / Green solvents / Green techniques In organic synthesis

Bibliographic Reference: Detsi, A., Papadopoulos, A., & Tzani, A. (2024). Green Chemistry and Engineering [Undergraduate textbook]. Kallipos, Open Academic Editions. http://dx.doi.org/10.57713/kallipos-968

Abstract

Green Chemistry is a new approach to chemical research. It aims to minimize waste, to minimize or eliminate the use and production of hazardous substances during the production processes of chemical products, by modifying the methods by which they are designed, synthesized and used. Green Engineering approaches the design of chemical products and processes through technologically feasible solutions on large scale in order to achieve: (i) reduction of the pollution caused by the construction and operation of an industrial facility, (ii) minimization of human exposure to risk, (iii) optimization of the material and energy use, (iv) economic viability. Green Chemistry is an interdisciplinary field that combines Chemistry, Biology and Physics, and finds applications in the development of chemical products. Green Engineering is a branch of Engineering that serves as a guide for all the fields of Engineering that deal with the processes and systems design. The present book offers spherical coverage of Green Chemistry and Green Engineering, as well as gradual familiarization with the offered knowledge (basic knowledge, specialization, connection between the knowledge and practical problems).

The Project is funded by the National Development Programme 2021-2025 of the Ministry of Education and Religious Affairs and implemented by the Special Account for Research Funds of the National Technical University of Athens and the Hellenic Academic Libraries Link.