Βιομηχανική Οργανική Χημεία

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Abstract

The availability of primary energy, i.e. energy drawn directly from nature (i.e. coal, oil, natural gas, etc.) is today perhaps the most critical problem of humanity because its survival and development depend on it. The increase in the standards of living of a country is accompanied by a corresponding increase in the energy consumed. On the contrary, the essential motivation of many wars is the dominance of energy resources. Suffice it to note that the global consumption of primary energy in 2010 was over 11 billion tons of oil equivalent, almost twice that of 30 years ago. The combination of the fact that all these energy resources (i.e. oil, natural gas, coal) are composed of organic compounds with the processes that occur for example in an oil refinery is sufficient to create the subject of industrial organic chemistry. In this context, this book is recommended, when someone needs information on the chemistry and technological processes during the exploitation of fossil resources to produce energy. Furthermore, in the general framework of industrial organic chemistry, this book includes also other topics such as the chemistry and technology of fats and oils, carbohydrates, as well as various chemical processes. This book is going to cover the teaching needs of undergraduate courses for students of the Departments of Chemistry, Chemical Engineering, Physics, and Mechanical Engineering, as well as Technologists of various specialties, dealing with the interesting topics of conventional energy resources. As the field is very broad, a detailed listing of processes is not attempted but rather an introductory update on the whole range of fossil fuels and their technological upgrading to different energy sources.



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