

Environmental Chemistry

Lecturer: Dr. habil. Tamás Rétfalvi, PhD.

Institute: University of Sopron, Faculty of Forestry, Institute of Chemistry

Course code: EG158-0A000

Credit points: 5

Time table: Lecture:2/Lab.:0

Language: English

Course description

Topics

Chemical processes of natural environment: principles and significance of environmental chemistry.

Evolution of natural environment: synthesis of element, formation of molecules, birth of earth and its geochemical evolution, chemical evolution, hypothesis of origin of life.

Chemistry of lithosphere, hydrosphere and atmosphere: structure of lithosphere, classification of minerals and rocks, chemistry of soil, chemistry of water and aqueous solution, structure of hydrosphere, structure of atmosphere, atmospheric chemical reactions, formation of smog.

Environmental chemistry of elements: transport processes and chemical equilibrium in the nature, biogeochemical pathways of C, N, O, S, P and metals.

Anthropogenic emission of hazardous materials: pollutants in the atmosphere, hydrosphere and soils. Transport processes and degradation of anthropogenic pollutants in the ecosphere.

References

1. Stanley E. Manahan. Environmental chemistry. Lewis publishers, CRC Press 1994. ISBN:1-56670-088-4
2. Baird, C., Cann, M. Environmental chemistry. W.H. Freeman and Co., 2012. ISBN: 1-4292-7704-1