

# The importance of catalysis in the modern world

## (Znaczenie katalizy we współczesnym świecie)

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Catalysis is a phenomenon of great importance in the modern world. It is the basis of the functioning of living organisms (enzymes) and the basis of the modern chemical industry, the development of which affects the progress of civilization in modern society. Its importance can be evidenced by the fact that the production of about 90% of all chemical compounds used by humans every day is based precisely on catalytic processes. The lecture aims to introduce young researchers to the essence of the phenomenon of catalysis, its interdisciplinary nature and its importance for the quality of modern life.

The proposed lecture will cover the following topics:

- Basis of catalysis and types of catalytic systems;
- The importance of catalysis in the chemical industry;
- The role of catalysis in environmental protection;
- Molecular mapping;
- Development of catalysis science;
- New paradigms of catalysis science;
- Catalysis of the 21<sup>st</sup> century.

**Lecture language:** English or Polish depends on the presence of foreign PhD students among the registered people

**Registration for the lecture:** by e-mail till 30.10.2023.

**Lecture timing:** November- February (eight meetings in total, in-person classes at one of the institute's lecture halls)

**Method of assessment:** attendance, exam and a short 10-min presentation related to the topic of the lecture.