

Project title: Nanostructured plasma catalysts for the conversion of carbon dioxide into syngas.

Principal investigator: mgr inż. Ryszard Kapica

Duration: 2019-2022

Project no: **PRELUDIUM 2018/29/N/ST8/02403**

Project objectives:

The main objective of the project is to produce catalytically active thin-film structures, on various supports, based on transition metal oxides (e.g. Cu, Ni, Fe, Co) using a cold plasma deposition. The obtained catalytic systems (support + active layer) will be examined in terms of their molecular structure, nanostructure and catalytic properties in the process of conversion of CO_2 to CO in the reactions: $\text{CO}_2 + \text{H}_2$ or $\text{CO}_2 + \text{CH}_4$, and thus the production of syngas.

The planned research is to answer the question about structure effects of the plasma-deposited films on their catalytic activity.

