National Science Centre Poland

Project title: **Electronic properties of cold plasma produced thin nanohybrid layers based on the carbon family**

Principal investigator: dr Ewelina Frątczak
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Research Project Objectives:

Designing and manufacturing unconventional nanocatalysts for fuel or solar cells is particularly interesting due to the study of the charge carrier transport processes and their electronic structure. Innovative hybrid materials based on carbon and elements from the carbon family are produced in the form of thin films with a unique method of plasma deposition (PECVD). During fabrication self-organization process occurs, and created nanojunctions are capable of separating charges generated by light. This opens up wide potential applications of such systems, e.g. in the processes of photodecomposition of water into hydrogen and oxygen.