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## Seminarium Zakładu Energetyki Jądrowej i Analiz Środowiska (UZ3) Departament Badań Układów Złożonych (DUZ) Wtorek: 30.06.2020

11:30

## **Ewelina Kucal**

## Positron Annihilation as a tool to study defects in Silicon Carbide

## Abstract:

Silicon Carbide has been considered for use in Dual Fluid Reactor (DFR) as a construction material. Very good understanding of behaviour SiC during irradiation at high temperature is a key to safety and long term operation of DFR. The evolution of defects during irradiation and annealing to define the repair mechanism is still under study. Positron annihilation is one of the method which can be used to investigate the evaluation of defects in the irradiated SiC.

In this presentation positron annihilation as a method to study irradiation damage will be discussed. Three different types of positron annihilation method will be described: positron annihilation spectroscopy, Doppler-broadening spectroscopy and angular correlation of annihilation radiation. Potential of positron annihilation to study defects in Silicon Carbide will be explained.

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