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

Wtorek: **21.06.2022**

**11:30**

**dr hab. Jacek Rzadkiewicz, prof. NCBJ**

### **Nuclear Excitation by Electron Capture in Resonant Transfer Process**

#### **Abstract:**

I will discuss research on Nuclear Excitation by Electron Capture in Resonant Transfer (NEEC-RT) that is the inverse process of nuclear internal conversion. After a short introduction on nuclear isomers, I will discuss the attempts to observe the NEEC process carried out over the last several decades. Then I will present the first experimental demonstration of NEEC resulting in depletion of the  $^{93m}\text{Mo}$  isomer at 2425 keV,  $21/2^+$ ,  $T_{1/2}=6.85$  h (*Nature* 554, 216, 2018). Finally, I will present attempts of more or less successful theoretical descriptions (including that presented in *Phys. Rev. Lett.* 127, 042501, 2021) and plans for further research.

Serdecznie zapraszamy  
M. Dąbrowski, T. Kwiatkowski  
<http://www.phd4gen.pl>