

## Katedra fyziky a CENAB zvou na přednášku

### *Molecular Level Studies of Radiation Interaction with Matter*

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z Ústavu fyzikální chemie J. Heyrovského AV ČR bude hovořit na téma

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**Abstract:** The interaction of ionizing radiation with matter is omnipresent in our lives, including reactions occurring naturally, technological and medical applications. The present talk overviews our fundamental studies in this research direction from elementary reactions of molecules isolated in the vacuum to complex interactions with DNA segments in the solution. Three cases studies will be presented referring to interaction of slow multiply charged ions with isolated iron pentacarbonyl, electron interactions with microhydrated DNA bases and studies of DNA segments using DNA origami nanoplatfoms. These are relevant for focused ion beam (FIB) fabrication of nanostructures, radiation damage induced by secondary low-energy electrons in living organisms and concomitant chemo-radiation therapy of cancer, respectively.

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