

# Adsorption on metal surfaces

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Nastupno predavanje

## **Sažetak:**

An understanding of chemical reactions occurring on metal surfaces is essential for explaining a wide range of surface phenomena, such as corrosion, electrochemistry, and heterogeneous catalysis. Heterogeneous catalysis alone has been estimated to serve as a fundamental requirement for over 20% of all industrial production, and its significance is poised to increase in the foreseeable future. The pursuit of sustainable energy solutions stands as one of the paramount scientific and technical challenges of our time, with heterogeneous catalysis occupying a central position in addressing this challenge. Consequently, surface physics and chemistry emerge as captivating yet demanding fields for several reasons. They occur at the interface between the solid state and gas phase, serving as a junction between condensed-matter physics and chemistry. In this lecture, we will show and discuss the most important concepts that enable the understanding of adsorption on metal surfaces. Along with the concepts, we will also mention the most useful experimental techniques and theoretical methods that can provide a deep understanding of adsorption and reactions on metal surfaces.