



## Predavanje

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**Tema:**

**»Energy band alignment of ferroelectric materials: Fundamentals, Experimental Determination, Results, and Implications for electronic properties«**

*Ferroelectrics are materials with energy gaps of 3-4 eV. For application as sensor or actuator the materials must be insulating. Other materials with comparable energy gaps like ZnO or GaN are well known for their semiconducting properties. If such a material is a semiconductor or an insulator is not determined by its band gap but rather by its intrinsic defect properties, which determine whether doping of a material is compensated electronically or ionically. This is directly affected by the absolute energy of the valence band maximum and the conduction band minimum. These values can be determined in so-called interface experiments, where a material is stepwise deposited onto a substrate and analyzed using photoelectron spectroscopy after each deposition step [1].*

[1] A. Klein, *Thin Solid Films* (2012); doi: [10.1016/j.tsf.2011.10.055](https://doi.org/10.1016/j.tsf.2011.10.055)

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***Vljudno vabljeni!***



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