

The utilization of fast AFM's tip-sample interaction for the surface morphology imaging and mechanical properties mapping

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The AFM determination of surface's mechanical properties at nanoscale became one of the major investigation issues, while the development of nanomaterials and nanostructures drawn attention of many research groups. As the response, a number of measurement modes and techniques were developed, providing variety of information. The most attractive approaches allowed to determine the real time tip-sample interactions, enabling both: unique approach to surface morphology imaging and complex mechanical properties mapping. It must be underlined that the observed progress was possible due to efficient data acquisition and processing solutions.

During the lecture, the principles of AFM based surface mechanical properties mapping will be presented. Also, the implementation of advanced tip-sample interaction measurement techniques, providing surface imaging will be discussed.

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