




Conference Proceeding

Biomedical Analysis and Manipulation by SPM: From Molecule to Cell

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Abstract

Our research interests focus on the development of advanced scanning probe microscopy (SPM) for biomedical analysis and manipulation. In this talk, the detail analysis from molecule to cell will includes: (1) Explore DNA self-assembling nanostructures and its mechanism of the thermodynamics, and develop a new room temperature method for DNA self-assembling; (2) Beside, more recent works will be introduced for single molecular manipulation by DNA nanotechnology; (3) Finally, I will propose our recent efforts to extend the atomic force microscopy's application on subcellular analysis and manipulation, and focus on detection method of cancer cell biomarkers and biology mechanism of nanodrugs, which would like to provide more supporting for cancer early detection and diagnosis.

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