

Abstract Submitted
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Electrostatic Force Microscopy Identification of Different Peptide Structures CASPER HYTTEL CLAUSEN, DTU Nanotech — In this work electrostatic force microscopy (EFM) was used to distinguish between different dipeptides tubes, silver filled peptides, spheres and silver wires, all the samples were placed on pre fabricated SiO₂ surfaces with a backgate under ambient conditions. The EFM method used for the experiments was force gradient signal, which uses a dual scan approach in order to minimize the atomic force interactions. The investigation shows that it is possible to distinguish between the three types of structures. Further an agreement between the detected signal and the structure of the hollow peptide was demonstrated. These measurements only show qualitative agreement with the mathematical expressing for the peptide tubes. Further during EFM mapping of the silver filled peptide structures showed a changing effect between the tip and the sample. Investigations of this effect were carried out in order to get a better understanding of the physical properties of the peptide structures.

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