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ABSTRACT

„Influence of microstructure on corrosion behavior of electrodeposited micro and nano-crystalline cobalt-molybdenum alloys”

The aim of this work is to obtain electrodeposited Co-Mo nanocrystalline coatings and to investigate the effect of microstructure on their corrosion resistance in simulated physiological solutions.

The thesis is divided into five chapters.

In summary, nanocrystalline Co-Mo coatings were obtained by electrochemical deposition as well as Co-Mo/TiO₂ nano-composite coatings. Their structure and the influence of different electrodeposition conditions on the structure were investigated and their corrosion resistance was tested in simulated physiological solutions. In addition, the mechanism of layer growth was determined on two types of electrodes.

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