

Corrosion of Metallic Implants and Their Surface Modifications Using Electrochemical Processes

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Keywords: Corrosion, Metallic implant, Surface modification, Electrochemical process

Corrosion resistant metals have been widely used in orthopedic and dental implant applications. However, corrosion of these metallic implants still occurs in the human body. Corrosion behavior of the metallic implants is one of the important matters for their long-lasting clinical applications. The electrochemical anodization and cathodic deposition processes can be used as the potential surface modification methods for the improvement of the biocompatibility of the metallic implants. In my speech, I will present the examples showing the *in vitro* and *in vivo* corrosion behavior and biological response of some metallic implants, including titanium, titanium alloys and others, after surface modifications using electrochemical processes.