

壓電薄膜之生醫感測器應用於牙科植體穩固度檢測

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Abstract

In this study, an aluminum nitride thin film was deposited on a dental implant by thin film deposition technology. A sensing device was developed by integration of cells and the piezoelectrical thin-film reaction. The piezoelectrical property was used as the sensing signal after reaction of the cell and the thin film. Based on the results, phase transformation of the aluminum nitride thin films and the cell reaction with the piezoelectrical thin film were helpful in the integration processes of creating an integrated circuit for a sensing device, which can be used for monitoring the initial stability of dental implants and the process of osseointegration of bone-implant interfaces.