



SEMINAR

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Kolar's lecture hall

The influence of metal titanium surface treatment on the properties of TiO₂ nanotubes grown by anodic oxidation.

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ABSTRACT

TiO₂ photocatalyst can be readily used to completely or partially decompose toxic organic compounds in waste waters or even air. Among many processes to synthesize photoactive TiO₂ the anodic oxidation is particularly interesting since it produces ordered arrays of TiO₂ nanotubes that are firmly attached with the titanium substrate. Although many studies were carried out in order to understand basic principles of the anodic oxidation process, no insightful studies were performed to correlate the surface morphology and chemical composition of starting metal titanium substrate with the growth of TiO₂ nanotubes and their resulting photocatalytic properties. This is why in our work we report on photocatalytic properties of TiO₂ nanotubes after anodic anodization of untreated titanium surfaces and electrochemically polished surfaces of titanium foils from two different titanium foils suppliers.

Kindly invited.