

Stored Charge and its Influence on Properties of Anodic Alumina Films

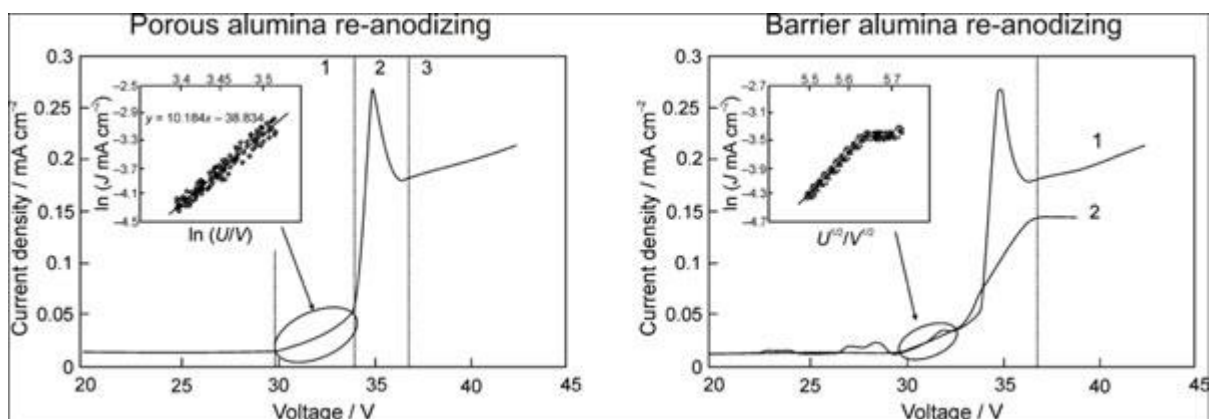
Author(s): Igor Vrublevsky*, Katsiaryna Chernyakova, Renata Karpicz, Arunas Jagminas.

Journal Name: Current Nanoscience

Volume 15 , Issue 1 , 2019

DOI : 10.2174/1573413714666180430140039

Graphical Abstract:



Abstract:

In porous and barrier-type anodic alumina films, the stored charge has electronic nature and it plays a significant role in the process of aluminum anodizing. The charge stored can modify the distribution of local field generated by a voltage applied and thus it can affect the oxide growth. The method for the investigation of thermally activated defects in anodic alumina films by reanodizing technique was also described. It was applied for computation of activation energy of electron traps in barrier layer for sulfuric and oxalic acid alumina films and concentration of the traps.

Keywords: Stored charge, anodic alumina, electron injection, electron traps, activation energy, amorphous structure.

Link: <https://www.eurekaselect.com/node/161692/article/stored-charge-and-its-influence-on-properties-of-anodic-alumina-films>