

Preparation of HMDSO/Amine multilayer coated magnesium alloys using plasma polymerization

최도영, 김병훈*
조선대학교

Magnesium and its alloy possess many advantageous properties, can be used as an implant due to its lightweight and good biocompatibility. However, Mg is highly chemically reactive when exposed to air or water and forms oxide/hydroxide layer, which then make it very susceptible to corrosion. Thin-film deposition on metal is considered as a way of increasing its corrosion resistance. We improve the corrosion resistance properties and bio activity of Mg via multilayer-coated plasma-polymerization of HMDSO and HMDSO/AAm onto a commercially available Mg alloys. These results that the polymeric multilayers coated on Mg alloy may be potentially applied for clinical use. This research was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (No. 2012-0001791).