Highly Biocompatible Porous NiTi Alloys

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Abstract: There are a wide range of applications of biocompatible Porous NiTi alloys in the areas of interbody fusion devices, synthetic bone grafting, etc. Although it cannot be denied of the possibility of high corrosion factor of Porous NiTi alloys as compared to solid Nitinol due to greater surface area in contact with the body fluids. Such cases include definite surface preparation to cater the need of increased biocompatibility. This paper includes the synthesis of porous NiTi alloys through sintering process along with a check of effects of surface treatments on the corrosion properties of Porous NiTi alloys. The Alloys were subjected to different treatments like dry heating, boiling in water and passivation. The corrosion resistance after and before the treatments, were evaluated.