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BIO –MEMTIC: AN ANOTHER TECHNIQUE TO BE USED FOR COATINGS FOR BIO IMPLANT APPLICATIONS

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Hydroxyapatite coatings are becoming more popular among the various materials used for biomedical applications. Due to their Ca/P ratio which is identical to human bone these are completely accepted by the human body which results easy fixation of the implant as soon as it is introduced in the body. Thermal Sprays technique is the only technique which is clinically approved by FDA, USA. But the coatings obtained by these spray technique is also associated with some drawbacks like formation of amorphous phases due to rapid cooling during coating process and coating also suffers failure of coating from the substrate due to poor adhesion between coating substrate interface. Hence to evaluate and avoid these drawbacks a new technique called biomemtic technique for coating is developed. In this technique firstly Ti6Al4V is made bio active by alkali treatment and further it is dipped in HA solution at 37^{o}C for two weeks. XRD and SEM investigation confirms the novel HA layer on bioactive Ti6Al4V substrate. FTIR spectroscopy also confirms the various bonds of PO_4 and Ca. It has been confirms from the results that crystalline HA layer has been formed.

Keywors: Hydroxyapatite, Bio-memtic, Bio-implant, Surface Treatment