

Bone substitute biomaterials

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Abstract

Bioceramics are used in several biomedical applications, particularly in reconstructive surgery, either as replacement elements or bone substitutes (scaffolds). These implants must have a high porosity rate to facilitate the delivery of nutrients and allow a high cell penetration. Although their biological function can be ensured in this way, their mechanical properties will be compromised due to the large amount of void volume. It is therefore essential to maintain their mechanical strength as well as possible and to evaluate their service life in order to guarantee their integrity until the new bone regeneration of tissues. In this context of my graduation thesis, my goal was to develop porous bioceramics by the polymeric sponge method and understand the influence of the porosity and its distribution on the mechanical behavior through numerical and experimental studies. .

Biography:

Marwa OUERGHEMMI is Materials Engineer Graduated from the National School of Engineers of Sfax, Tunisia. Currently holding the position of Project Manager & Quality Development. I have experienced a sense of excitement while working at a project of my own during my graduation, scouting about for physical and mechanical properties of a very challenging material designed for bone substitution.

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