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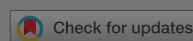
Articles

# Solvent-free polymer/bioceramic scaffolds for bone tissue engineering: fabrication, analysis, and cell growth

Joshua Minton, Cara Janney, Rosa Akbarzadeh, Carlie Focke, Aswati Subramanian, Tyler Smith, ... [show all](#)

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electron microscopy (SEM) was used to examine the effect on scaffold morphology caused by the addition of HA particles. Both  $\mu$ CT and SEM results showed that HA could be incorporated into PCL scaffolds without negatively affecting scaffold morphology or pore formation. Energy-dispersive X-ray spectroscopy (EDS) and elemental mapping demonstrated a uniform distribution of HA within PCL/HA scaffolds. Murine calvaria-derived MC3T3-E1 cells were used to determine whether cells could attach on scaffolds and grow for up to 21 days. SEM images revealed an increase in cell attachment with the incorporation of HA into the scaffolds. Similarly, DNA content analysis showed a higher cell adhesion to PCL/HA scaffolds.

Keywords:

- bone
- polycaprolactone
- hydroxyapatite
- scaffolds
- tissue engineering
- cell culture

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