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Microsphere-based selective laser sintering for building macroporous bone scaffolds with controlled microstructure and excellent biocompatibility

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Highlights

1. Well-designed PCL and HA/PCL porous scaffolds were fabricated by microsphere-based selective laser sintering for the first time.
2. The scaffolds possess controlled microstructure, favorable porosity and mechanical properties.
3. The microsphere-based scaffolds were suitable for MSCs adhesion and growth *in vitro*.
4. The 20% HA/PCL scaffolds significantly promoted MSCs proliferation and differentiation *in vitro*.
5. The microsphere-based scaffolds have excellent histocompatibility.

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