3D PRINTING OF BIODEGRADABLE PHOTOPOLYMERS FOR PERSONALIZED MEDICAL DEVICES

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3D printing has attracted great attention due to its powerful ability to create complex 3D geometries with precise microarchitectures. In combination with medical imaging techniques, it might provide enormous opportunities to design customized drug formulations and biomedical devices.[1] Among the existing 3D printing techniques, digital light processing (DLP) emerged with high precision, desktop size, designable materials and relatively low cost, which is based on a localized light-initiated photopolymerization process, taking place in a bath containing liquid (macro)monomers and photoinitiators. However, the lack of biocompatible and biodegradable materials suitable for DLP limits their application in the biomedical area, especially for the manufacture of elastic personalized devices.[2] We recently developed novel synthetic strategies to enable the digital light 3D printing of biodegradable polymeric materials with tunable mechanical properties.[3,4] These works open new perspectives for fabricating precise personalized medical devices with biodegradability as well as ideal elastomeric properties by 3D printing.

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[3] Paunović, N.; Bao, Y. et al, *Sci. Adv.*, 2021, 7, eabe9499.

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