

# ADVANCED BIOCOMPATIBLE PHOTOPOLYMERS FOR BIOMEDICAL APPLICATIONS

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Photopolymers have proved to be an ideal material platform for biomedical applications. Their intrinsic properties to cure in seconds opens up manifold possibilities, incl. *in situ* curing of, e.g., adhesives and of course 3D printing of individualized medical devices, e.g., implants.[1] Moreover, their versatility and adaptability enable the tuning of properties, e.g., their mechanical characteristics, over several orders of magnitudes.[2] For instances, photohydrogels perfectly mimic the mechanical behavior of soft tissue while highly filled photopolymer composites excellently resemble bone.

For this reason, we are interested to continuously extend the toolbox of biocompatible photopolymer precursors. One important class of materials in this context are vinyl esters [3] and we presented a range of use cases in the field of biomedicine.[4-7]

This talk will give an overview on the precursor design principles and synthesis, the adjustment of material composition to satisfy required material properties and finally successful use cases for biocompatible photopolymers in biomedicine.

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