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# Chitin nanocrystal enhanced wet adhesion performance of mussel-inspired citrate-based soft-tissue adhesive

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## Highlights

- Chitin nanocrystal was creatively used to improve the wet adhesion property of tissue adhesive
- Homogeneous nanocomposite adhesives were facilely prepared by simple aqueous blending
- Chitin nanocrystal endowed the adhesive with extra crosslinks to enhance the bulk cohesion property
- Macroscopic wet adhesion performance was considerably improved with increasing ChiNC content.

## ABSTRACT

Chitin nanocrystal (ChiNC) with its good biodegradability and biocompatibility as well as rod-like structure characteristic has become one of excellent nanofillers to enhance mechanical properties and bioactivity of biomedical polymers. For further extending its application fields, here, we dispersed ChiNC into a recently synthesized citrate-based tissue adhesive (POEC-d) and explored its effects on the adhesion and cytocompatibility

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