



# Bacterial Cellulose-Based Hydrogels: Synthesis, Properties, and Applications

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## Abstract

There is an importunate effort taking place worldwide to obtain the innovative hydrogels either from natural, synthetic, or mixed type polymers, ever since the breakthrough invention of the first hydrogel of polyhydroxy ethyl methacrylate. Predominantly the cellulose-based hydrogels attracted the attention of researchers due to its renewable, biodegradable biopolymeric nature. In comparison to plant cellulose (PC), the bacterial cellulose (BC) has been preferred due to its pure fibrous biomaterial nature, high crystallinity, ultrafine three-dimensional nano-structure network, high water absorption, superior mechanical properties,

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