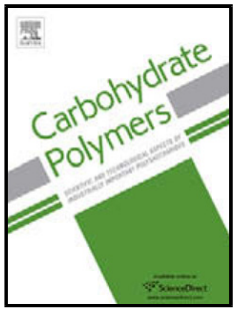

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Conductive bacterial cellulose-polyaniline blends: influence of the matrix and synthesis conditions

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Highlights:

- BC matrixes greatly influence the blend membrane final properties.
- The synthesis conditions influence the blend membrane conductivity.
- Improved conductivity is obtained through *in situ* polymerization on drained BC.
- Changes in the physico-chemical properties were highlighted by IGC.

Abstract

Bacterial cellulose/polyaniline (BC/PANi) blends present a great potential for several applications. The current study evaluates the impact of using different BC matrixes (drained, freeze-dried and regenerated) and different synthesis conditions (*in situ* and *ex situ*) to improve the inherent