

### Development of regenerated bacterial cellulose films from BC pellets obtained through agitation culture

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Bacterial cellulose (BC), an important biopolymer received tremendous applications in biomedical and other industrial fields. The discrepancy between the production efficiency and related characteristics has hindered its industrial scale utilization. BC Films are obtained through static cultivation with low productivity. Agitation strategy give higher productivity but the obtained pellets (granules) don't entertain the aforementioned applications. A strategy which could convert the BC pellets into BC films could significantly contribute towards the industrial scale up of BC with ample applications. An approach described here can lead towards the goal of developing BC films from pellets. The pellets obtained from agitated culture were dissolved in N-Methylmorpholine-N-oxide (NMMO). The solution was casted on glass plates with applicator and the produced films were purified with water. Structural morphology observed through FE-SEM revealed that nanofibril arrangements in regenerated BC films were almost similar to that obtained from static culture. The present strategy could generate new magnitude in industrial scale up of BC films with controlled dimensions.