**Supplementary Information**

Facile In-Situ Synthesis of Nanocrystalline Celluloses-Silver Bio-nanocomposite for Chitosan Based Active Packaging

Mona T. Al-Shemy1\*, Amira M. El-Shafei2, Aly Al-Sayed3 and Abeer M.Adell

1 National Research Centre, Cellulose and Paper Department, 33El-Bohouth St. (Former El-Tahrir St.), Dokki, P.O. 12622, Giza, Egypt.

2 National Research Centre, Textile Research and Technology Institute, 33El-Bohouth St. (FormerEl-Tahrir St.), Dokki, P.O. 12622, Giza, Egypt.

3 National Research Centre, Water Pollution Research Department, 33El-Bohouth St. (Former El-Tahrir St.), Dokki, P.O. 12622, Giza, Egypt.



**Online Resource 1**  XRD patterns of the three extracted NCs



**Online Resource 2**Transparency of (a) uncovered background, (b) neat CS film, (c, d & e) CSbio-nanocomposite loaded with ONC-Ag, SNC-Ag and PNC-Ag, respectively