Development of bioelectrochimic sensors for living bacteria sensing in textiles

María Díaz González
Instituto de Microelectrónica de Barcelona, IMB-CNM (CSIC)

Smart textiles is a fast-growing field with a wide range of applications. In this context, antimicrobial textiles with bacterial sensing functionality are highly demanded to improve infection control in medical and healthcare environments.

Electrochromic compounds (i.e. Prussian blue) are very promising materials to be used as bacterial detector labels for smart color-changing textiles. These materials undergo optical changes (between two coloration states) depending on their redox state and have the potential ability to act as redox indicators of bacterial activity.