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pH-Switchable Bacteria Detection Using Zwitterionic Fluorescent Polymer

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ABSTRACT

A zwitterionic fluorescent polymer with high sensitivity to pH changes was constructed for the detection and imaging of both gram-positive and gram-negative pathogenic bacteria. A detection probe using the zwitterionic fluorescent polymer was synthesized with single boron dipyrromethane (BODIPY) as a hydrophobic dye and bromoethane as a cationic group for bacteria binding with conjugated poly(sulfobetaine methacrylate) (BOD/BE-PSM). The zwitterionic fluorescent polymer bound to bacteria through ionic complexes between anionic

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