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#### ACCEPTED MANUSCRIPT

# A Mixed Matrix Eu-4,4'-Biphenyldicarboxylate Coordination Polymer Film as a Fluorescence Turn-Off Sensor to Aniline Vapor

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#### **Abstract**

The ionothermal reaction of EuCl<sub>3</sub> with 4,4'-biphenyldicarboxylic acid (H<sub>2</sub>BPDC) produced a 3D fluorescence coordination polymer (CP), [PMI]<sub>2</sub>[Eu<sub>2</sub>(BPDC)<sub>3</sub>Cl<sub>2</sub>] (1). 1 was dispersed onto the bandage, and further infiltrated by polyvinylidene fluoride (PVDF) to give a mixed matrix 1@PVDF/bandage composite film (1-film). The fluorescence and the morphology indicate 1-film can emit red fluorescence and the CP particles are on the surfaces of bandage fabrics with the adhesion of PVDF. The fluorescence of 1-film can be quenched

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M. L. Shen and Z. Wei contribute equally to the work.

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