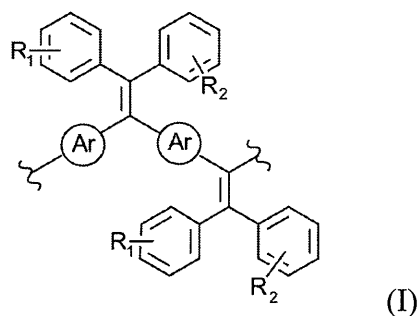


ABSTRACT

In a first aspect, there is provided polymeric nanoparticles having a unit structure represented by formula (I),



wherein

R_1 and R_2 are independently selected from the group consisting of hydrogen, alkyl, cyano, formyl, alkyl carbonyl, carboxylic acid, alkyl carboxylic acid, carboxylic ester, alkyl carboxylic ester, alkylaldehyde, and ketone;

Ar is selected from the group consisting of substituted or unsubstituted aromatic rings and substituted or unsubstituted heteroaromatic rings, wherein the substituents are independently selected from the group consisting of C_{1-12} alkyl and wherein the heteroatom is independently selected from the group consisting of N, S, and O; and

$\sim$ indicates the attachment point of the next unit.

The present disclosure also relates to a device for the detection of nitro compounds comprising the polymeric nanoparticles as defined herein, a method of fabricating such as device, a method for detection of nitro compounds, use of the polymeric nanoparticle for the detection of nitro compounds and a method of preparing the polymeric nanoparticles.

[No suitable Fig.]