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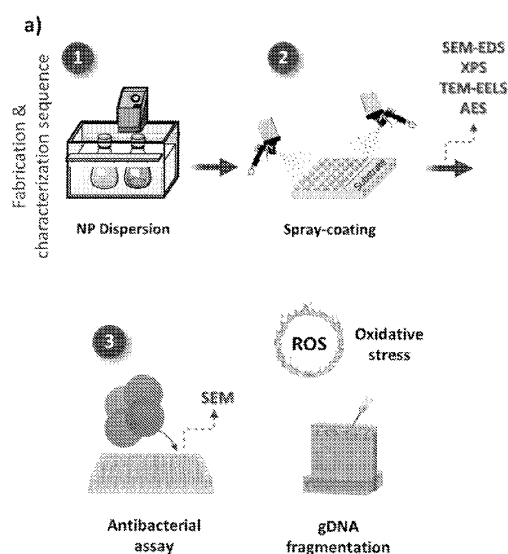
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(54) Title: COPPER NANOPARTICLE FORMULATION TO PROMOTE RAPID PATHOGEN INACTIVATION

Figure 1



(57) Abstract: A composite material for killing a microbe on contact is disclosed. The composite material comprises a substrate such as cotton fibres; a silicon-containing material such as silicates, silanes and siloxanes; and a plurality of nanoparticles comprising Cu₂O. The composite material is made by providing an intermediate material formed from a substrate material and a silicon-containing material; and attaching a plurality of nanoparticles comprising Cu₂O onto the silicon-containing material. The nanoparticles can be attached to the intermediate material by methods such as dip-coating or spray-coating. The composite material may be used as an antimicrobial surface.

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