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— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

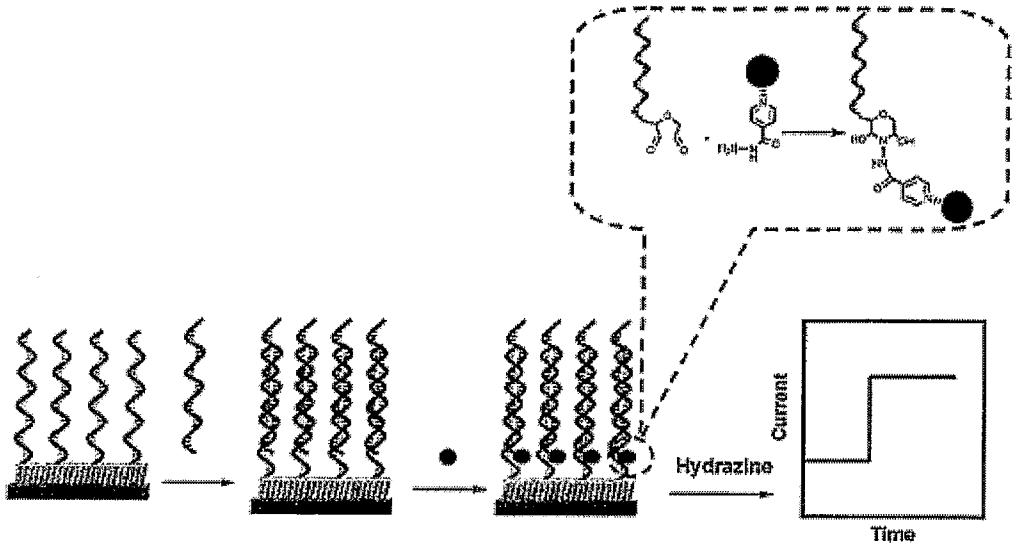
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(54) **Title:** NANOPARTICLE AND METHODS THEREFOR



(57) **Abstract:** There is provided an electroactive nanoparticle, which may be used as a label in electrochemical detection assays. The nanoparticle comprises a transition metal oxide and a capping agent, the capping agent comprising a ligand group and a functional group. The capping agent is coordinated to a transition metal centre in the transition metal oxide via the ligand group. Also provided are methods relating to preparation of the nanoparticle and detection of an analyte molecule in a sample using electrochemical methods.

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