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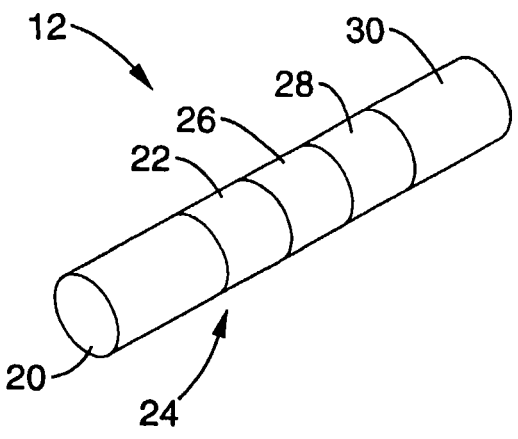
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(54) Title: METHODS OF FABRICATING NANOSTRUCTURES AND NANOWIRES AND DEVICES FABRICATED THEREFROM



(57) Abstract: One-dimensional nanostructures having uniform diameters of less than approximately 200 nm. These inventive nanostructures, which we refer to as "nanowires", include single-crystalline homostructures as well as heterostructures of at least two single-crystalline materials having different chemical compositions. Because single-crystalline materials are used to form the heterostructure, the resultant heterostructure will be single-crystalline as well. The nanowire heterostructures are generally based on a semiconducting wire wherein the doping and composition are controlled in either the longitudinal or radial directions, or in both directions, to yield a wire that comprises different materials. Examples of resulting nanowire heterostructures include a longitudinal heterostructure nanowire (LOHN) and a coaxial heterostructure nanowire (COHN).

WO 02/080280 A1

ACTION

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