

The invention relates to electronics, in particular to the technology for material manufacturing for electronics and instrument engineering, namely to ordered composite nanostructures.

The process for manufacturing a filiform nanostructure includes formation of a semimanufactured article, made in the form of a close-packed current-conducting microwire bundle, for example metal, semimetal or superconducting, each microwire being in dielectric insulation, for example, glass insulation, placed into a glass tube, at the same time the overall diameter of the bundle constitutes 1...25 mm, heating of semimanufactured article up to the softening and melting temperature of its components, drawing of semimanufactured article up to the obtaining of a filiform nanostructure and subsequent cooling thereof. Formation of semimanufactured article is carried out by means of preliminary manufacturing of an initial semimanufactured article of extensive form, consisting of hollow glass microcapillars, placed parallel to each other and placed into the glass tube. Then the microcapillar are filled with microwire-forming current-conducting material, submerging the initial semimanufactured article from the part of the open ends of microcapillars into the melt of the microwire-forming current-conducting material and creating the positive differential pressure between the melt surface and the cavities of each microcapillar.

Claims: 6