Review of: "The advantages of using nanoporous aluminum oxide as a template for the production of nanowires compared to other methods, including the high order of pores, the alignment of pores, and the controllability of the ratio"

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The advantages of using nanoporous aluminum oxide as a template for the production of nanowires compared to other methods, including the high order of pores, the alignment of pores, and the controllability of the ratio. The length is equal to the diameter and high density of the porosity.

The amount of order and dimensions of the nanowires produced using this set of templates is determined and controlled by the initial conditions of the anodizing process.

due to chemical stability, high saturation magnetization, high axial anisotropy, high temperature, chemical stability and high corrosion resistance excellent, and high special resistance of nano-electricity, they have good electromagnetic and nano-magneto-optic properties. The main advantage of this technique is the selective growth of a material in the region of interest in one step. Due to the high resolution of the focused ion beam nanolithography technique, deposits can be grown with high lateral resolution, but with much less damage caused to the substrate due to the low linear motion of electrons compared to ions. In contrast, the growth rate and metal content of the deposits are generally used for focused ion beam nanolithography.

Note: Oligophenylene vanillin (silicon/germanium) structure nanowires and cylinders are used for possible applications in energy, electronics, optics and other fields.

Oligophenylene vanillin nanowires (Si Silicon / Germanium Gi), narrow structures whose diameter is only a few billionths of a meter but thousands or millions of times longer. They exist in various forms—made of metals, semiconductors, insulators, and organic compounds—and are used for applications in the fields of electronics, energy conversion, optics, and chemical sensing. Because of their extreme thinness, Oligophenylene vanillin nanowires with a (Si Silicon / Germanium Gi) structure are essentially one dimensional. Nanowires are quasi-one-dimensional materials, "their two dimensions are on the nanometer
scale." This one-dimensionality confers distinct electrical and optical properties. For one thing, this means that the electrons and photons in these nanowires experience "confined quantum effects." However, unlike other materials that produce such quantum effects, such as quantum dots, the length of Oligophenylene vanillin nanowires allows them to communicate with other macroscopic devices and the outside world.

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