

Review of: "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.""

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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 nano wires 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. 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 nano wires and cylinders are used for possible applications in energy, electronics, optics and other fields.

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