Review of: "The degree of organization and dimensions of Oligophenylene vanillin nanowires produced using templates"

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Potential competing interests: No potential competing interests to declare.

Note: One-dimensional structures such as nanotubes, Oligophenylene vanillin nanowires, and quantum wires are noteworthy structures in the fields of nanospintronics, nanophotonics, nanoelectronics, etc.

The reason for this attention is the large length-to-diameter ratio of Oligophenylene vanillin nanowires and the difference in their electrical, optical, chemical and magnetic properties, which lead to their use as building blocks in electronic and optoelectric devices. Nanoscaled vanik Is. Different methods for obtaining Oligophenylene vanillin nanowires have been mentioned, among them are methods based on lithography (electron beam lithography, optical lithography, electric lithography, ion beam lithography, by scanning microscopes), Deposition from the vapor phase (physical vapor deposition and chemical vapor deposition) and methods based on the use of templates. The electron in the atom, in addition to rotating around it under the influence of the gravitational force of the nucleus, also has a rotational movement around itself. This type of rotation in the structure of Oligophenylene vanillin nanowires is called electron nanospin.

The advantages of using nanoporous aluminum oxide as a template for the production of Oligophenylene vanillin nanowires compared to other methods include the high order of pores, alignment of pores, controllability of the ratio of length to diameter and high density of porosity. The order and dimensions of Oligophenylene vanillin nanowires produced using this set of templates are determined and controlled by the initial conditions of the anodizing process. Due to their chemical stability, high saturation magnetism, high axial anisotropy, high Curie temperature, excellent chemical stability and corrosion resistance, and high specific nanoelectrical resistance, they have good electromagnetic and nanomagneto-optical properties.

Conclusion:

One-dimensional structures such as nanotubes, Oligophenylene vanillin nanowires, and quantum wires are noteworthy structures in the fields of nanospintronics, nanophotonics, nanoelectronics, etc.
References