Review of: "Nanowires (SiNWs) have high mobility and surface-to-volume ratio"

Carlos Sanchez¹

¹ Universidad Pontificia de México

Potential competing interests: No potential competing interests to declare.

Note: From the physical properties of Oligophenylene vanillin nanowires, we can mention their electrical, photoelectric and mechanical properties.

Nanowires (SiNWs) have high mobility and surface-to-volume ratio, which makes them easy to control using a weak electric field. These one-dimensional nanostructures are created from nanowires with a diameter in the range of nanometers and a length of more than a micrometer. It has been done in the manufacture of nanowires through regular one-dimensional arrays with the help of different physical and chemical methods. Methods such as the use of electron beam or lithography method, heavy ion irradiation, laser, chemical and electrochemical methods such as water heat and spontaneous assembly methods used to make the membranes of molds can also be used.

In making one-dimensional nanostructures such as Oligophenylene vanillin nanowires, the electro-accumulation method consists of three general steps:

firstly, the creation of a porous template as a suitable substrate and framework for the accumulation of nanowires, secondly, the growth of nanowires along the cavities of the template, and thirdly, removing the template and separating the nanowires from it. The nanowires are directly dependent on the characteristics of the mold surface such as the size distribution of the holes, the density of the holes and the superiority of the surface of the nano-holes. In order to control the properties of Oligophenylene vanillin nanowires, parameters that are effective in the formation and optimization of the diameter of the holes and the thickness of the mold should be considered.

Conclusion:

From the physical properties of Oligophenylene vanillin nanowires, we can mention their electrical, photoelectric and mechanical properties.

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References

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