Review of: "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"

Radousha Asanovic

1 Indiana University

Potential competing interests: No potential competing interests to declare.

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.

Conclusion:

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

References

1. ^Lei Choe. (2024). Review of: "The field-effect tunneling transistor nMOS, as an alternative to conventional CMOS by enabling the voltage supply (VDD) with ultra-low power consumption.". Qeios. doi:10.32388/z3oxov.


8. Chad Allen. (2024). Review of: "FinFET nanotransistor, the reduction of scale causes more short channel effects, less gate control, an exponential increase in leakage currents, severe process changes, and power densities", Qeios. doi:10.32388/h3qk7b.


26. ^Afshin Rashid. (2024). Review of: "In general, an electrical nano-biosensor consists of an immobilized static biological system (based on their own built-in immobilized static biological system)". Qeios. doi:10.32388/pq6ho0.


28. ^Prienna Radochevich. (2024). Review of: "Block nanolithography Oriented copolymer is a combination of top-down lithography and the bottom-up self-organization of two polymers to produce high-resolution nanopatterns over large areas". Qeios. doi:10.32388/a0nexa.

29. ^Prienna Radochevich. (2024). Review of: "Block nanolithography Oriented copolymer is a combination of top-down lithography and the bottom-up self-organization of two polymers to produce high-resolution nanopatterns over large areas". Qeios. doi:10.32388/a0nexa.

30. ^Afshin Rashid. (2024). Review of: "Nano supercapacitor called (electrostatic) -- The total thickness of each &lt; a i=4\&gt;electrostatic nanocapacitors only 25 nm". Qeios. doi:10.32388/247k3y.