Review of: "Functional specifications and resistance measurement of Nano wire"

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Potential competing interests: No potential competing interests to declare.

Note: nanowires have a structure that has an amazing length-to-width ratio. Nanowires are very thin - it is possible to create nanowires with a diameter of only one nanometer, nanowires are used to create the smallest transistor (nanotransistors).

Nano wire can have insulation, semiconductor or metal properties. Insulators do not carry electrical charges, while metals carry very good electrical charges. Semiconductors lie between the two and are charged under the right conditions. By placing semiconductor wires in the right configuration, transistors can be made that either act as switches or amplifiers. Some of the interesting and anti-flexible properties of nanowires are due to their small scale.

Some nanowires are ballistic conductors. In normal conductors, electrons collide with atoms in the conductor material. This causes the electrons to slow down as they travel, creating heat as a byproduct. In ballistic conductors, electrons can pass through the conductor without collision. Nanowires can conduct electricity efficiently without generating extreme heat. As the bulk volume decreases to the size of the nanoparticle, its melting point decreases, because when you reduce any particle to the nanoscale, there is a significant increase in the surface-to-volume ratio. Top-down approach and bottom-up approach in the manufacture and propagation of nanowires. A top-down approach literally means you take a large amount of the material you want to use for the nanowires and etch until you get the right size. A bottom-up approach is an assembly process in which smaller particles join together to form a larger structure.

Conclusion:

Nanotransistors are created using nanowires. And increasing the resistance of nano wire is directly related to the efficiency and durability of nano transistors. And nano-ion transistors perform better than current graphene nano-transistors.

References

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