

Transport properties of electrodeposited ZnO nanowires

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ZnO nanowires were electrodeposited by using a template approach. Ion track polycarbonate foils (30 μm thick) were used as templates. Current–voltage (I – V) characteristics were recorded in the temperature range 40–300 K. I – V characteristics show a symmetric, non-linear shape, at temperatures greater than 240 K and voltages greater than 15 V. At lower temperatures, linear characteristics were recorded for the voltage range used. The temperature dependence of the electrical resistance is activated, with activation energy of 0.42 eV at temperatures greater than 240 K.