

## Electrical properties of electrodeposited CdS nanowires

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A template method was used to obtain cadmium sulfide (CdS) nanowires. Polymer ion tracks foils (30  $\mu\text{m}$  thick) were used as templates, after etching with solutions containing NaOH and methanol. CdS nanowires were electrochemically grown in the resulting pores. The nanowires were contacted by sputtering a gold layer on top of the membrane, and the electrical properties were recorded in the temperature range 40–300 K. An activated electrical resistance was observed, with activation energy of 0.27 eV at temperatures larger than 180 K.  $I$ – $V$  characteristics show a symmetric, non-linear shape, in the voltage range used in this experiment.