Silicon Nanowire Fabrication based on UV-assisted Nanoimprint Lithography for the Detection of Dopamine

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Ultraviolet-nano imprint lithography(UV-NIL) is one of the most promising key techniques in the growth of nanoscale lithographic technology. By using UV-NIL, we have produced 100 nm wide silicon nanowire patterns. The electrical property of silicon nanowire and metal electrodes were confirmed by semiconductor parameter analyzer. The devices have been used for the detection of dopamine, which is mainly concerned with the depression and Parkinsonism. we have obtained graphs of electric change and the proposed techniques could be applied to nanoscale biochip field.