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# Deposition of SiC films with single source for MEMS applications

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We have tried to find the most suitable conditions for the deposition process of silicon carbide thin films as a material for MEMS techniques. We have also studied its application to semiconductor processes. High quality silicon carbide thin films are grown by metal-organic chemical vapor deposition (MOCVD). This process employs single molecular precursors such as diethyl methylsilane(DEMS), 1, 3-disilabutane(DSB) at pressures between $1.0\times10^{-4}$ and $1.0\times10^{-5}$ Torr and a growth temperature in the range of 800～1000℃.

The films were characterized by X-ray diffractometry (XRD), X-ray photoelectron spectroscopy (XPS), Atomic Force Microscope(AFM) and scanning electron microscopy (SEM).