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Universal Template Technique for Patterned Growth of Carbon Nanotubes YING CHEN, HUA CHEN, JUN YU, BILL LI, VINCE CREIG, JAMES WILLIAMS, Department of Electronic Materials Engineering, The Australian National University, Canberra, ACT 0200 — A new template technique has been developed to help patterned growth of carbon nanotubes on Si surface without predeposition of metal catalysts. Focused ion beam (FIB) milling system was used to create nanosized patterns on Si wafer surface as the template. Under a controlled pyrolysis of iron phthalocyanine at 1000 ^{o}C, carbon nanotubes only nucleate and grow in the template. The selective growth is due to the special surface morphology and crystalline structure created by FIB. This template technique can be used to help patterned growth of other nanotubes and nanowires on any substrates.

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