

# Graphene growth on "technical" supports: Ni(111)/Si(111) and Ni(111)/Al<sub>2</sub>O<sub>3</sub>(0001)

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Epitaxial graphene can be grown on various metal single crystal supports, however, high cost of these substrates limits their applicability in electronic devices. We deposited nickel onto "technical" Si(111)-(7x7) and Al<sub>2</sub>O<sub>3</sub>(0001) supports and annealed at high temperatures trying to obtain epitaxial nickel films that could mimic single-crystalline Ni(111). As fabricated substrates were then annealed in ethylene (C<sub>2</sub>H<sub>4</sub>) gas in order to obtain epitaxial graphene. Preliminary *in situ* scanning tunneling microscopy (STM) and *ex situ* Raman spectroscopy results confirmed the presence of graphene and/or graphite on both supports.

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