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**A density-functional theory study for the mobility of carbon atoms on 6H SiC(0001)** CHRISTIAN RATSCH, UCLA — Graphene is a very promising material for many microelectronic applications because of its unique electronic properties. Among the several proposed routes to fabricate (single) layers of graphene, the growth of epitaxial graphene on 4H and 6H SiC(0001) appears to be particularly promising. The 6H SiC(0001) surface has 3 different polytypes. In this talk, results from density-functional theory calculations will be presented for the potential energy surfaces and different diffusion rates of C atoms on these different polytype surfaces. Both, the Si or C terminated surfaces will be investigated. Results for the adsorption of single and multiple graphene layers will also be presented.

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