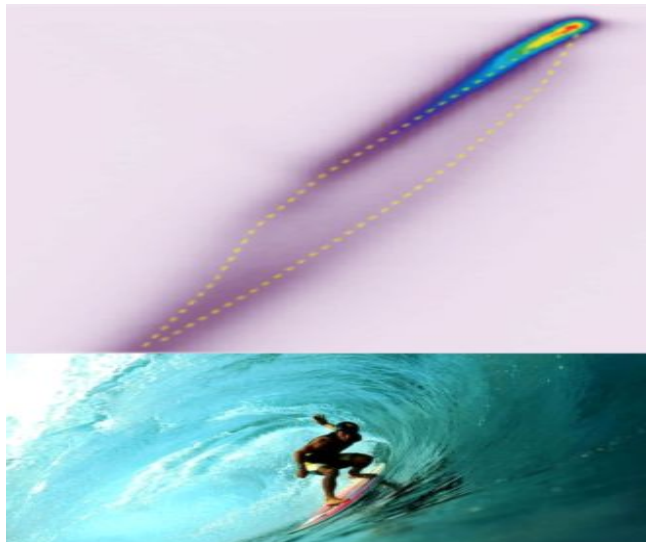


## Epitaxial Graphene on SiC: From Flakes to Wafers

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Graphene, the 2-dimensional crystal of  $sp^2$ -bonded carbon atoms, is currently one of the hottest topics in solid state physics. The electronic structure of the charge carriers in grapheme is described by the Weyl-Hamiltonian for massless particles. This results in interesting properties such as an unusual quantum Hall effect or Klein tunneling. Charge carriers in grapheme, whose density and type (electrons or holes) can be tuned by an external gate, are characterized by a high mobility, which makes grapheme interesting for electronic applications. Furthermore, grapheme is mechanically very stable and thereby almost completely transparent which may be exploited in flexible and transparent electrodes. In order to bring grapheme from the lab into the application, methods must be developed for a large scale production of grapheme by epitaxial growth on a substrate. In my talk I will survey the properties of epitaxial graphene grown on silicon carbide surfaces.