

Patterned Functionalization of Graphene and Inorganic 2D-Materials

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A fundamental challenge of graphene functionalization is the spatially resolved covalent patterning of this 2D-system. We will also emphasize our recent success in this direction. We have demonstrated that both mask assisted patterning of graphene and laser writing can be used and even be combined to generate hierarchically ordered multifunctional 2D-architectures. The potential of practical applications is enormous. This includes chemical information storage exemplified by complete write/read/erase cycles. Moreover, we will present our recent on the chemical functionalization of other 2D-materials such as particular black phosphorus (BP) and MoS₂.