

Two-dimensional crystals: the next steps ahead

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With the advent of graphene the new science and technology of two-dimensional crystals was created.

The physical properties of these new materials are very different from its three dimensional counterparts for several different important reasons including their soft nature due to extreme thickness, their sensitivity to environmental conditions since they are pure surfaces, and the strong role played by electron-electron interactions due to lack of screening. I will discuss some of the progress in this exciting area of research and the challenges that remain to be conquered before one reaches the holy grail of using these materials in three dimensional heterostructures.