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Defect complexes on SiC surfaces

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Abstract :

SiC is a technologically important material because of its hardness and semi-conducting properties. SiC surfaces are important, for example, as a substrate in the growth of graphene. The epitaxial growth of SiC is important and here the structure of SiC surfaces are relevant. In our work, we study surfaces of SiC using first principles total energy methods. We consider surfaces of the cubic and hexagonal forms of SiC, both Si-terminated and C-terminated. Our primary focus is adatoms and vacancies on these surfaces. We have shown the effect of surface geometry on these defect complexes with the view of determining low energy configurations.

Award :

Yes

Level :

MSc

Supervisor :

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Paper :

No

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