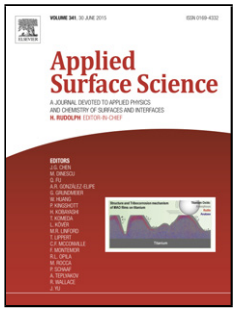

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Boron doping effect on the interface interaction and mechanical properties of graphene reinforced copper matrix composite

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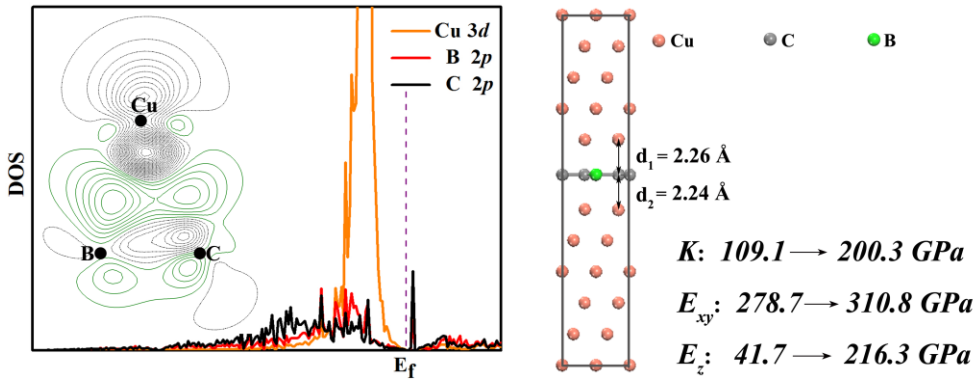
Graphical abstract":



Highlights:

- The chemical role of the intermediate O between Cu and graphene is revealed.
- Interaction between Cu and B- and N-doped graphene with integrity are studied.
- B doping effect is comparable to or even better than the intermediate oxygen.
- B doping enhances the mechanical properties of graphene/Cu composite.