Hydrogen Isotope Interactions with Diamond like Carbon

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We have been developing molecular dynamics (MD) simulation of interaction between hydrogen and graphite using a modified Brenner empirical bond order potential (REBO) model [1,2,3]. Recently, we tried to reveal hydrogen injection onto some types of surfaces of single crystal diamond by MD simulation [4]. According to our simulation, hydrogen adsorption depends on the surface structure of diamond strongly. Therefore, paying attention to amorphous structure of diamond like carbon (DLC) which is quite different from the diamond crystal, we choose DLC as the target of the hydrogen injection [5,6].

In the present paper, on the basis of the previous work, we reveal what kind of yield detaches when hydrogen isotope impacts onto DLC. We, moreover, make the dependence of yield on the isotope clear.

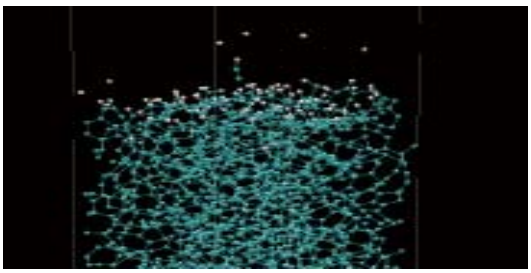

Fig. 1 Surface of diamond like carbon structure (DLC).

References

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