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Effect of hydrogen coverage on elastic response and acoustic wave propagation of SiC sheet

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Highlights

- The effect of incomplete sp3 hybridization on the elastic properties of SiC hybrid is studied.
- Polar plot of Young's modulus, Poisson ratio and acoustic waves speed are given.
- The structures are stiffer than silicene and stronger than graphene.
- Hybridization reduces the propagation of acoustic waves' values along zigzag direction.

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