

## Supporting information

### Manufacturing of Complex Silicon–Carbon Structures: Exploring SixCy Materials

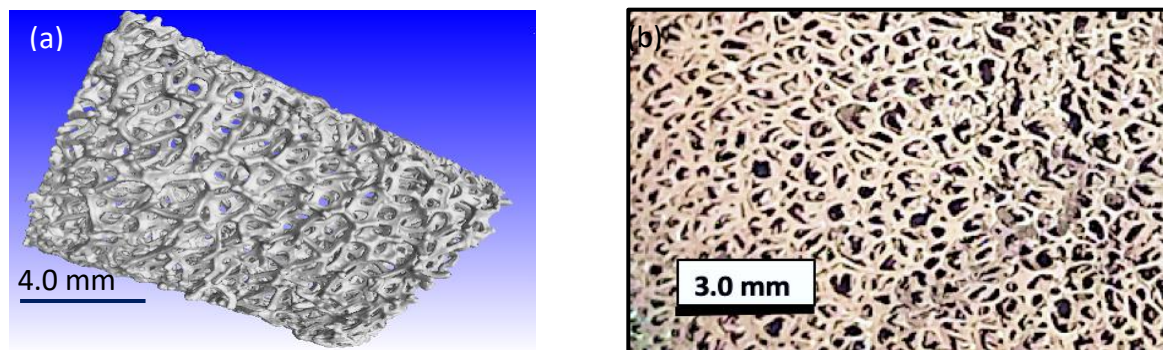
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*Figure S1. (a) SEM images from the graphene foam precursor, and (b) photograph from the produced Si/C foam.*

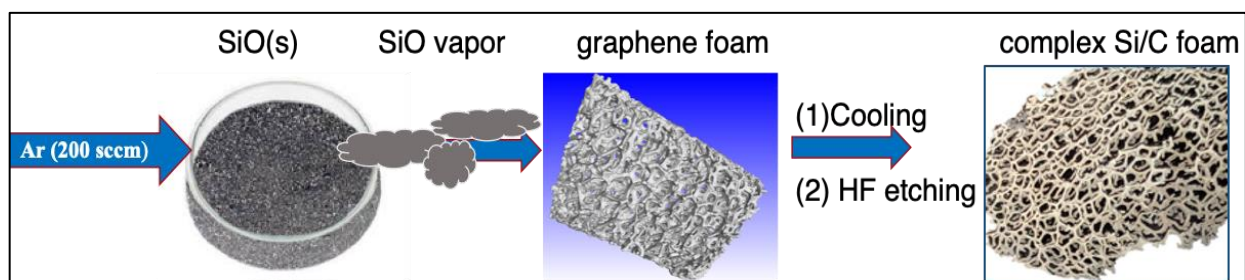


Figure S2. A schematic of the CVD synthesis of the foam.

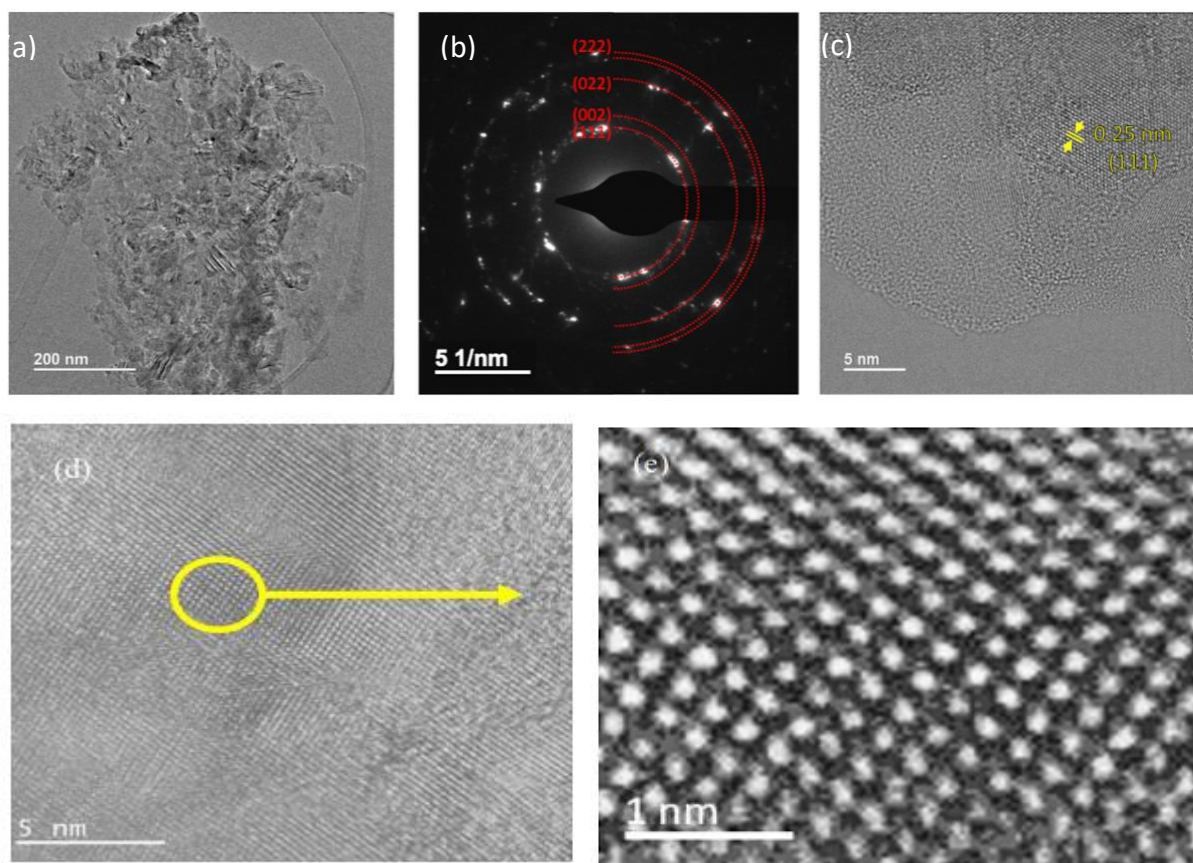


Figure S3. (a) TEM image and (b) indexed selected area electron diffraction pattern from a polycrystalline portion of the sample. (c-e) TEM images from different samples showing local crystalline order.

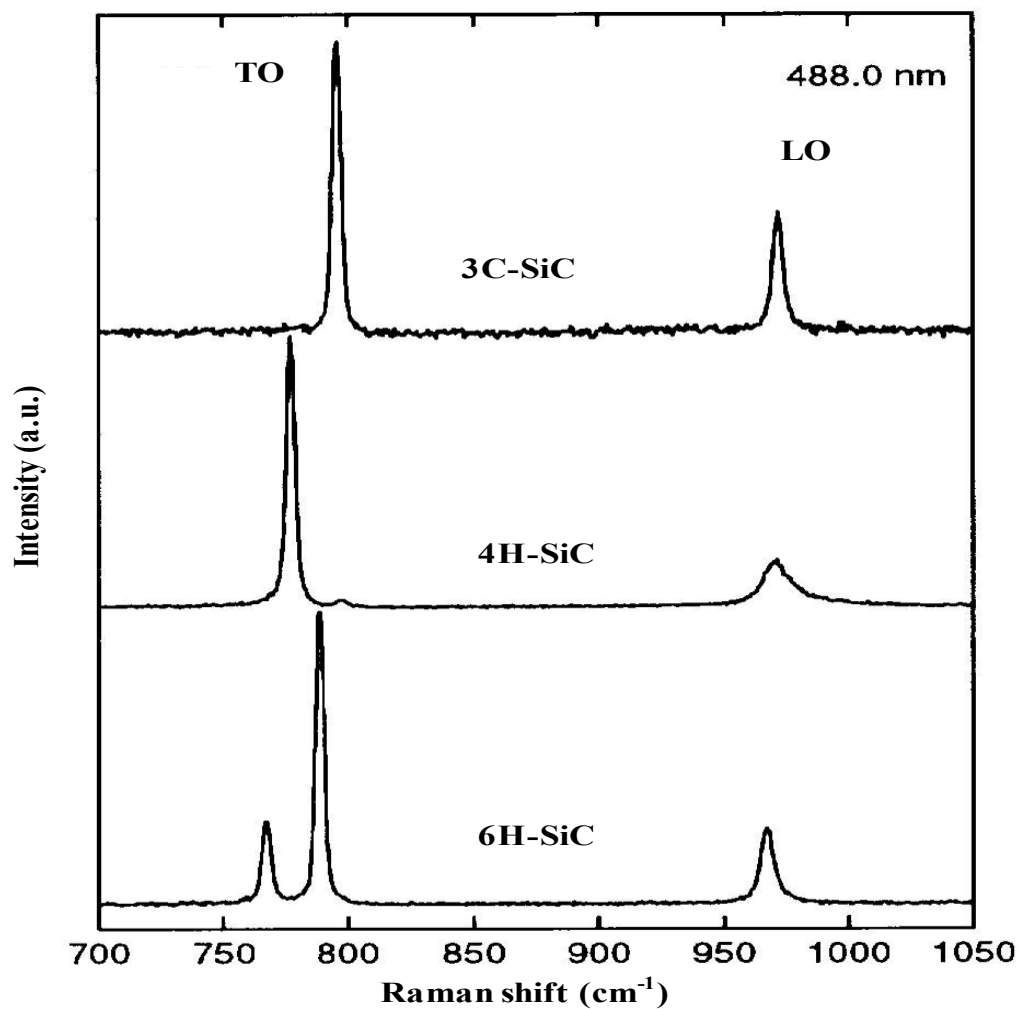


Figure S4. Raman spectra of different polytypes of SiC<sup>1</sup>. Reproduced with permission from Elsevier. Copyright 2015. Published by Elsevier Ltd.

**Reference:**

- (1) Cantarero, A. Raman Scattering Applied to Materials Science. *Procedia Mater. Sci.* **2015**, 9, 113–122.