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C2Po2B-08 [10]: Molecular simulation on adsorption of helium by activated carbon with temperature below 10 K

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Adsorption behavior of helium on activated carbon is expected to be used in the regenerator of 4-K class cryocoolers to improve the performance of the refrigerator. Since the amorphous carbon structure based on graphite slice is closer to the actual activated carbon, we use Grand Canonical Monte Carbo (GCMC) method to simulate the adsorption of helium on the amorphous carbon in low temperature. The effects of temperature, pressure, graphite slice's size and density of amorphous carbon on the concentration of adsorbate will be analyzed.

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