Carbon geometries as optimal configurations

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I would like to comment on the possibility of describing the geometry of some classes of three-dimensional carbon structures by minimizing suitable configurational potentials. The general aim is that of identifying regimes in which the specific 'objective structures' which can be experimentally observed are energetically favored. In particular, I will mention the case of fullerenes and concentrate on the discussion of nanotubes. This is joint work with E. Mainini, H. Murakawa, and P. Piovano.