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Diagnostics of Compressed Atoms Encapsulated in Fullerenes

Fullerenes with atomic and molecular compounds inside have been of great interest recently due to their application e.g. in drug delivery systems. However it should be noted that atoms encapsulated in fullerenes undergo the impact of fullerenes' electron shells, which causes deformation of atoms, i.e. contraction or expansion. In such cases relative deformations may vary from portions to tens of percents. It is shown that one can estimate the deformation value by analyzing spectra of polarization bremsstrahlung (PB). The estimations for an endohedral nano-compound P@C₆₀ are given as example.

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