Morphology of carbon nanoparticles of detonation synthesis

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Carbon in the detonation products of various high explosives and their mixtures with carbon-containing additives reveals a wide variety of aggregate structures and particle sizes, including diamond ones. By changing the morphology of such carbon nanoparticles is an effective way to control their functional characteristics.
The formation of different forms of carbon nanoparticles is explained by the dependence on the parameters of detonation and the chemical composition of explosive mixtures, on the mechanism of shock wave compression and the mechanism of detonation decomposition of explosives.
Methods for manufacturing carbon nanomaterials with various basic characteristics by selecting the chemical composition and structure of explosive mixtures are proposed.