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TITLE: PULMONARY TOXICITY OF 1-D NANOCARBON MATERIALS

PUBLISHED: May-05

CITE: FULLERENES NANOTUBES AND CARBON NANOSTRUCTURES 13 (2): 141-145
APR-JUN 2005

ABSTRACT: 1-D (one-dimensional) nanocarbon materials possess unique properties. However, they could become airborne and reach the lungs. In the present study the pulmonary toxicity of nanotubes was investigated. Guinea pigs were intratracheally instilled with different nanotubes and inflammatory response was measured. The results show that both the duration of exposure and material characteristics can affect the respiratory process and induce pathological reaction in lung tissue.