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Abstract

Particulate matter (PM) pollution has become a serious environmental problem, especially in developing countries, owing to its severe threat to human health. Particularly, airborne PM_{2.5} (mean aerodynamic diameter ≤ 2.5 μm) particles are extremely harmful, because the tiny particles can enter human respiratory system and even penetrate into circulatory system. Herein, we propose an effective strategy to recycle PM_{2.5} carbon nanoparticles generated by diesel vehicle engine for the applications of clean energy. After thermal treatment and purification, the PM_{2.5} derived carbon nanoparticles show a diameter distribution between 25–40 nm,

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