



## **Carbon Black Nanoparticles from Degradation of Biodegradable Plastic Mulch**

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Black plastics often contain carbon black, a black nanoparticle that is added to the plastic during manufacturing of the plastic. Carbon black renders plastic black and provides multiple benefits, including absorption of UV radiation, thereby protecting the plastic to prematurely degrade due to UV radiation. Biodegradable plastic mulches often are black, because the black color prevents light penetration, and as a result, no weeds can grow under the plastic, making black plastic an effective weed control. However, upon degradation of the biodegradable plastic, the carbon black nanoparticles contained in the plastic likely will be released as the plastics polymers mineralize. Here, we show that indeed carbon black nanoparticles are being released when biodegradable plastic degrades in a compost pile.