

Facile single step preparation of carbon nanodots from chitosan by carbonization

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Simple carbonization technique was followed to obtain amino functionalized carbon nanodots. Using chitosan as precursor, different methods were employed to optimise the carbon dots. The X-ray diffraction (XRD) pattern showed a strong carbon peak for carbonised chitosan. Optical property of the as-prepared carbon dots was studied by UV-Visible spectroscopy. The Thermo gravimetric analysis (TGA) revealed the mass change of the carbon dots with respect to the temperature. The study reports the synthesis and characterization of carbon dots from chitosan as a suitable material for multifunctional applications.

Keywords: Chitosan, amino-functionalized carbon dots, carbonization.