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Optical Properties of waste derived carbon dots PRASHANT SARSWAT, MICHAEL FREE, University of Utah — Carbon dots (CDs) have been extensively examined recently, mainly due to their luminescence and excitation wavelength dependent emission behavior. These dots can be derived from a variety of carbonaceous sources. Some of the possible sources are carbonaceous waste materials. Although it is possible to synthesize CDs using waste and their applications in light source, few steps such as to purification of starting material and removal of other impurities during solvothermal processing can enhance the performance of CDs and associated devices. Our primary results suggest that carbonaceous waste in liquid form is easy to process. In contrast the solid carbonaceous wastes are relatively difficult to process, but their availability is higher. In this regard, a detailed study has been performed to formulate the appropriate processing parameters for best performing CDs.

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