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Hydrothermal synthesis of carbon nanospheres.[1] PRIYA KARNA, Union College Barbourville, Ky, HITESH ADHIKARI, University of Memphis, Memphis, TN, SUNIL KARNA, Union College Barbourville, Ky — Carbon nanospheres were synthesized via green chemistry approach by polycondensation reaction of glucose under hydrothermal conditions from 140°C to 190°C for 6 hours. The final black products were centrifuged and washed with ethanol and water and dried under vacuum for 48 hours. The synthesized particles were characterized by TEM, SEM, XRD, TGA, and Raman spectroscopy to assess morphology, crystallinity, presence of required phase, phase transition, and the presence of impurity. The synthesized particles are highly dispersed and spherical with size ranges from 26 nm to 300 nm. Raman peak at 1580 cm^{-1} corresponds to graphitic presence and the overall experimental result depicts that 170°C for 6 hours of autoclaving is an optimized condition for high dispersity and good morphology.

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