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Selective formation of carbon nanotubes and spherical carbon nanoparticles in molten LiCl

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T he electrochemical erosion of a graphite cathode during the electrolysis of molten lithium chloride salt may be used for the preparation of nano-structured carbon materials. It has been found that the structures and morphologies of these carbon nanomaterials are dependent on those of the graphite cathodes employed and also on the processing parameters such as current density used during the electrolysis process. Tubular and spherical carbon nanostructures can be selectively produced by appropriate control of these parameters.

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