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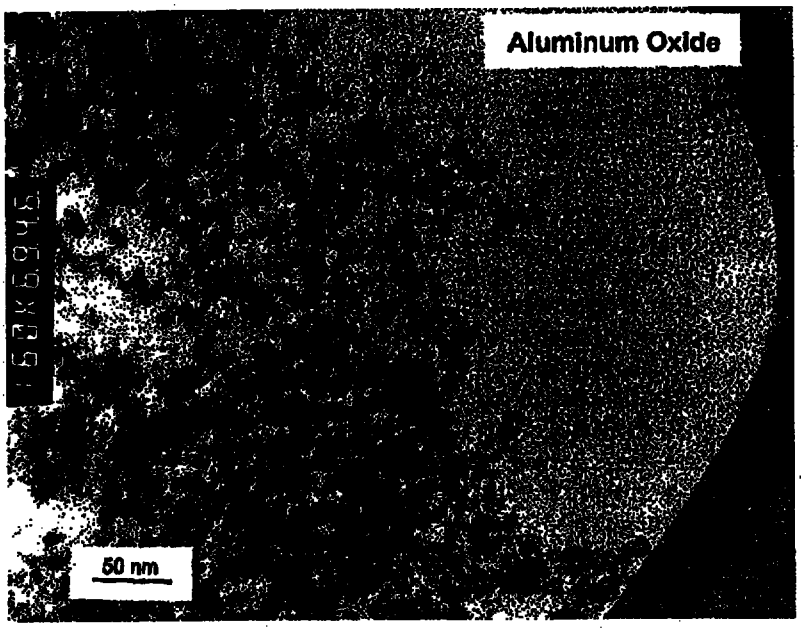

(57) Abstract

A collection of nanoparticles of aluminum oxide having a very narrow distribution of particle diameters are produced by laser pyrolysis. The distribution of particle diameters effectively does not have a tail and almost no particles have a diameter greater than about 4 times the average diameter. The pyrolysis is performed by pyrolyzing a molecular stream containing an aluminum precursor, an oxidizing agent and an infrared absorber.