

Synthesis of nanoparticles by electroless deposition and spark generation and their applications

황정호*

연세대학교 기계공학과

(hwangjh@yonsei.ac.kr*)

Recently, considerable attention has been focused on the characteristics of “naked” metal nanoparticles which are believed to be appropriate for examining the effect of surface structure and geometry. Spark generation has been used to generate particles of a wide range of conducting materials with particles sizes ranging from several nanometers up to ~ 100nm in an aerosol state because spark generation is simple, easily deliverable, and environmental friendly. We introduce a strategy for catalytic surface activation by producing metal aerosol nanoparticles via spark generation. The catalytically activated substrates were placed into a solution for electroless deposition (ELD) of metal (Ag, Cu, Pd). To apply synthesis of nanoparticles by electroless deposition and spark generation, we were carried out on the removal of NO and micro patterning with nanoparticles.