Various pretreatment methods for silver electroless deposition

김서영, 구효철, 김재정*
서울대학교
(jjkimm@snu.ac.kr*)

To obtain uniform and continuous silver thin film, high number density of catalytic particles is a decisive factor. Therefore for electroless deposition, surface pretreatment is one of the most important processes. In this study, electroless deposition of silver thin film on TiN substrate was performed using tin sensitization and palladium activation as the pretreatment methods. Tin surface sensitization helps the improvement of surface wetting property and forming of palladium catalytic layer. The morphologies of the sensitzed and activated TiN substrate and electrolessly deposited silver layer were analyzed by AFM and FESEM. By the way, the results on patterned wafer and on blanket wafer are different from each other, even though the same pretreatment methods were adopted. Therefore, we investigated the reason and succeed in making even silver thin film both on blanket and patterned wafer.