

ABSTRACT

ELECTROLESS DEPOSITION OF COBALT ALLOYS

Systems and methods for electroless deposition of a cobalt-alloy layer on a copper surface include a solution characterized by a low pH. This solution may include, for example, a cobalt(II) salt, a complexing agent including at least two amine groups, a pH adjuster configured to adjust the pH to below 7.0, and a reducing agent. In some embodiments, the cobalt-alloy is configured to facilitate bonding and copper diffusion characteristics between the copper surface and a dielectric in an integrated circuit.

Fig. 2