METHOD AND SLURRY FOR TUNING LOW-K VERSUS COPPER REMOVAL RATES DURING CHEMICAL MECHANICAL POLISHING

ABSTRACT OF THE DISCLOSURE

A composition and associated method for the chemical mechanical planarization (CMP) of metal substrates on semiconductor wafers are described. The composition contains a nonionic fluorocarbon surfactant and a per-type oxidizer (e.g., hydrogen peroxide). The composition and associated method are effective in controlling removal rates of low-k films during copper CMP and provide for tune-ability in removal rates of low-k films in relation to removal rates of copper, tantalum, and oxide films.