ABSTRACT

IMPROVED CHEMICAL AGENT ADDITIVES IN COPPER CMP SLURRY

A polishing method is achieved comprising the following steps. A layer made of material containing a metal as a main component over a substrate having recessed portions on a surface thereof so as to fill the recessed portions with the metal layer is formed. The metal is Cu, a Cu alloy, Al, or an Al alloy. The metal layer is polished by a chemical mechanical polishing method using a slurry including a polishing agent. The polishing agent contains a chemical agent and an etching agent. The chemical agent includes at least a carbonyl derivative of benzotriazole and is responsible for forming a protective film on the surface of the metal layer by reacting with the material containing a metal as a main component. The etching agent is responsible for etching the material containing a metal as a main component.

(FIGURE 1A IS SUGGESTED FOR PUBLICATION)