

ABSTRACT

METAL COMPOUND COATED COLLOIDAL PARTICLES

PROCESS FOR MAKING AND USE THEREFOR

5 Solid metal compound coated colloidal particles are made through a process by coating metal compounds onto colloidal particle surfaces. More specifically, metal compound precursors react with the base solution to form solid metal compounds. The solid metal compounds are deposited onto the colloidal particle surfaces through bonding. Excess ions are removed by ultrafiltration to obtain the stable metal compound coated colloidal
10 particle solutions. Chemical mechanical polishing (CMP) polishing compositions using the metal compound coated colloidal particles prepared by the process as the solid state catalyst, or as both catalyst and abrasive, provide uniform removal profiles across the whole wafer.

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Figure 4