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(54) Title: CHEMICAL-MECHANICAL POLISHING METHOD

(57) Abstract: The present invention provides a method for chemically-mechanically polishing a substrate comprising tantalum and a conductive metal (other than tantalum). The method comprises (a) applying to the substrate a conductive metal-selective polishing composition and a metal oxide abrasive, (b) selectively removing at least a portion of the conductive metal as compared to the tantalum from the substrate, (c) applying to the substrate a tantalum-selective polishing composition and a metal oxide abrasive, and (d) removing at least a portion of the tantalum as compared to the conductive metal from the substrate. In one embodiment, the conductive metal-selective polishing composition is any such polishing composition, and the tantalum-selective polishing composition comprises a persulfate compound and a passivation film-forming agent for the conductive metal. In another embodiment, the conductive metal-selective polishing composition comprises a persulfate compound and optionally a passivation film-forming agent for the conductive metal, and the conductive metal-selective polishing composition or the polishing process is adjusted to render the conductive metal-selective polishing composition a tantalum-selective polishing composition, such as described above.