CHEMICAL MECHANICAL POLISHING SLURRY COMPOSITION FOR POLISHING PHASE-CHANGE MEMORY DEVICE AND METHOD FOR POLISHING PHASE-CHANGE MEMORY DEVICE USING THE SAME

ABSTRACT OF THE DISCLOSURE

A slurry composition for chemical mechanical polishing (CMP) of a phase-change memory device is provided. The slurry composition comprises deionized water and iron or an iron compound. The slurry composition can achieve high polishing rate on a phase-change memory device and improved polishing selectivity between a phase-change memory material and a polish stop layer (*e.g.*, a silicon oxide film), can minimize the occurrence of processing imperfections (*e.g.*, dishing and erosion), and can lower the etch rate on a phase-change memory material to provide a high-quality polished surface. Further provided is a method for polishing a phase-change memory device using the slurry composition.