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(54) **Title**: AQUEOUS POLISHING COMPOSITION AND PROCESS FOR CHEMICALLY MECHANICALLY POLISHING SUBSTRATES HAVING PATTERNED OR UNPATTERNED LOW-K DIELECTRIC LAYERS

(57) **Abstract**: An aqueous polishing composition comprising (A) abrasive particles and (B) an amphiphilic nonionic surfactant selected from the group consisting of water-soluble or water-dispersible surfactants having (b1) hydrophobic groups selected from the group consisting of branched alkyl groups having 10 to 18 carbon atoms; and (b2) hydrophilic groups selected from the group consisting of polyoxyalkylene groups comprising (b21) oxyethylene monomer units and (b22) substituted oxyalkylene monomer units wherein the substituents are selected from the group consisting of alkyl, cycloalkyl, or aryl, alkyl-cycloalkyl, alkyl-aryl, cycloalkyl-aryl and alkyl-cycloalkyl-aryl groups, the said polyoxyalkylene group containing the monomer units (b21) and (b22) in random, alternating, gradient and/or blocklike distribution; a CMP process for substrates having patterned or unpatterned low-k or ultra-low-k dielectric layers making use of the said aqueous polishing composition; and the use of the said aqueous polishing composition for manufacturing electrical, mechanical and optical devices.