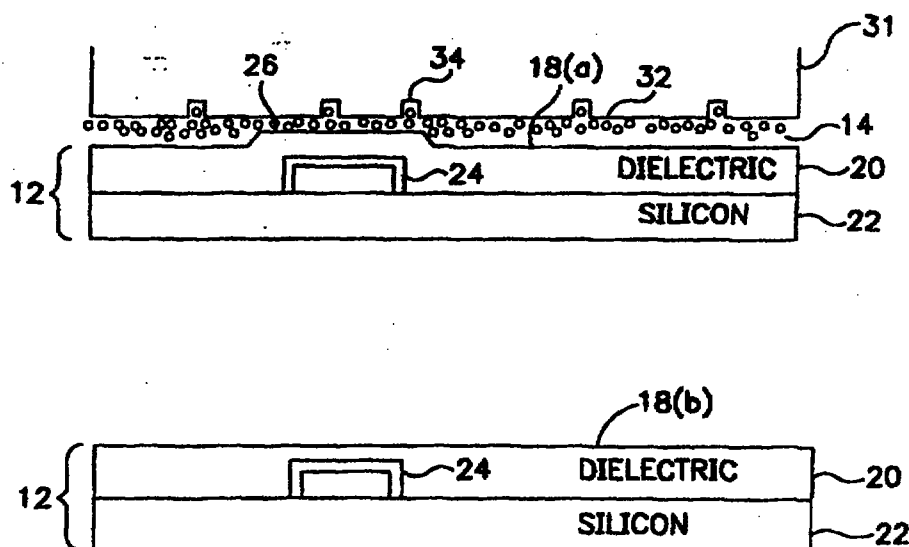




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : B24B 37/04, H01L 21/306		A1	(11) International Publication Number: WO 97/47433
			(43) International Publication Date: 18 December 1997 (18.12.97)
(21) International Application Number: PCT/US97/09901 ✓ (22) International Filing Date: 6 June 1997 (06.06.97) ✓ (30) Priority Data: 08/662,678 14 June 1996 (14.06.96) ✓ US (71) Applicant: SPEEDFAM CORPORATION [US/US]; 305 North 54th Street, Chandler, AZ 85226 (US). (72) Inventor: FRUITMAN, Clinton, O.; 3 N. Galaxy Drive, Chandler, AZ 85226 (US). (74) Agents: HILYARD, Chad, S. et al.; Snell & Wilmer, One Arizona Center, 400 East Van Buren, Phoenix, AZ 85004-0001 (US).		(81) Designated States: DE, GB, JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published With international search report.	

(54) Title: METHODS AND APPARATUS FOR THE CHEMICAL MECHANICAL PLANARIZATION OF ELECTRONIC DEVICES



(57) Abstract

A lapping pad (31) used to polish wafers in a CMP process comprising a substantially flat surface (32) having relatively few surface irregularities (34). The lapping pad (31) is suitably made from a porous material which permits the adsorption and/or entrainment of suitable slurries, for example, aqueous high pH slurries comprising colloidal silica, or the like. Moreover, pad (31) is relatively pliable to permit the undersurface of pad (31) to conform to the global topography of a workpiece (12) being polished without damaging the delicate microstructures (24) associated with workpiece (12) as pressures are applied between pad (31) and workpiece (12). Finally, the flat surface (32) of pad (31) urges particles (14) onto surface (18) of workpiece (12) more uniformly, thereby resulting in a more uniform planar surface (18) of workpiece (12).