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[54] **ELECTRO-OSMOTIC DISPLAYS AND MATERIALS FOR MAKING THE SAME**

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[52] **U.S. Cl.** **427/213.3**; 427/213.31; 427/213.34; 427/213.35; 428/402; 428/402.2; 428/402.21; 428/402.22; 428/402.24; 264/4.1; 264/4.33; 264/4.4; 264/4.6; 264/4.7

[58] **Field of Search** 427/213.3, 213.31, 427/213.34, 213.35; 428/402, 402.2, 402.21, 402.22, 402.24; 264/4.1, 4.33, 4.4, 4.6, 4.7

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[57] **ABSTRACT**

Disclosed herein are novel electrophoretic displays and materials useful in fabricating such displays. In particular, novel encapsulated displays are disclosed. Particles encapsulated therein are dispersed within a suspending, or electrophoretic, fluid. This fluid may be a mixture of two or more fluids or may be a single fluid. The displays may further comprise particles dispersed in a suspending fluid, wherein the particles contain a liquid. In either case, the suspending fluid may have a density or refractive index substantially matched to that of the particles dispersed therein. Finally, also disclosed herein are electro-osmotic displays. These displays comprise at least one capsule containing either a cellulosic or gel-like internal phase and a liquid phase, or containing two or more immiscible fluids. Application of electric fields to any of the electrophoretic displays described herein affects an optical property of the display.

8 Claims, 14 Drawing Sheets