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(54) Title: DIELECTRIC MEDIA INCLUDING SURFACE-TREATED METAL OXIDE PARTICLES

(57) Abstract: Briefly, the present invention provides an electronic device, typically a transistor or a capacitor, comprising at least one electrically conductive electrode and, adjacent to the electrode, a dielectric layer; wherein the dielectric layer comprises a polymeric matrix and, dispersed in the polymeric matrix, metal oxide particles; wherein the metal oxide particles have organic functional groups covalently bound to their surface, and wherein the organic functional groups are not covalently bound to the polymeric matrix. In another aspect, the present invention provides a printable dispersion, typically a jet-printable dispersion, comprising: a) a curable composition and b) metal oxide particles; wherein the metal oxide particles have organic functional groups covalently bound to their surface, and wherein the organic functional groups are not covalently bound to any part of the curable composition. In one embodiment, the organic functional groups do not react with any part of the curable composition to form covalent bonds. In one embodiment, the organic functional groups may react with the curable composition to form covalent bonds upon curing of the curable composition.

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