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(54) Title: UV RADIATION PROCESS FOR MAKING ELECTRONIC DEVICES HAVING LOW-LEAKAGE-CURRENT AND LOW-POLARIZATION FATIGUE

(57) Abstract

A precursor solution (P22) formed of a liquid polyoxyalkylated metal complex in a solvent is applied to a substrate in the formation of a metal oxide thin film (P26). The liquid thin film is baked (P28) in air to a temperature up to 500 °C while UV radiation having a wavelength ranging from 180 nm to 300 nm is applied. The thin film can be twice-baked at increasing temperatures while UV radiation is applied at one or both bakings. The film is then annealed (P32) at temperature ranging from about 700 °C to 850 °C to produce a thin-film solid metal oxide product. Alternatively, the UV radiation may be applied to the liquid precursor, the thin film may be annealed with UV radiation, or combinations of such applications of UV radiation to the precursor, to the thin film before or after baking, and/or UV annealing may be used.

