Abstract of the Disclosure

ULTRAVIOLET (UV) RADIATION TREATMENT METHODS FOR SUBATMOSPHERIC CHEMICAL VAPOR DEPOSITION (SACVD) OF OZONE-TETRAETHOXYSILANE (O_3-TEOS

Dielectric layers are formed on a substrate by performing Subatmospheric Chemical Vapor Deposition (SACVD) of ozone-tetraethoxysilane (O_3-TEOS) to form a layer of O_3-TEOS on the substrate, and treating the layer of O_3-TEOS with ultraviolet (UV) radiation. The UV radiation treatment can increase the tensile stress in the O_3-TEOS layer by reducing the amount of water in the layer. Moreover, the UV treatment may also reduce the amount of silanol in the O_3-TEOS layer, which can also increase reliability of the device.

Figure 3