



## Low Dielectric Constant (Low-K) Dielectric And Method Of Forming The Same

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### The Invention

A method of forming a low dielectric constant (low-k) dielectric is disclosed. The method includes providing a substrate and forming a dielectric including porogens over the substrate. While subjecting the dielectric to a first pressure, the dielectric is exposed to ultraviolet (UV) radiation. The dielectric is also subject to a second pressure less than  $1 \times 10^{-3}$  Torr. While subjecting the dielectric to the second pressure, the dielectric is exposed to vacuum UV (VUV) radiation having one or more photon energies greater than 7 eV. Since it is difficult for VUV radiation to travel through a medium at a pressure greater than 10 Torr without being absorbed by intermittent materials, subjecting the dielectric to the second pressure creates a medium wherein the dielectric can be exposed to the VUV radiation. By exposing the dielectric to UV and VUV radiation, the dielectric can achieve a reduced dielectric constant and increased mechanical properties.

### Additional Information

#### For More Information About the Inventors

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#### Tech Fields

- [Semiconductors & Integrated Circuits : Components & materials](#)

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