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(54) **HIGH-K GATE DIELECTRIC WITH UNIFORM NITROGEN PROFILE AND METHODS FOR MAKING THE SAME**

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(57) **ABSTRACT**

High-k transistor gate structures and fabrication methods therefor are provided, wherein a gate dielectric interface region near a semiconductor substrate is provided with very little or no nitrogen, while the bulk high-k dielectric is provided with a uniform nitrogen concentration.

15 Claims, 3 Drawing Sheets