SEMICONDUCTOR DEVICE STRUCTURE AND METHOD OF FORMING

Abstract of the Disclosure

A method for forming a unilateral, graded-channel field effect transistor and a transistor stack 200 that includes providing a substrate (10) with an overlying gate electrode (14, 16). A spacer (23) is formed on only the drain side of the electrode. A graded-channel region (36) is formed aligned to the source side of the electrode while the spacer protects the drain side of the channel region. Source/drain regions (38) are formed, the spacer is removed, and then a drain extension region (40) is formed aligned to the drain side of the electrode.

Figure 6 accompanies this abstract.