

INTEGRATED CIRCUITS AND METHODS FOR FABRICATING INTEGRATED CIRCUITS HAVING METAL GATE ELECTRODES

ABSTRACT

Integrated circuits and methods for fabricating integrated circuits are provided. In an exemplary embodiment, a method for fabricating integrated circuits includes providing a sacrificial gate structure (26) over a semiconductor substrate. The sacrificial gate structure includes two spacers (24) and sacrificial gate material (20) between the two spacers. The method recesses (34) a portion of the sacrificial gate material between the two spacers. Upper regions of the two spacers are etched while using the sacrificial gate material as a mask. The method includes removing a remaining portion of the sacrificial gate material (20) and exposing lower regions of the two spacers. A first metal (78) is deposited between the lower regions of the two spacers. A second metal (90) is deposited between the upper regions of the two spacers.

Figs. 7 and 11