ABSTRACT

ETCHED NANOFIN TRANSISTORS

One aspect of the present subject matter relates to a method for forming a transistor. According to an embodiment, a fin is formed from a crystalline substrate. A first source/drain region is formed in the substrate beneath the fin. A surrounding gate is formed around the fin and separated from the fin by the surrounding gate insulator. A second source/drain region is formed in a top portion of the fin. Various embodiments etch a hole in a layer over the substrate, form sidewall spacers in the hole, form a fin pattern from the sidewall spacers, and etch into the crystalline substrate to form the fin from the substrate using a mask corresponding to the fin pattern. Other aspects are provided herein.

FIGURE 8.