

SEMICONDUCTOR STRUCTURE AND METHOD FOR FORMING SAME

ABSTRACT

Embodiments of the disclosure provide a semiconductor structure and a method for forming the same. The method includes: providing a semiconductor substrate, in which stack structures and isolation structures alternately arranged along a first direction are formed on the semiconductor substrate; forming a support structure in the stack structures and the isolation structures; etching the stack structures and the isolation structures to form a plurality of zigzag first semiconductor pillars in an array arrangement along the first direction and a second direction, in which an interspace is formed between the zigzag first semiconductor pillars; each of the zigzag first semiconductor pillars comprises first convex structures and first concave structures alternately arranged along a third direction, and the zigzag first semiconductor pillars are supported by the support structure; the first direction, the second direction and the third direction are perpendicular to one another, and the second direction is perpendicular to a top surface of the semiconductor substrate; and forming capacitor structures the interspace.

[Fig. 1]