

METHOD OF FORMING A PATTERNED STRUCTURE AND DEVICE THEREOF

ABSTRACT

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There is provided a method of forming a patterned structure on a substrate. The method includes: forming a resist layer on the substrate, the resist layer being a negative tone resist; exposing a first portion of the resist layer to a focused electron beam to form a modified first portion, the modified first portion defining a boundary of a second portion of the resist layer; performing a plasma treatment on a surface of the resist layer, including on a surface of the second portion of the resist layer to form a modified surface portion of the second portion of the resist layer, resulting in a plasma treated resist layer; and performing development of the plasma treated resist layer to form the patterned structure on the substrate corresponding the second portion of the resist layer.

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FIG. 1