

METAL LAYER ENABLING DIRECTED SELF-ASSEMBLY SEMICONDUCTOR LAYOUT DESIGNS

ABSTRACT OF DISCLOSURE

Methods for forming a DSA pre-patterned semiconductor transistor layout and the resulting devices are disclosed. Embodiments may include forming a pre-patterned transistor layout by directed self-assembly (DSA) (110, 210, 310, 410, 510), forming a metal layer over the DSA pre-patterned transistor layout, including: forming a plurality of horizontal metal lines (401, 401a, ... 401d); and forming a plurality of vertical metal segments (403) discontinuous from and between adjacent horizontal metal lines; and forming one or more bridging dots (501) each connecting one of the plurality of horizontal metal lines to one of the plurality of vertical metal segments, wherein locations of the bridging dots determine logic functions of resulting transistor cells.

FIG. 6A