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(54) **Title:** STEPPED STRUCTURE AND MANUFACTURING METHOD THEREFOR, AND SEMICONDUCTOR STRUCTURE

(54) 发明名称: 阶梯结构及其制造方法、半导体结构

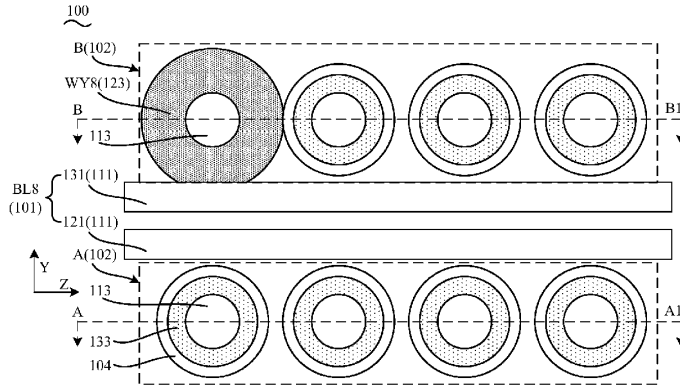


图 1

(57) **Abstract:** A stepped structure and a manufacturing method therefor, and a semiconductor structure. The stepped structure comprises: a plurality of conductive layers arranged at intervals in a first direction, each conductive layer comprising at least two sub-conductive layers arranged at intervals in a second direction, and the conductive layers extending in a third direction; and a plurality of step structures arranged at intervals in the second direction, a column of the sub-conductive layers arranged at intervals in the first direction being at least in contact with and connected to one of the step structures. Each step structure comprises a plurality of conductive columns electrically insulated from one other, one of the conductive columns is in contact with and connected to one of the sub-conductive layers, and the conductive column in contact with and connected to said sub-conductive layer is electrically insulated from all of the other sub-conductive layers. In a column of the conductive layers arranged at intervals in the first direction, the conductive layers are in contact with and connected to the conductive columns one-to-one. Embodiments of the present disclosure at least facilitate reducing the horizontal area occupied by the whole stepped structure and increasing the integration density of the conductive columns in the

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(AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

本国际公布：
— 包括国际检索报告(条约第21条(3))。

(57) 摘要：一种阶梯结构及其制造方法、半导体结构，阶梯结构包括：沿第一方向间隔排布的多条导电层，导电层包括沿第二方向间隔排布至少两条子导电层，导电层沿第三方向延伸；沿第二方向间隔排布的多个台阶结构，沿第一方向间隔排布的一列子导电层至少与一台阶结构接触连接；其中，每一台阶结构包括多个相互电绝缘的导电柱，一导电柱和一子导电层接触连接，与一子导电层接触连接的导电柱与其他子导电层之间均电绝缘；且沿第一方向间隔排布的一列导电层中，导电层与导电柱一一接触连接。本公开实施例至少有利于缩小阶梯结构整体所占用的水平面积，以及提高阶梯结构中导电柱的集成密度。