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(54) **GRAPHENE WIRING STRUCTURE AND MANUFACTURING METHOD THEREOF**

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(58) **Field of Classification Search**

CPC H01L 23/528; H01L 23/53276; H01L 21/02603

See application file for complete search history.

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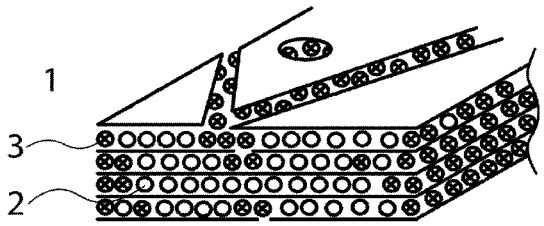
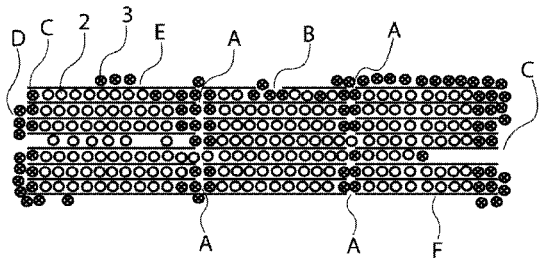
(57) **ABSTRACT**

A graphene wring structure of an embodiment includes multilayer graphene, a first interlayer compound existing in an interlayer space of the multilayer graphene, and a second interlayer compound existing in the interlayer space of the multilayer graphene. The second interlayer compound containing at least one of an oxide, a nitride and a carbide.

20 Claims, 4 Drawing Sheets