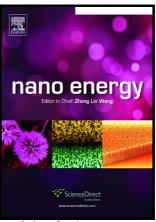
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#### ACCEPTED MANUSCRI

## Very High Open-Circuit Voltage in Dual-Gate Graphene/Silicon **Heterojunction Solar Cells**

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#### Abstract:

Two dimensional (2D) layered materials and their heterojunctions with other materials are attracted because of their remarkable electrical and optical properties. In particular, graphene/semiconductor Schottky heterojunction is used for high performance solar cells. Here, we demonstrated very high open circuit voltage  $(V_{oc})$  in graphene/silicon heterojunction solar

<sup>&</sup>lt;sup>1</sup> U. Y. W. and T. H. L. contributed equally to this work.

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