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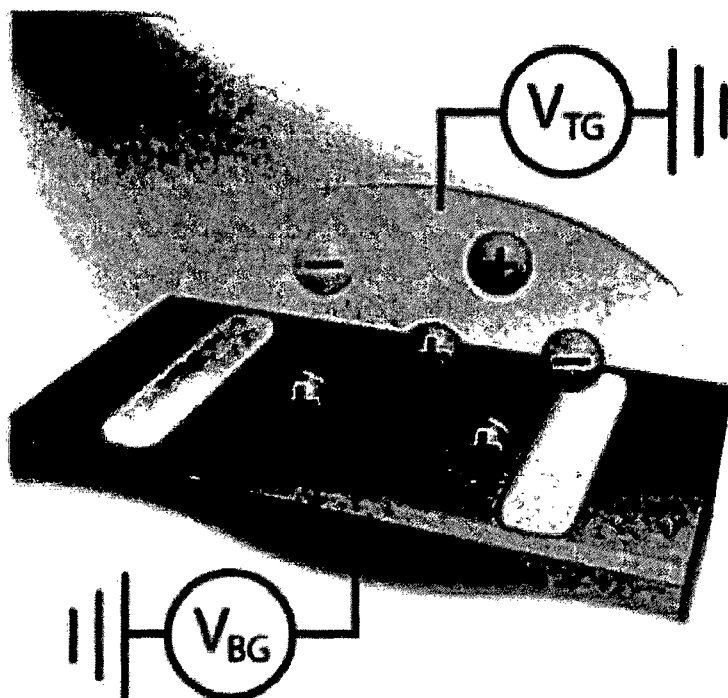
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(54) Title: GRAPHENE FERROELECTRIC DEVICE AND OPTO-ELECTRONIC CONTROL OF GRAPHENE FERROELECTRIC MEMORY DEVICE



(57) Abstract: In accordance with an embodiment of the invention, there is provided a graphene ferroelectric device. The device comprises a graphene transistor channel and a ferroelectric gate of the graphene transistor channel, the ferroelectric gate comprising a linear polarization at a first applied gate voltage less than a threshold voltage, and a hysteretic polarization at a second applied gate voltage greater than the threshold voltage. The device may be configured to undergo optical switching of the graphene transistor channel between a high resistance state and a low resistance state in response to photoillumination of the device.



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