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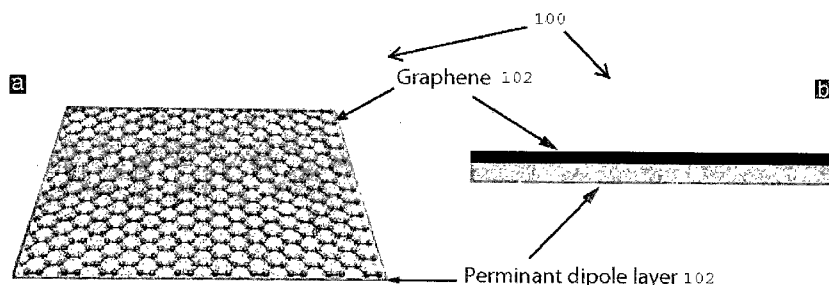


Figure 1

(57) Abstract: A transparent conductor comprising: a graphene layer and a permanent dipole layer on the graphene layer configured to electrostatically dope the graphene layer.