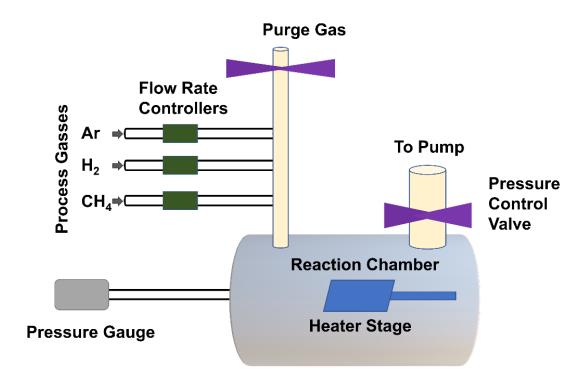
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**Figure S1:** Schematic of gas flow in the graphene nanoCVD reactor.

Table. S1 Electronic properties of pristine and defected monolayer graphene (MLG).

Data of Band Structure and Density of States	Pristine monolayer graphene	1 point defect in graphene	2 point defects in graphene	C-O-C bond with defect in graphene	C-OH bond with defect in graphene	-COOH bond with defect in graphene
E <sub>f</sub> (Fermi Energy) (eV)	0.9014	0.6151	0.3890	0.7095	0.7695	1.0334
E <sub>g</sub> (Bandgap Energy) (eV)	0.00	0.2778	0.6119	0.8105	0.9527	0.2361