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Pt-decorated Phosphorene as a Propitious Room Temperature VOCs Gas Sensor for Sensitive and Selective Detection of Alcohols

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Table S 1. The adsorption energy of the different number of Platinum on the pristine Phosphorene surface.

Number of Pt	1	2	3	4
Adsorption energy (eV)	–5.84	–3.16	–2.97	–2.55

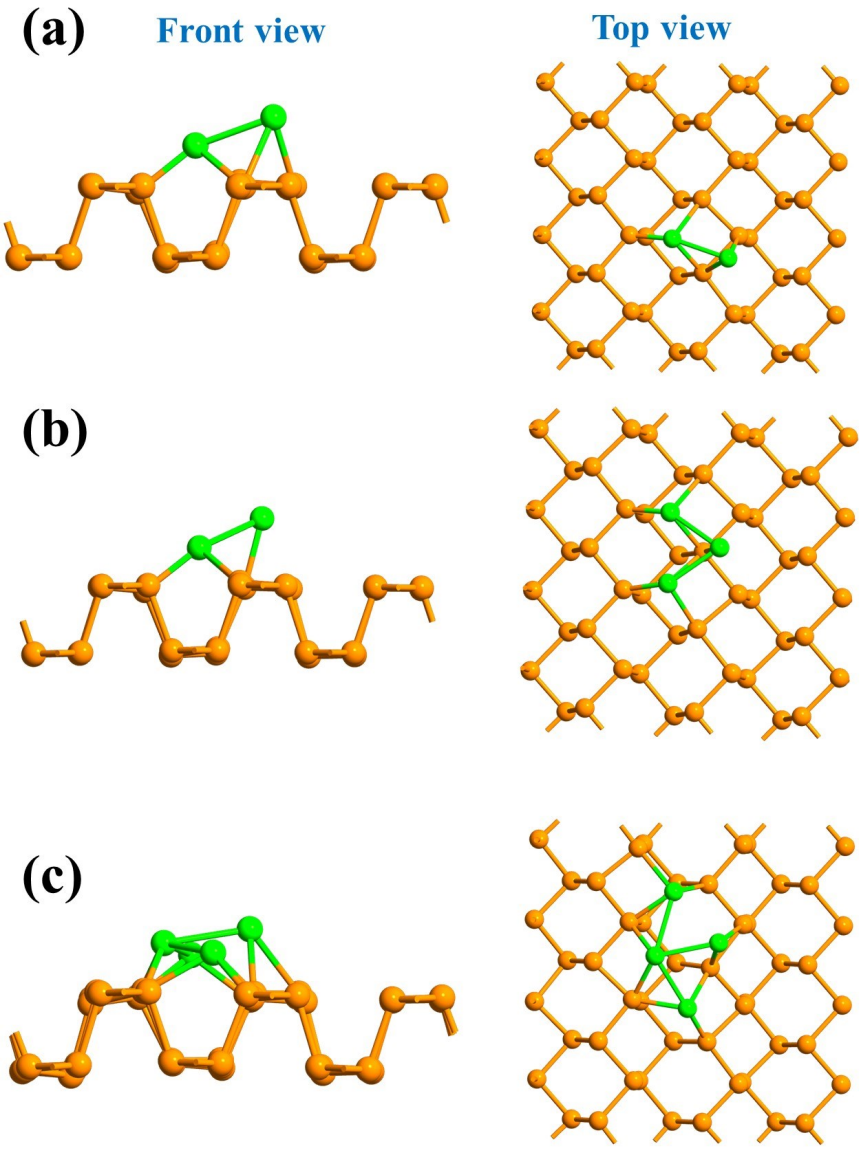

Figure S1. The most stable configuration of different number of Pt on the phosphorene. (a) 2 atoms of Pt. (b) 3 atoms of Pt. (c) 4 atoms of Pt.

Table S 2. The adsorption energy of Methanol on the the different number of Pt- decorated Phosphorene surface.

Number of Pt	1	2	3	4
Methanol adsorption energy (eV)	–0.908	–2.43	–0.97	–1.28

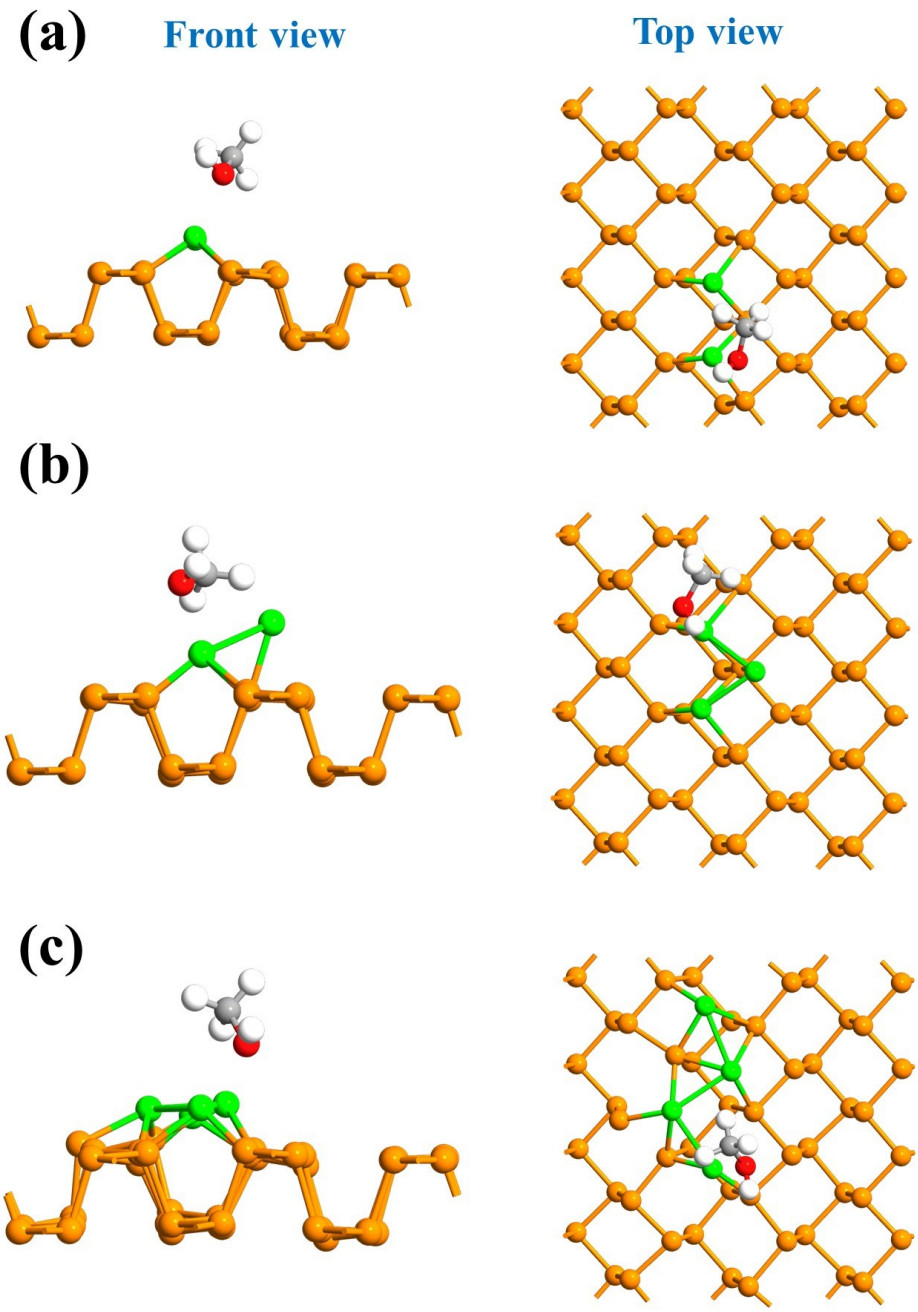

Figure S2. The most favorable adsorption of methanol upon different number of Pt- decorated phosphorene. (a) 2 atoms of Pt. (b) 3 atoms of Pt. (c) 4 atoms of Pt.