Supporting Information of

Coordinately unsaturated O_{2c}–Ti_{5c}–O_{2c} sites promote the reactivity of Pt/TiO_2 catalysts in the solvent-free oxidation of octanol

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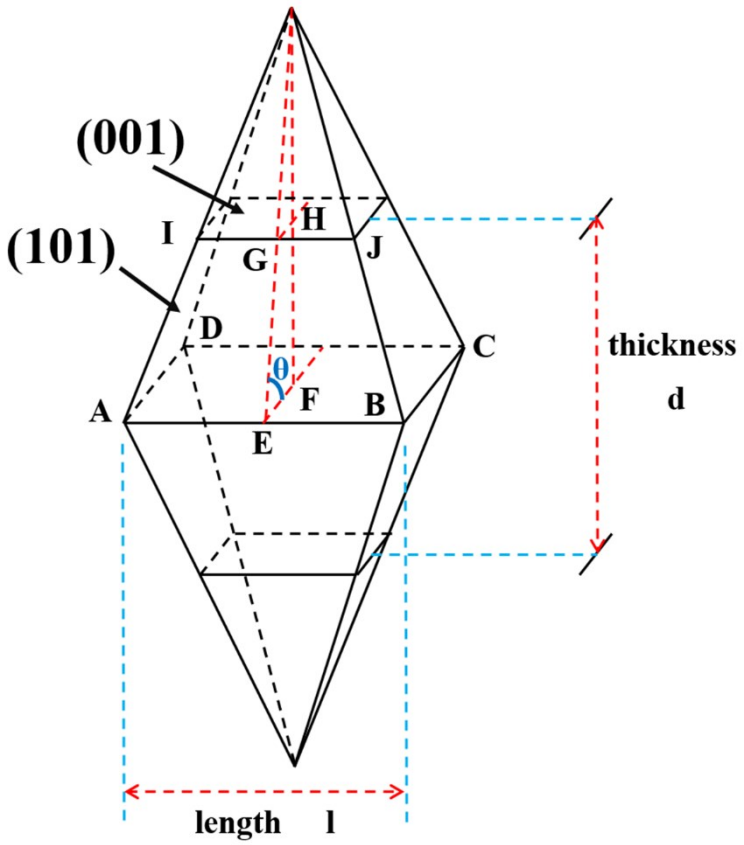

Figure S1 An model of anatase TiO_2 single crystal for calculation of geometrical characteristics.

Table S1 The properties of synthesized TiO_2 with different facets exposed and the series Pt/TiO_2 catalysts

	BET surface (m^2/g)	Pt loading (wt.%)
TiO_2-101	52.0	-
TiO_2-001	21.8	-
Pt/TiO_2-101-Air	53.1	0.96
Pt/TiO_2-001-Air	26.6	0.99
Pt/TiO_2-101-H_2	50.1	1.02
Pt/TiO_2-001-H_2	24.8	1.01

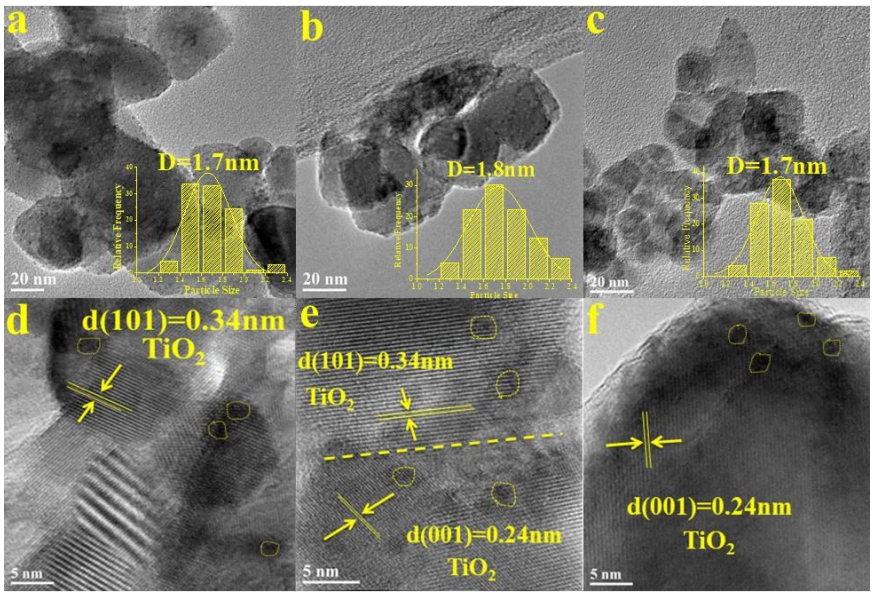

Figure S2 HRTEM images of Pt/TiO_2-101-Air-500°C (a and d), Pt/TiO_2-101-001-Air-500°C (b and e) and Pt/TiO_2-001-Air-500°C(c and f)

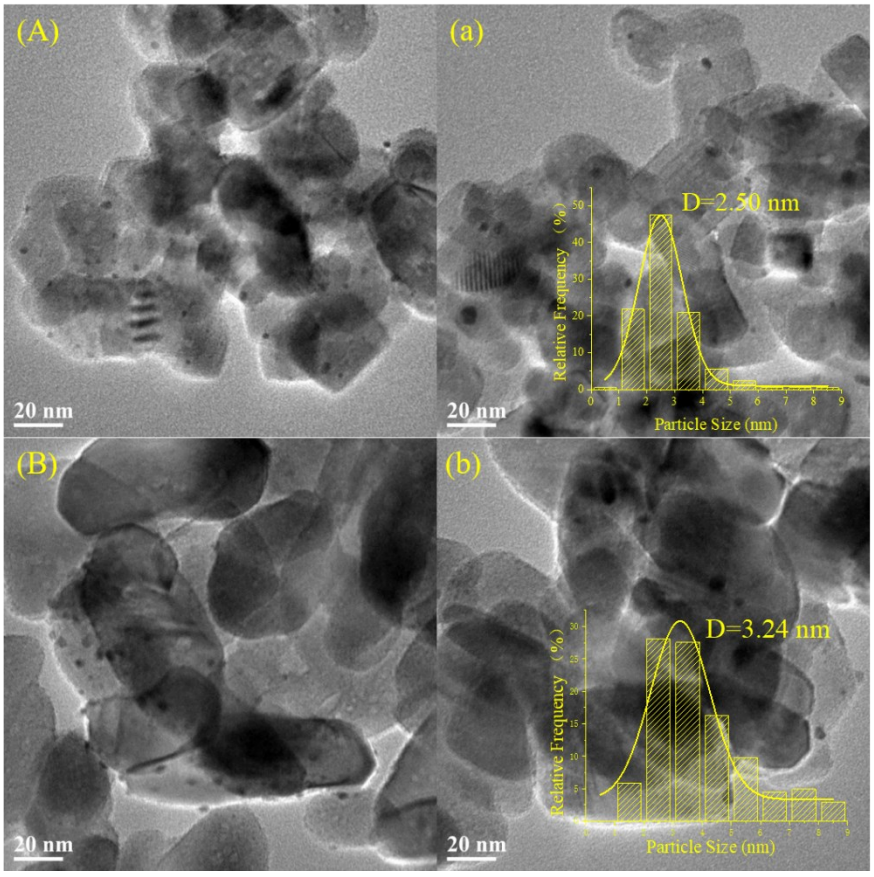

Figure S3 HRTEM images of Pt/TiO_2-101-H_2 (A and a) and Pt/TiO_2-001-H_2 (B and b)

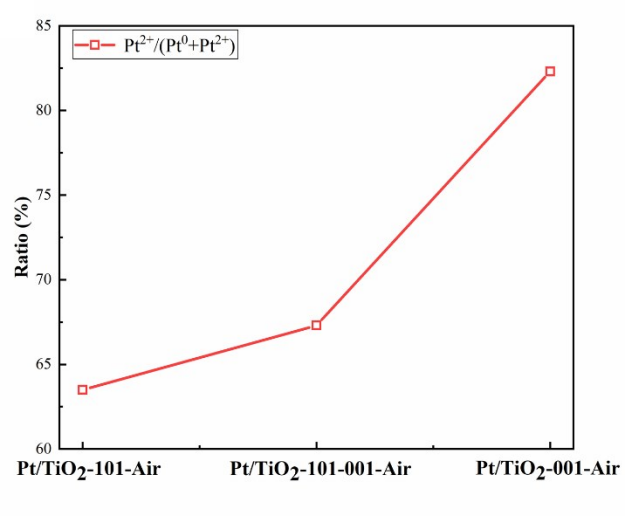

Figure S4 The ratio of $Pt^{2+}/(Pt^{2+}+Pt^{0})$ over the calcined Pt/TiO_2 with different facets exposed.

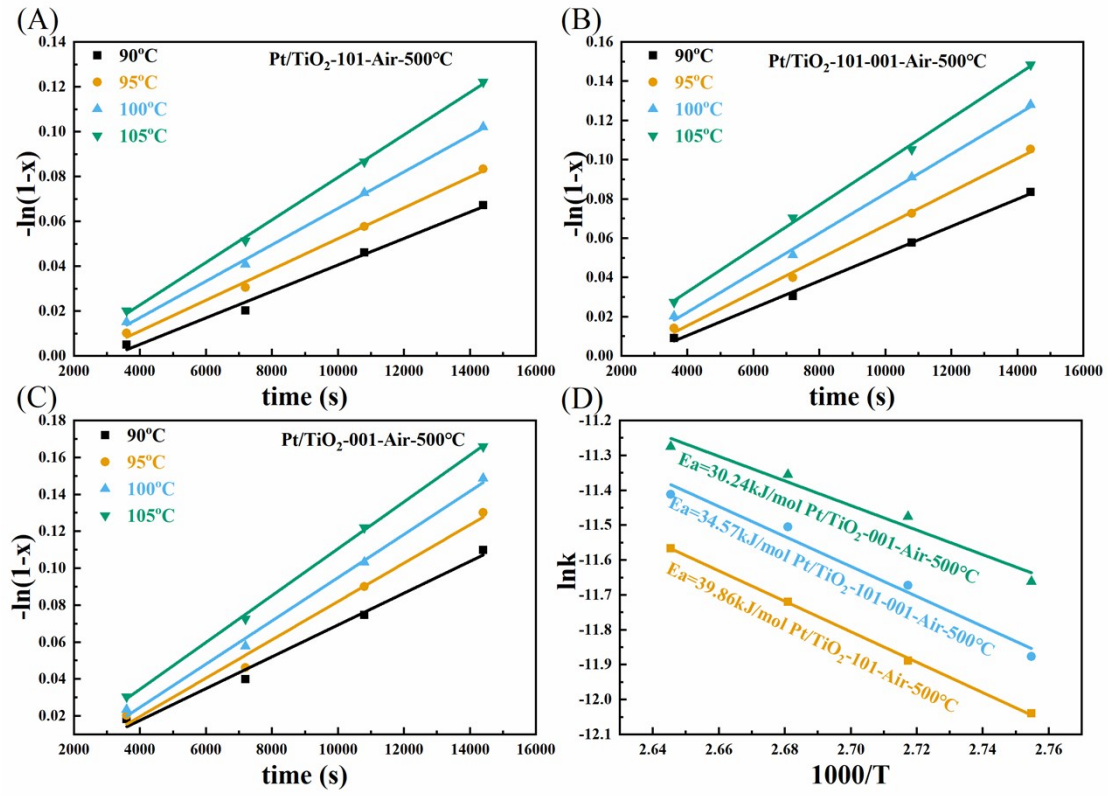

Figure S5 Time−conversion plots at various temperatures for Pt/TiO_2-101-Air (A), Pt/TiO_2-101-001-Air (B), and Pt/TiO_2-001-Air (C) and Arrhenius plots (D) for n-octanol oxidation.

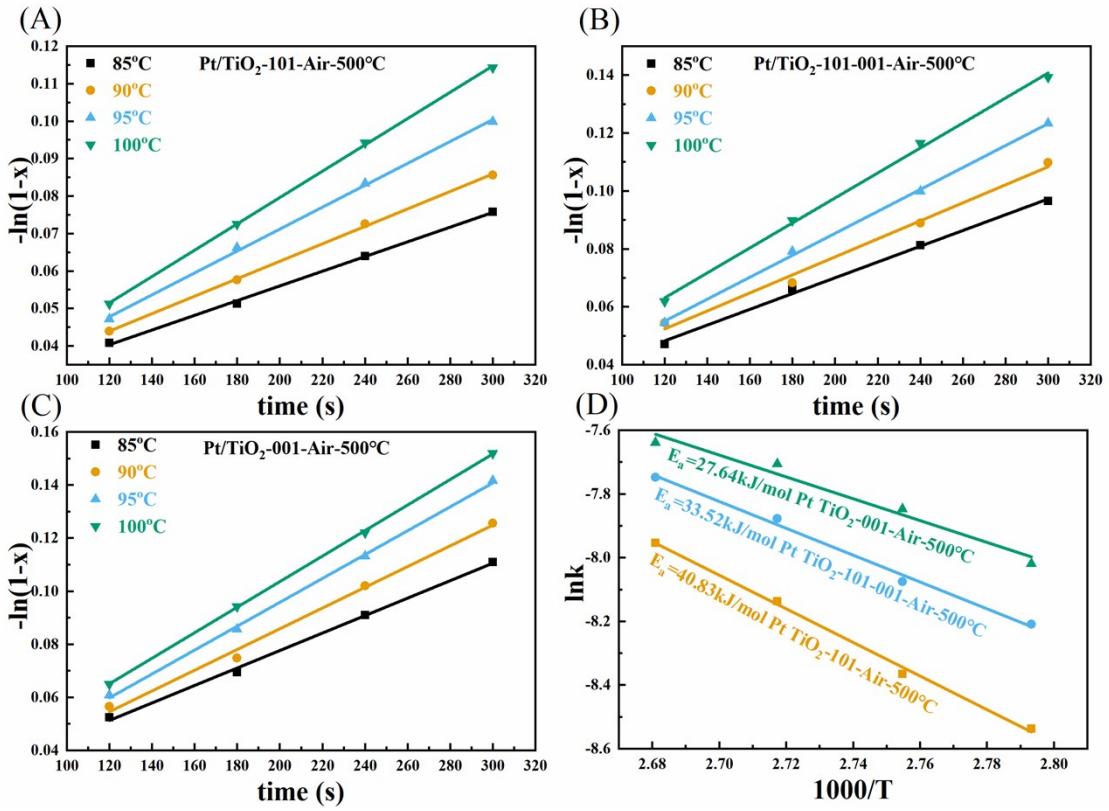

Figure S6 Time–conversion plots at various temperatures for Pt/TiO_2-101-Air (A), Pt/TiO_2-101-001-Air (B), and Pt/TiO_2-001-Air (C) and Arrhenius plots (D) for octanal oxidation.