

Electronic Supplementary Information

Acid etching induced defective Co_3O_4 as an efficient catalyst for methane combustion reaction

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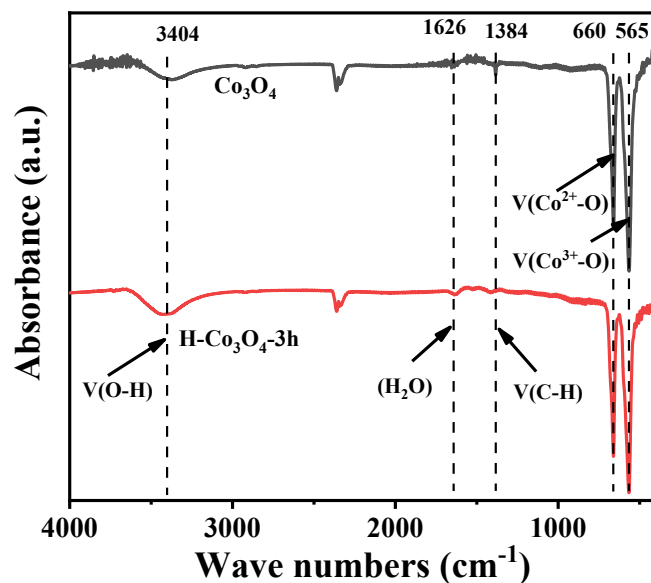


Fig. S1. FTIR images of the pristine Co₃O₄ and H-Co₃O₄-3h

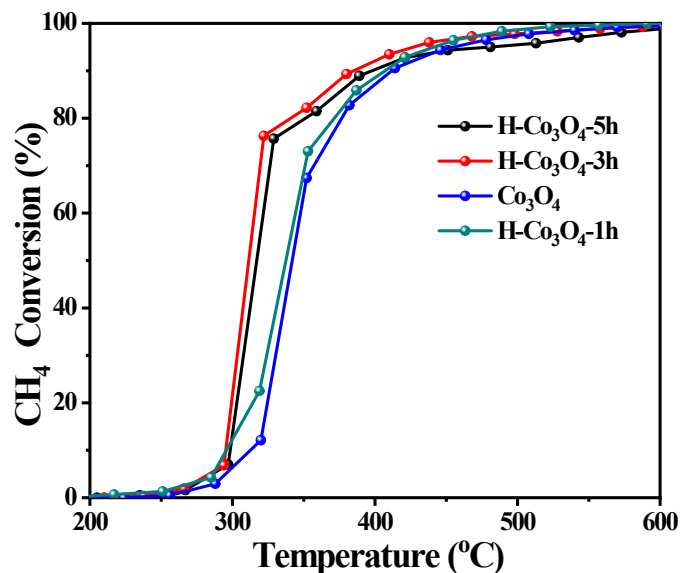


Fig.S2. Light-off curves for CH₄ oxidation over Co₃O₄ etched at different time (gas mixer: 2% CH₄, 20% O₂, Ar as balance gas, WHSV= 33,000 mL g⁻¹ h⁻¹).

Table S1. Mass change for H-Co₃O₄ at different etching time.

Sample	Initial mass (mg)	Mass after etching (mg)	Mass loss
H-Co ₃ O ₄ -1h	200	184	8%
H-Co ₃ O ₄ -3h	200	168	16%
H-Co ₃ O ₄ -5h	200	162	19%