Electronic Supplementary Material (ESI) for Catalysis Science & Technology.

Supplementary Information

Development of a unique $Ni^{\delta+}$ ($0<\delta<2$) in $NiMoP/Al_2O_3$ catalyst for dry reforming of methane

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Results

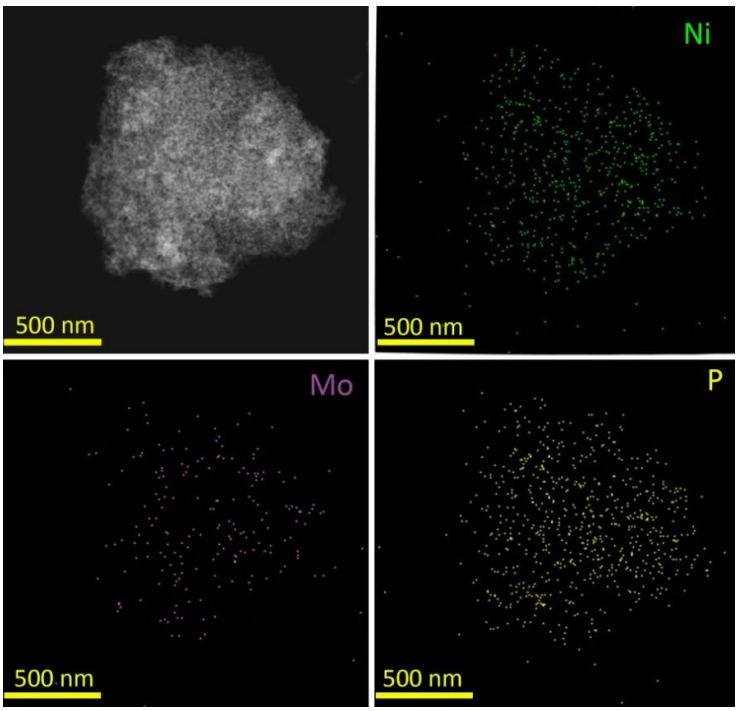


Fig. S1 EDS-mapping images of 1.86NiMoP catalyst.

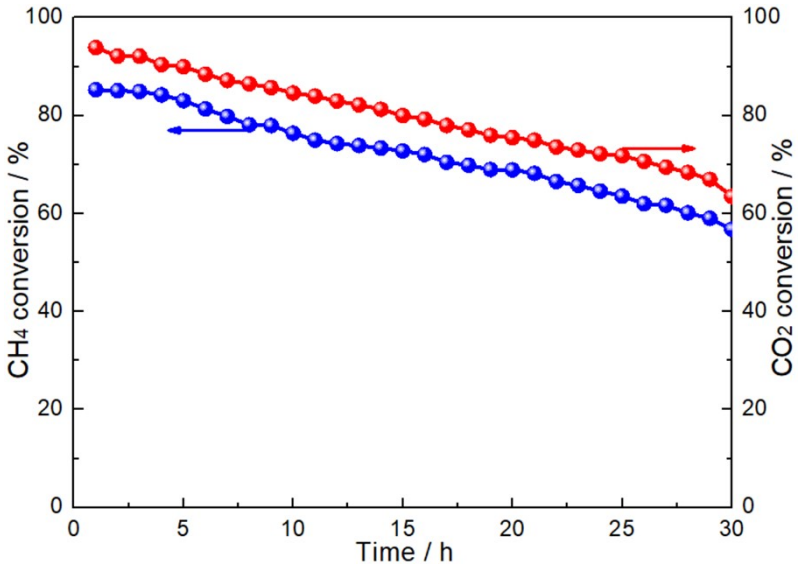
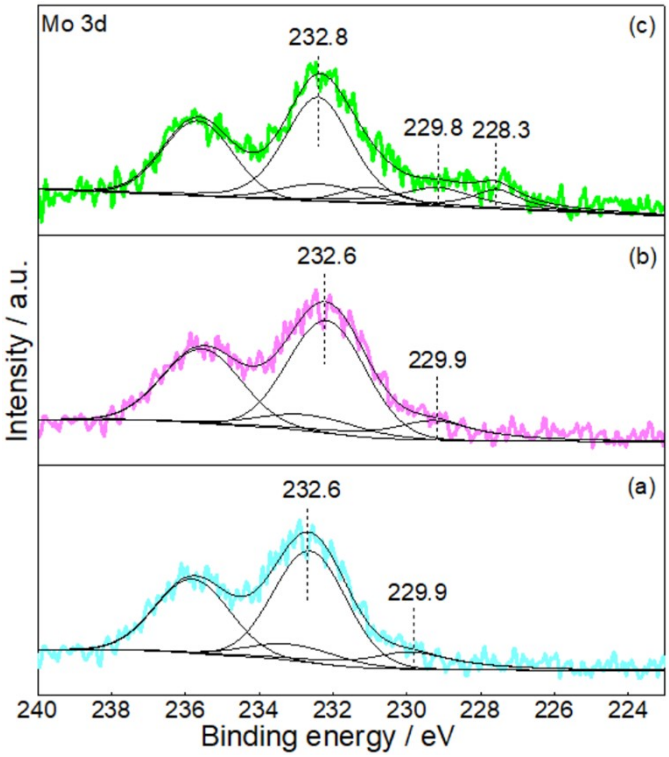


Fig. S2 Time dependence of catalytic performance over 1.86NiMo catalyst at various reaction temperatures. Reaction conditions: CH_4:CO_2=1:1, WHSV=24000 cm^3 g^{-1} h^{-1}, reaction pressure=1 atm, reaction temperature=750 °C.



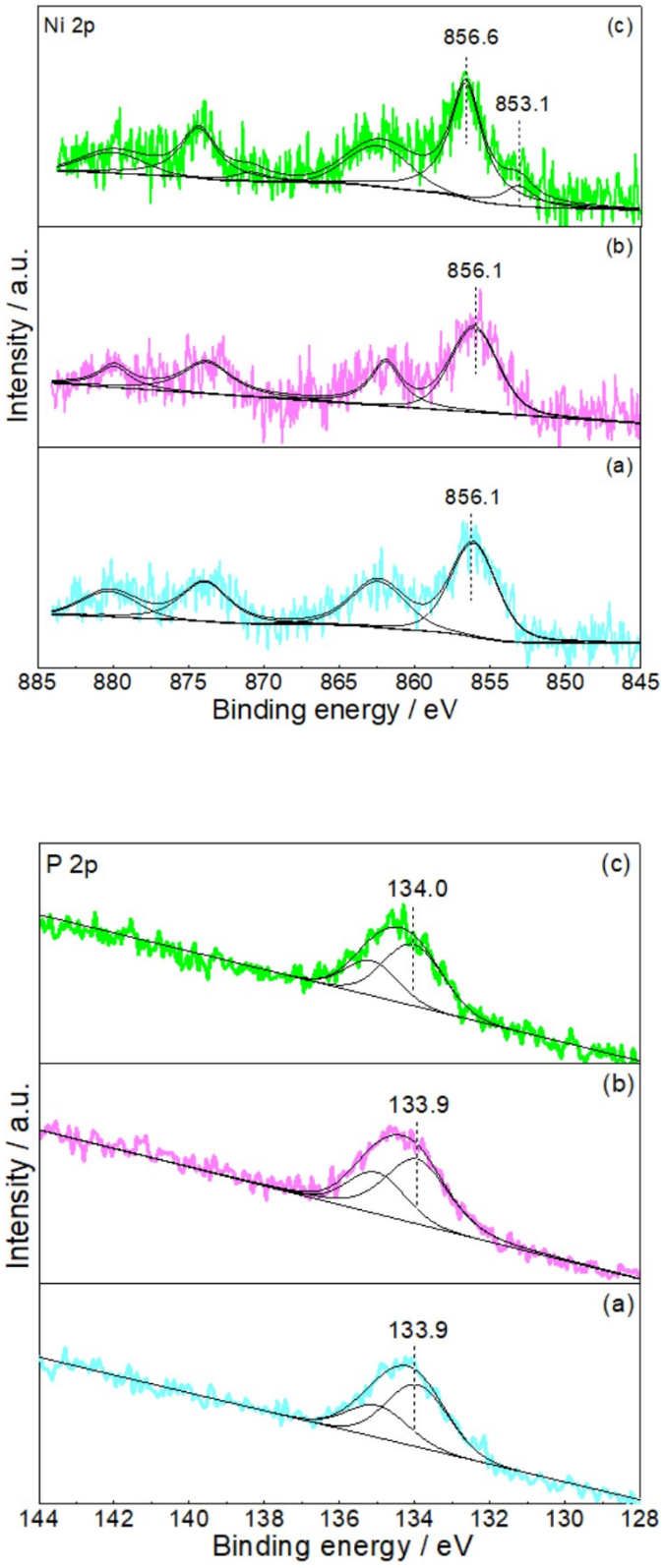


Fig. S3 XPS spectra of Mo 3d, Ni 2P and P 2p (a) 1.86NiMoP-650, (b) 1.86NiMoP-700 and (c) 1.86NiMoP-750.