

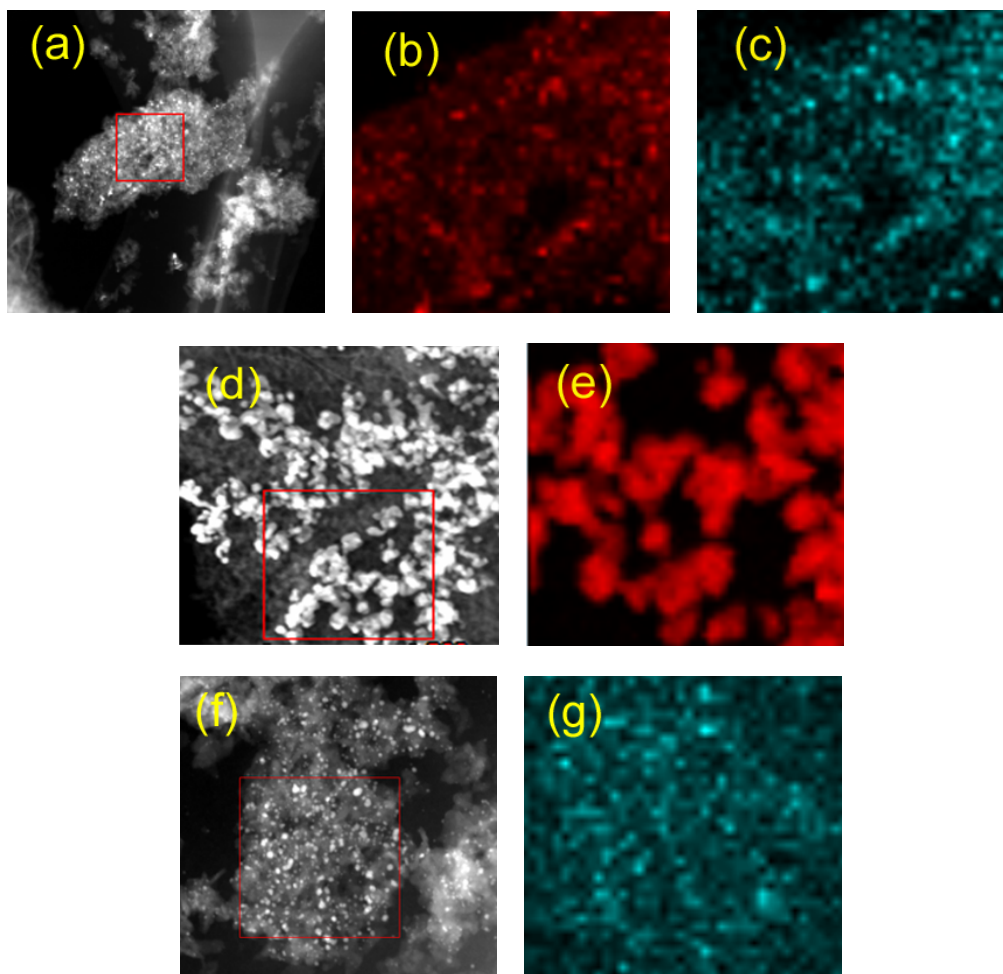
## Supporting Information

**Title: Enhancement of Pt-Ru catalytic activity for catalytic wet air oxidation of methylamine *via* tuning Ru surface chemical state and dispersion by Pt addition**

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**Number of pages:** 9

**Number of figures:** 8



**Figure S1** Elemental mapping images of the (a) Ru-Pt, (d) Pt, and (f) Ru catalysts: (b) and (e) for platinum mapping; (c) and (g) for ruthenium mapping.

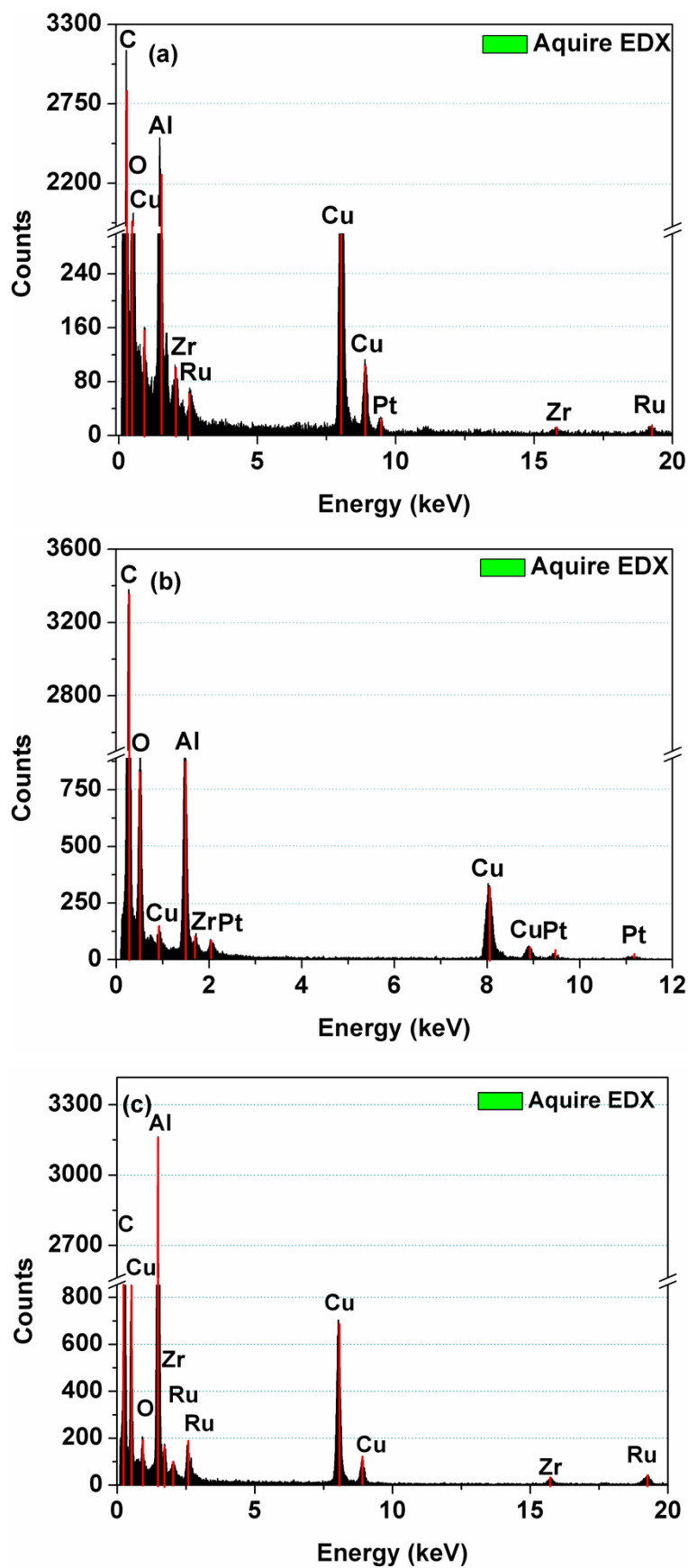
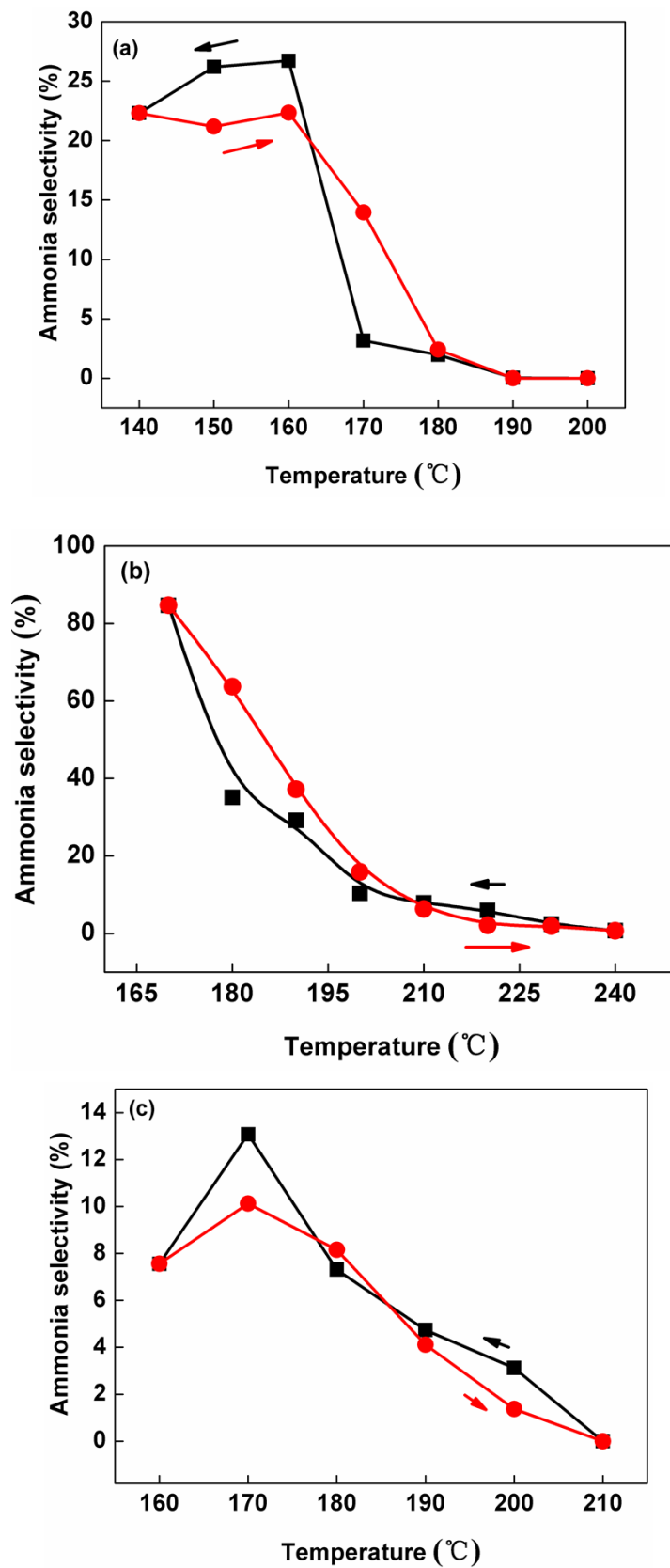
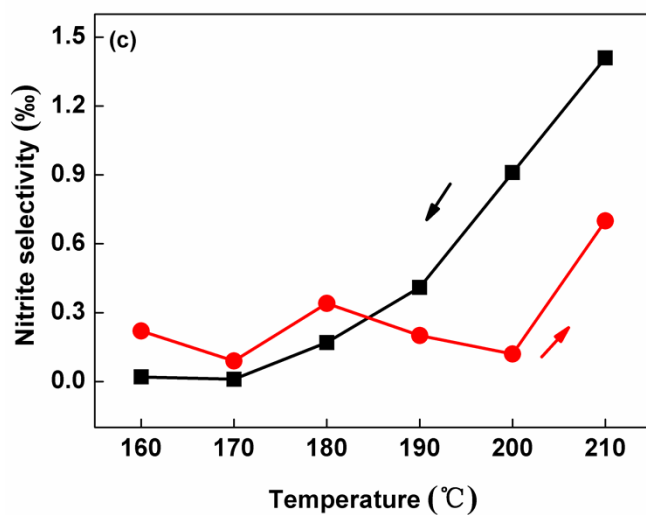
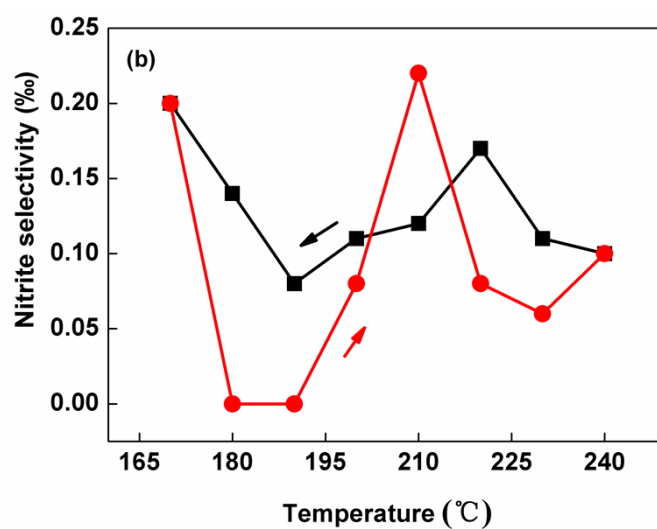
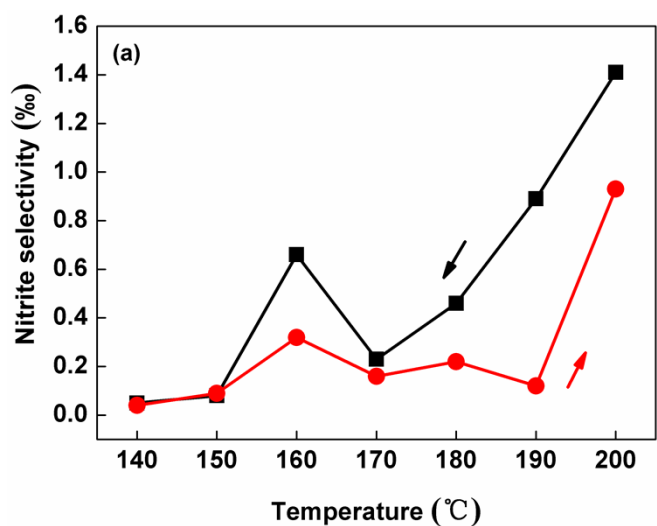


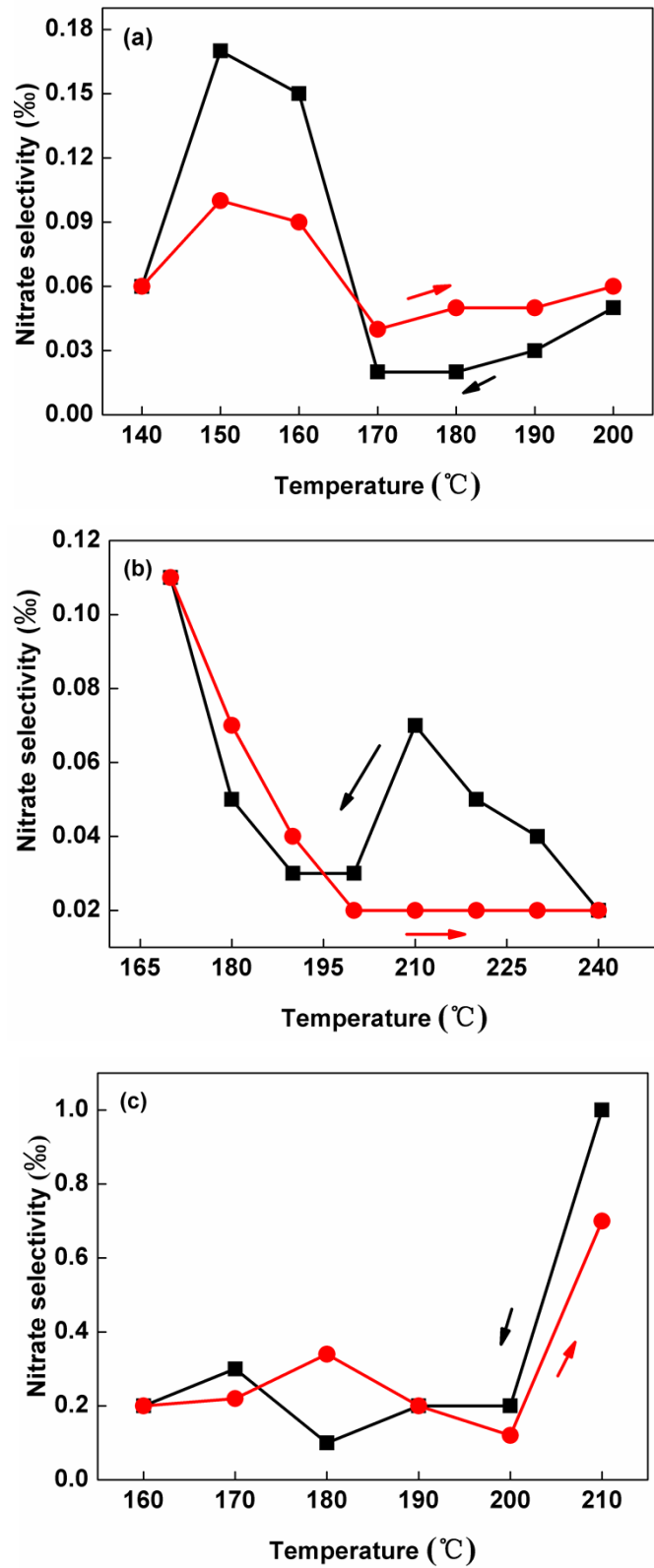
Figure S2 Typical EDX spectra of (a) Ru-Pt, (b) Pt, and (c) Ru catalysts.



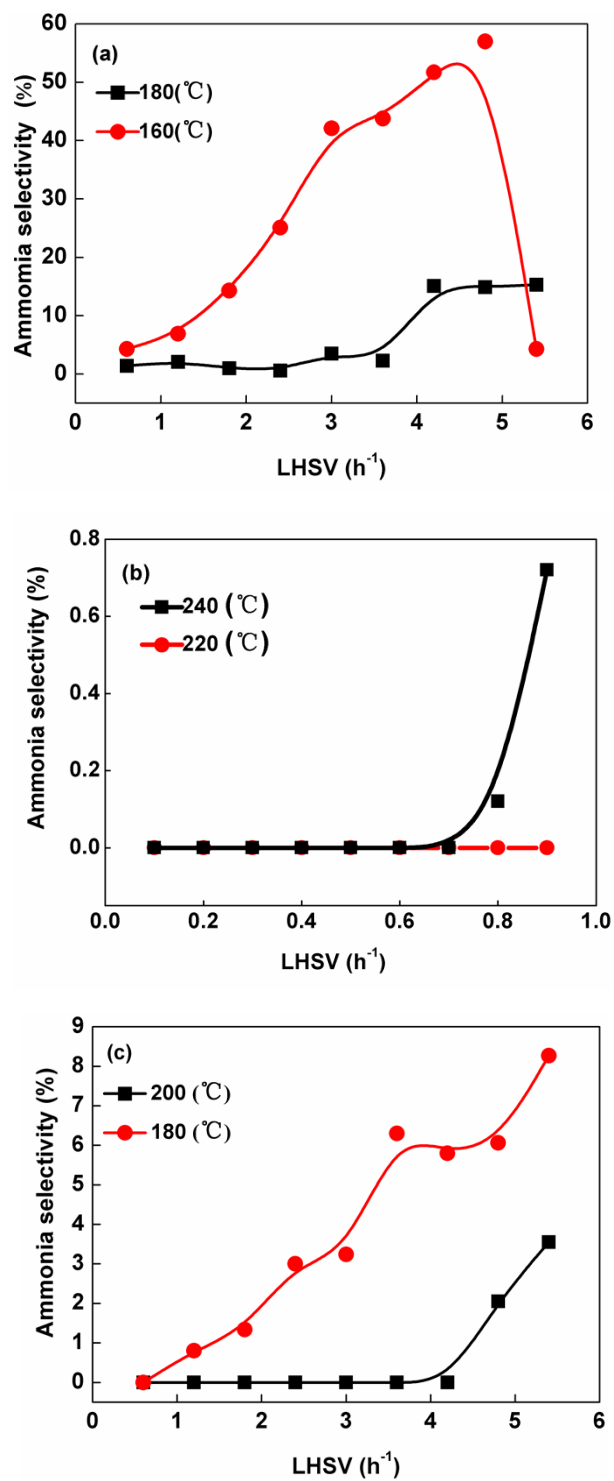
**Figure S3** Influence of the temperature on the ammonia selectivity over (a) Ru-Pt, (b) Pt, and (c) Ru catalysts.



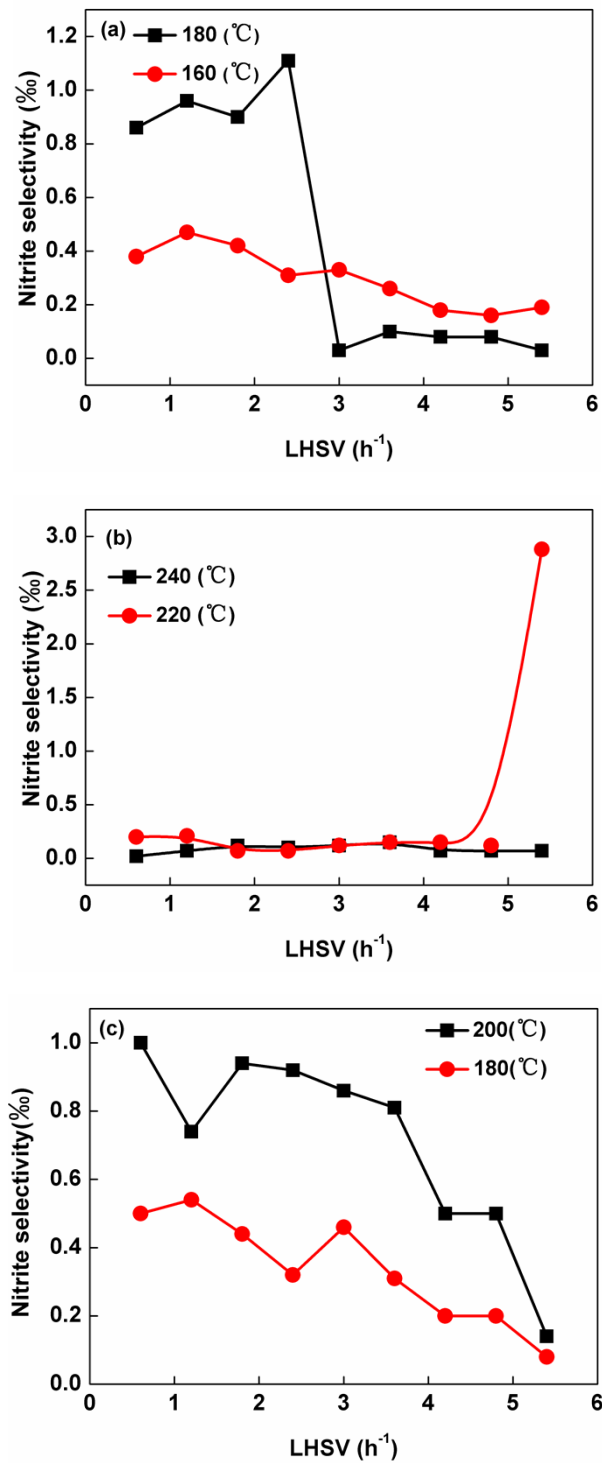
**Figure S4** Influence of the temperature on the nitrite selectivity over (a) Ru-Pt, (b) Pt, and (c) Ru catalysts.



**Figure S5** Influence of the temperature on the nitrate selectivity over (a) Ru-Pt, (b) Pt, and (c) Ru catalysts.

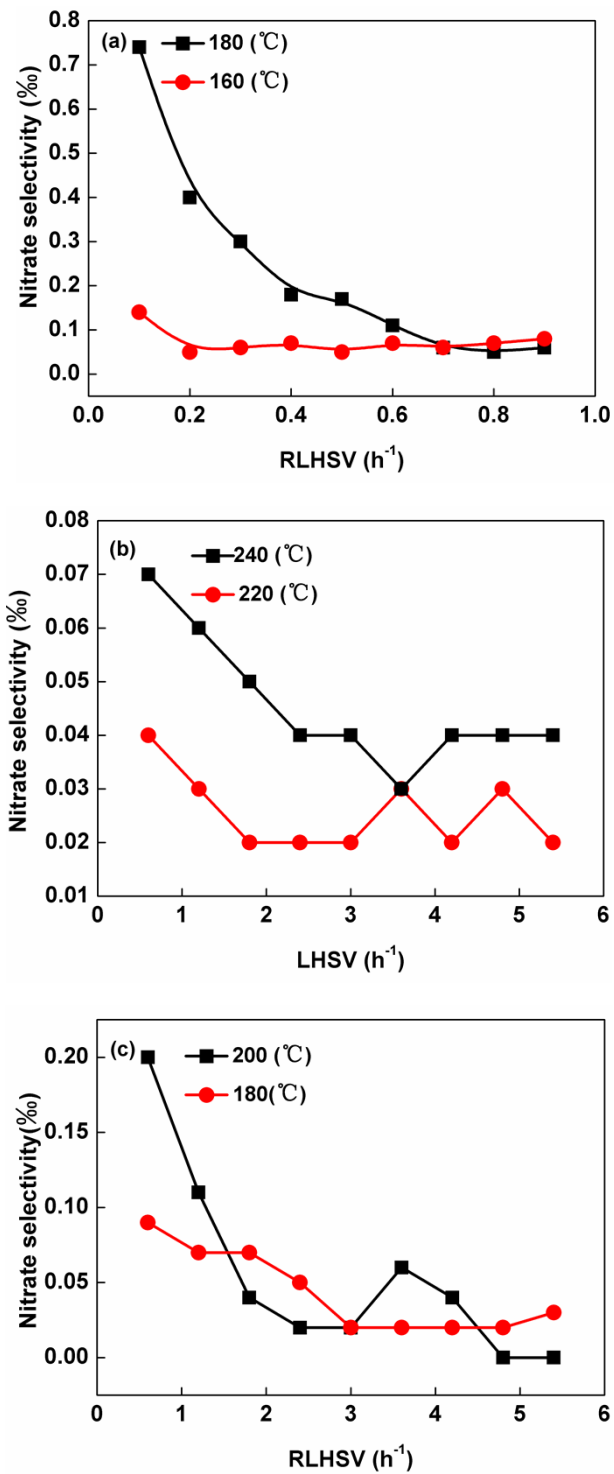


**Figure S6** Influence of LHSV on the ammonia selectivity over (a) Ru-Pt, (b) Pt, and (c) Ru catalysts.



**Figure S7** Influence of LHSV on the nitrite selectivity over (a) Ru-Pt, (b) Pt, and (c) Ru catalysts.





**Figure S8** Influence of LHSV on the nitrate selectivity over (a) Ru-Pt, (b) Pt, and (c) Ru catalysts.