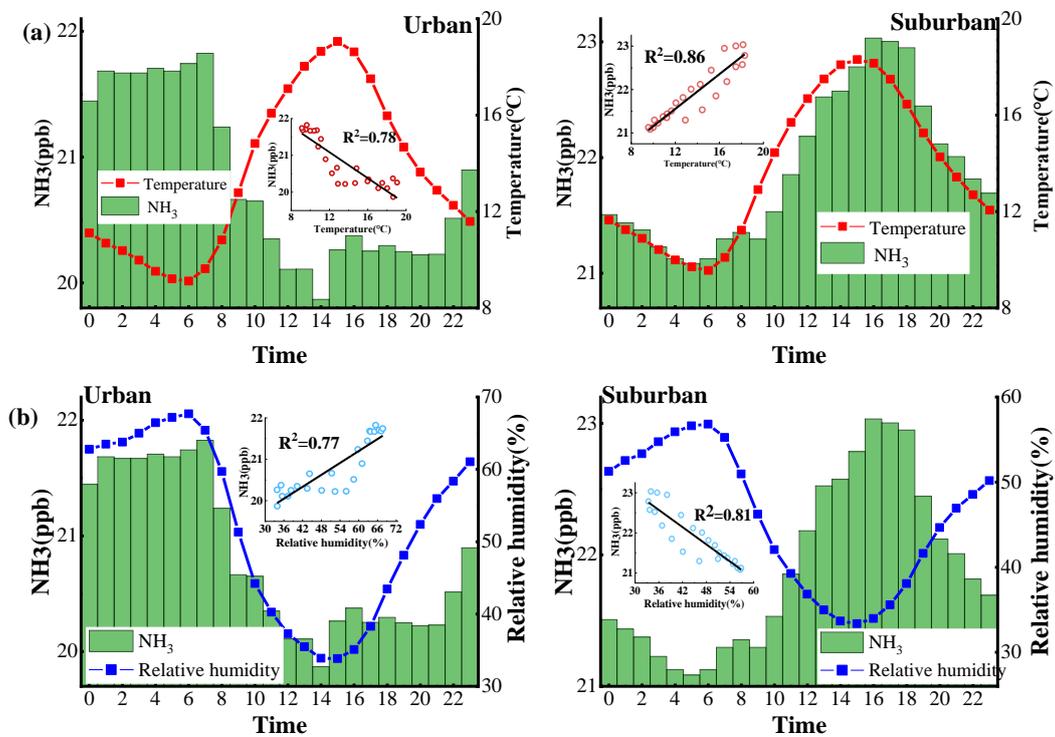


1 As seen in Fig. S1, the annual diurnal variations in the  $\text{NH}_3$  mixing ratio at the urban site were  
 2 significantly and negatively (positively) correlated with the temperature (relative humidity). By  
 3 contrast, the annual diurnal variations in the  $\text{NH}_3$  mixing ratio at the suburban site were significantly  
 4 and positively (negatively) correlated with the temperature (relative humidity). In general, the diurnal  
 5 behaviors of  $\text{NH}_3$  with temperature and relative humidity were different at the urban and suburban  
 6 sites.



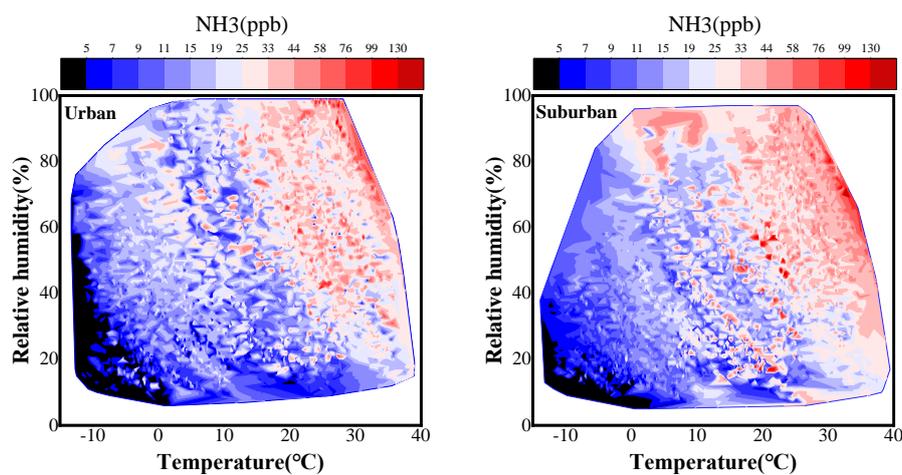
7  
 8 **Fig. S1.** Annual diurnal variations in and correlations between the  $\text{NH}_3$  mixing ratios and temperature (a), relative humidity (b).

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15 As see in Fig. S2, the  $\text{NH}_3$  mixing ratios at both sites increased with the relative humidity at the same  
16 temperature and increased with the temperature at the same relative humidity. The maps were plotted  
17 using all the measurement data.

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20 **Fig. S2.** Contour maps of the  $\text{NH}_3$  mixing ratio, temperature, and relative humidity at urban and suburban sites in Beijing.

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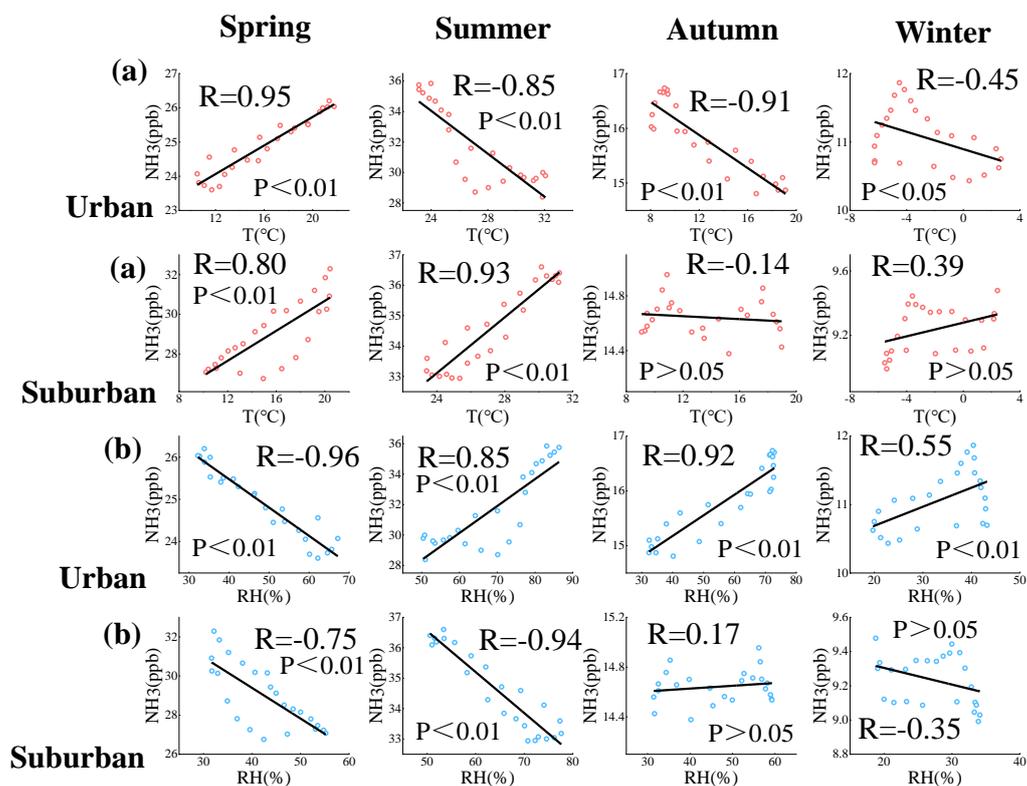
30

31

32 As seen in figure S3, similar correlations of diurnal NH<sub>3</sub> with Temperature(T), relative humidity

33 (RH) were found in spring but different in other seasons at urban and suburban Beijing.

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35

36 Fig. S3. Correlations of diurnal NH<sub>3</sub> with Temperature(T), relative humidity (RH) in different seasons at urban and suburban Beijing.