

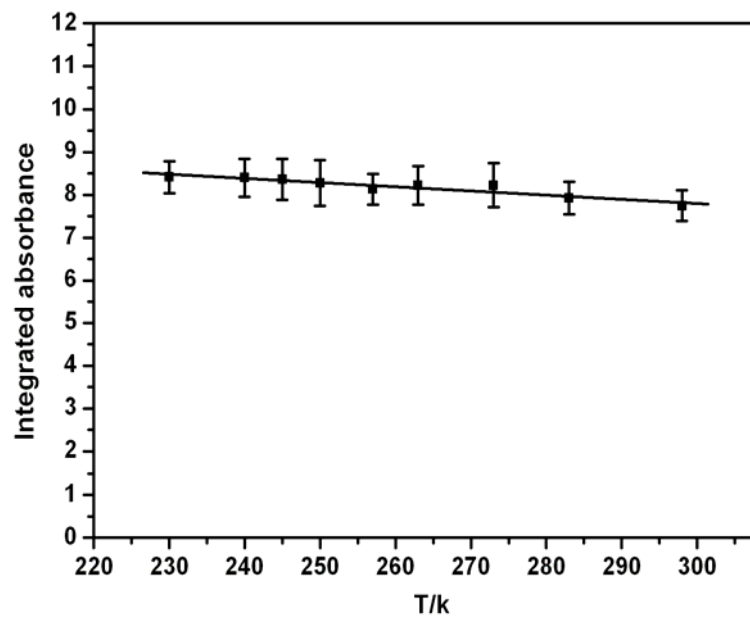
## **Supplementary Material for the paper**

### **Effects of temperature on the heterogeneous oxidation of sulfur dioxide by ozone on calcium carbonate**

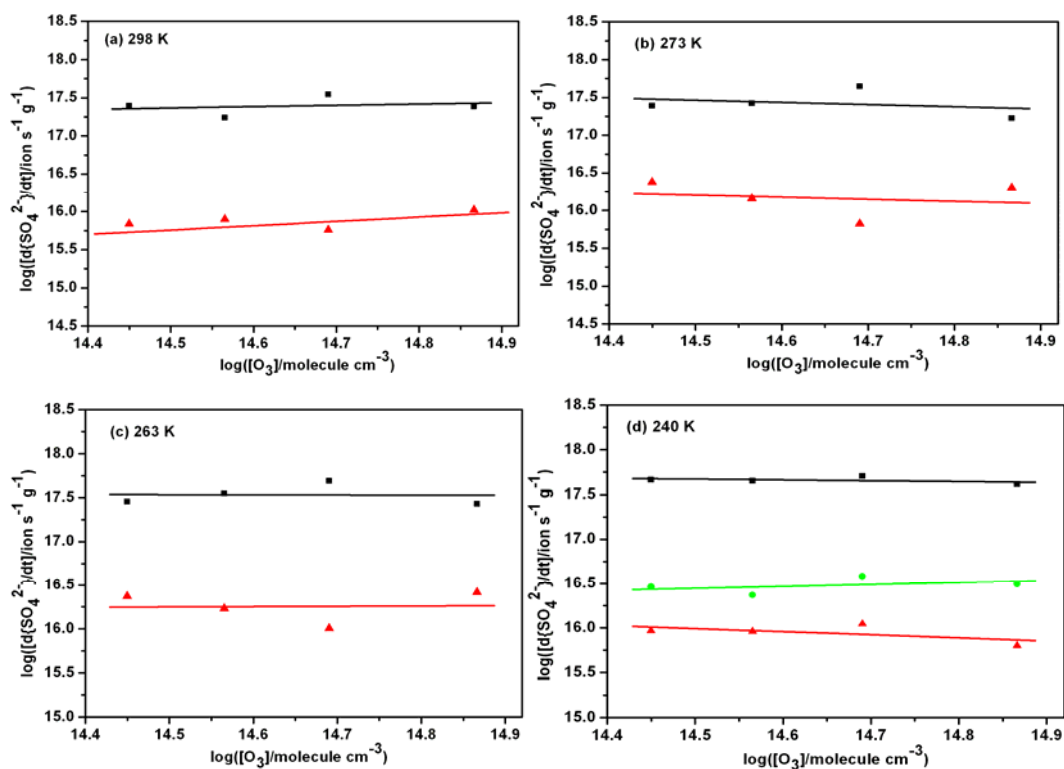
By:

L. Y. Wu, S. R. Tong, W. G. Wang, and M. F. Ge

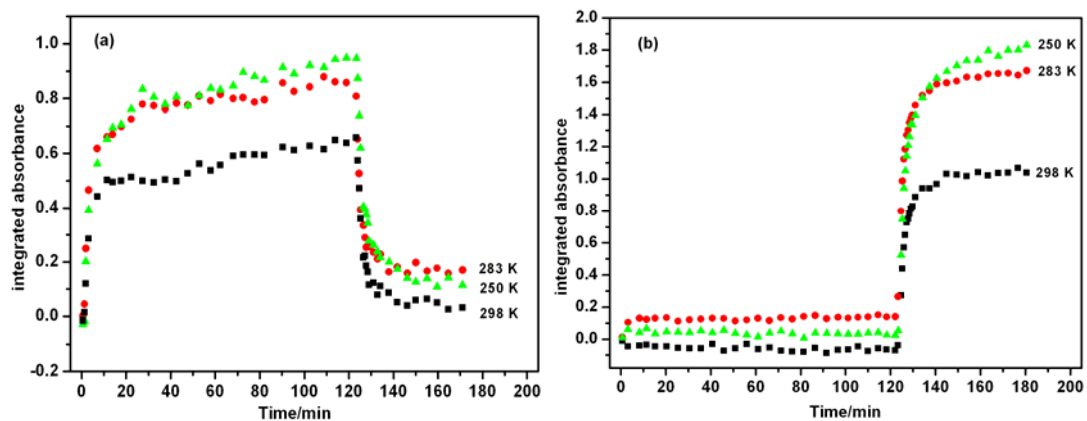
Correspondence to: M. F. Ge ([gemaofa@iccas.ac.cn](mailto:gemaofa@iccas.ac.cn))



**Fig.S1.** The integrated absorbance of sulfate with the same concentration (2.4 mg/g) as a function of temperature. The slope from a linear regression was determined to  $-0.00969 \pm 0.0845(\sigma)$ .



**Fig.S2.** Double-logarithmic plot of the rate of sulfate formation as a function of the concentration of  $O_3$  at (a) 298 K, (b) 273 K, (c) 263 K, and (d) 240 K. ■, ●, and ▲ represent the data of the initial region, the transition region, and the saturation region, respectively.



**Fig.S3.** The evolutions of the integrated absorbance of the sulfite band (a) and the sulfate band (b) during the sequential exposure experiments that the  $O_3$  was introduced in the reaction system after the adsorption of  $SO_2$  for 120 min.