Response to editor:

We are thankful for the editing work of the editor and are glad that this paper was accepted for publication. Upon the stage of final draft submission, we wanted to let the editor know that during the second review process, we have made a small change to the calculation of the TMI catalyzed SO_2 oxidation process, so that the pH dependent Fe and Mn concentrations are in accordance with those assumed in Cheng et al. (2016). This has resulted in more TMI catalyzed sulfate production under lower pH values, however, had negligible influence on the our results and conclusions.

The estimated average sulfate production rates for the two haze periods increased to 0.33 and 0.94 μg m^{-3} h^{-1} (about 38% and 20% of that observed within $PM_{2.5}$). While for the estimated HONO production fraction of R1 and R2, f_{R2} was estimated to range from range from 82.2 to 99.7% and from 86.8 to 99.8% during the 4th and 5th Nov. 2016, respectively. For the two haze events on 11th and 14th Nov., f_{R2} was estimated to be 99.7% and 98.0%.

Under the assumed upper limit of pH, R1 could have contribute up to 17.8% and 13.2% to the observed HONO growth during the two fog events. For the two haze events, R1 contributed very little (0.3% and 2%) to the observed HONO growth.

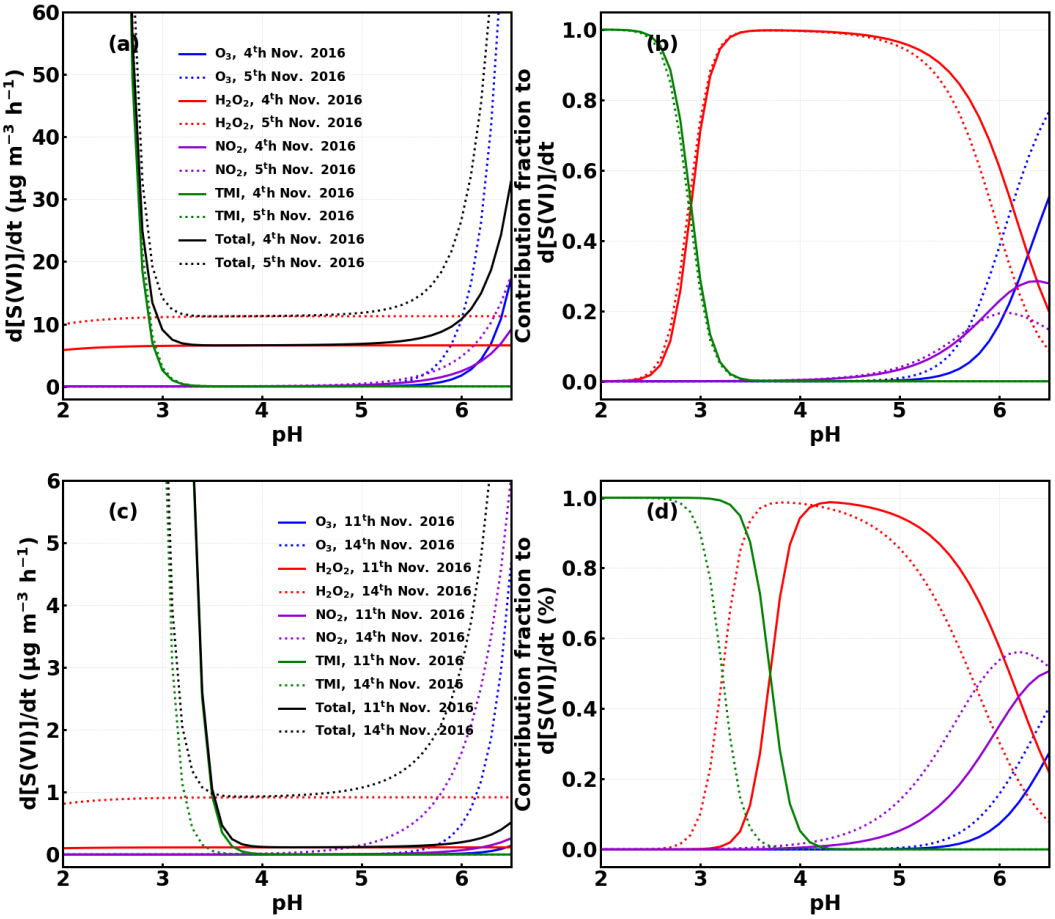

Figure 1 Calculated average sulfate production (a,c) and contribution fraction b,d) from SO_2 oxidation by H_2O_2, NO_2^*, O_3, TMI under different pH values using methods described in (Cheng et al., 2016) for the case episodes on 4th, 5th, 11th and 14th Nov. 2016.