

Supplement of
Photolysis of iron-organic complexes regulates the HONO production
from nitrate/organic acid/Fe(III) mixtures: Roles of organic species,
bulk acidity, and dissolved oxygen

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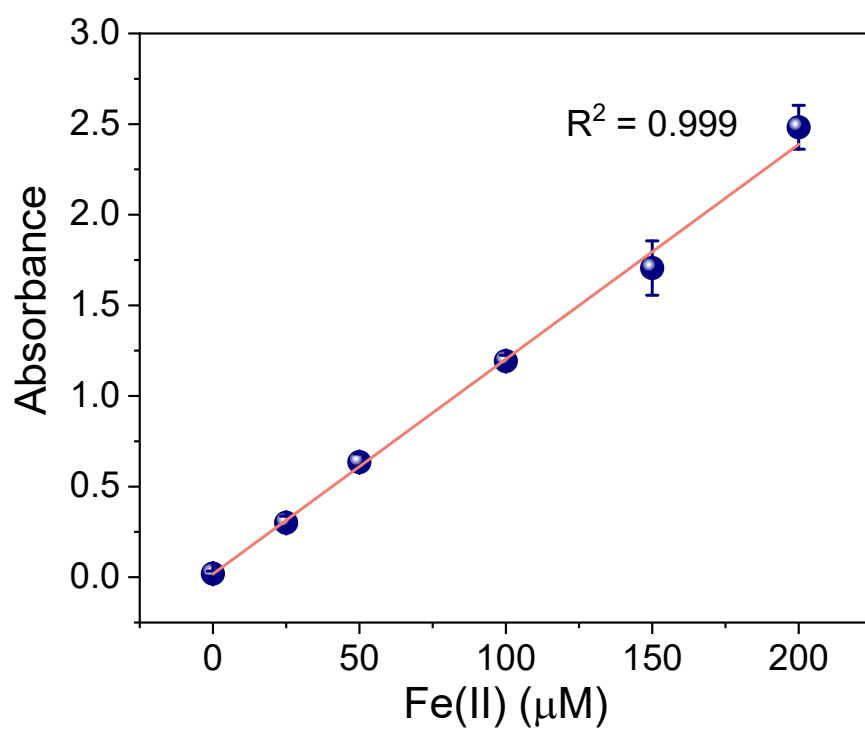
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19 **Supplementary Figures**



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21 **Figure S1.** Calibration curve for Fe(II) measurements using ferrous ammonium sulfate standard

22 solutions.

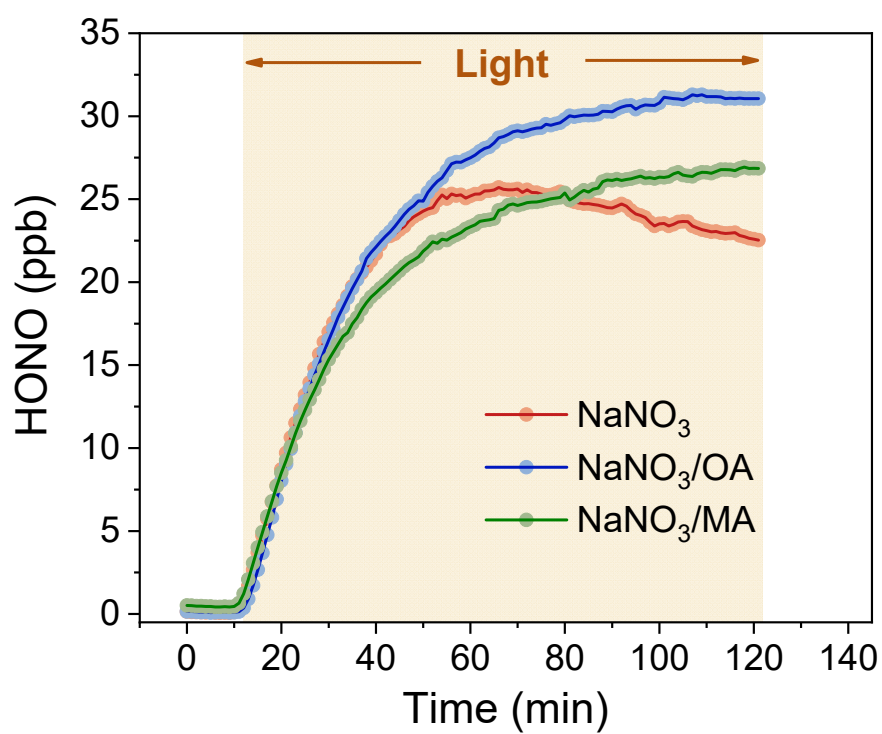


Figure S2. HONO concentrations produced from pure NaNO₃, NaNO₃/OA and NaNO₃/MA solutions at pH 1.6 using N₂ as the carrier gas. The yellow-shaded region indicates the period of simulated sunlight irradiation.

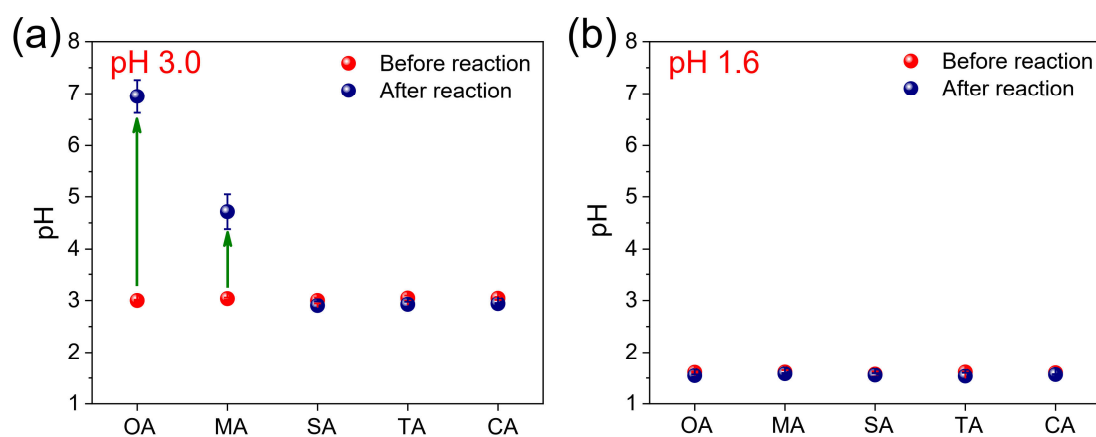


Figure S3. Changes in the pH of NaNO₃/organic acid/FeCl₃ solutions at initial pH values of 3.0 (a) and 1.6 (b) before and after photochemical reactions.

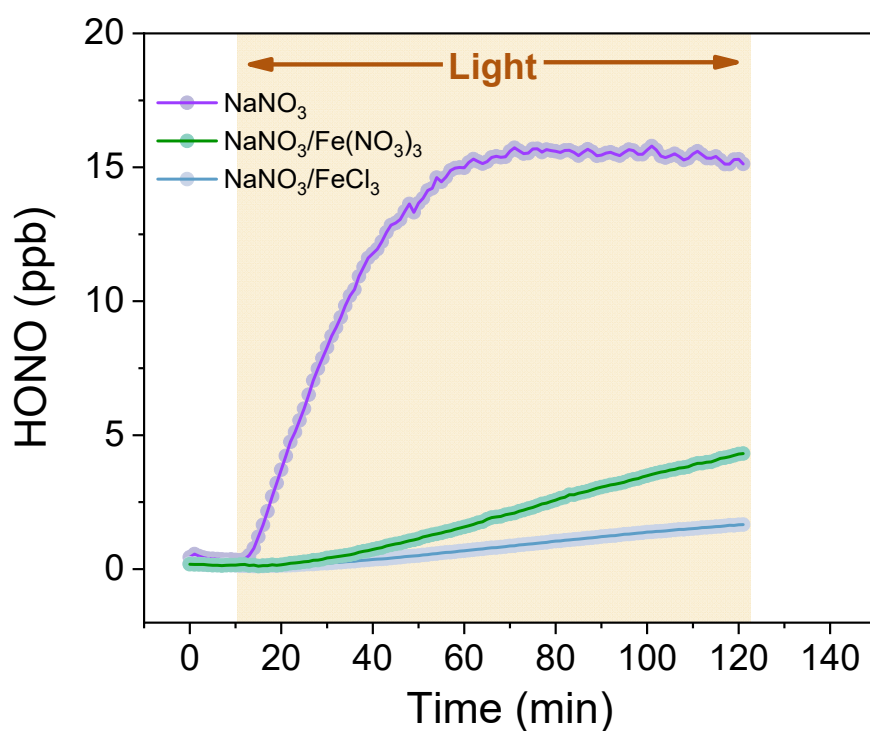
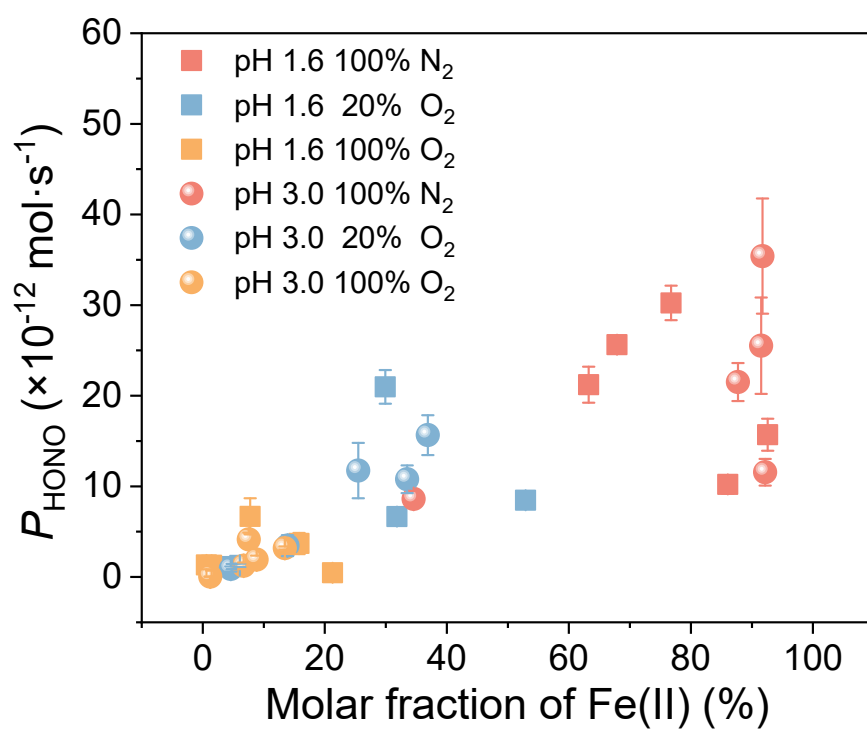


Figure S4. HONO concentrations produced from pure NaNO_3 , $\text{NaNO}_3/\text{Fe}(\text{NO}_3)_3$, and $\text{NaNO}_3/\text{FeCl}_3$ solutions at pH 1.6. In the $\text{NaNO}_3/\text{Fe}(\text{NO}_3)_3$ mixture, the concentrations of $\text{Fe}(\text{NO}_3)_3$ and NaNO_3 were 0.2 and 2.9 mM, respectively, to ensure identical amounts of $\text{Fe}(\text{III})$ and NO_3^- to those in the $\text{NaNO}_3/\text{FeCl}_3$ system. The yellow-shaded region indicates the period of simulated sunlight irradiation.



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 37 **Figure S5.** Correlation between HONO production rates and the molar fraction of Fe(II) in
 38 NaNO₃/organic acid/FeCl₃ mixtures at initial pH values of 3.0 and 1.6 under three carrier gas
 39 conditions, i.e., 100% N₂, air (80% N₂ + 20% O₂), and 100% O₂.