Kinetics of the OH + NO₂ reaction: Rate coefficients (217-333 K, 16-1200 mbar) and fall-off parameters for N₂ and O₂ bath-gases

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Supplementary Information
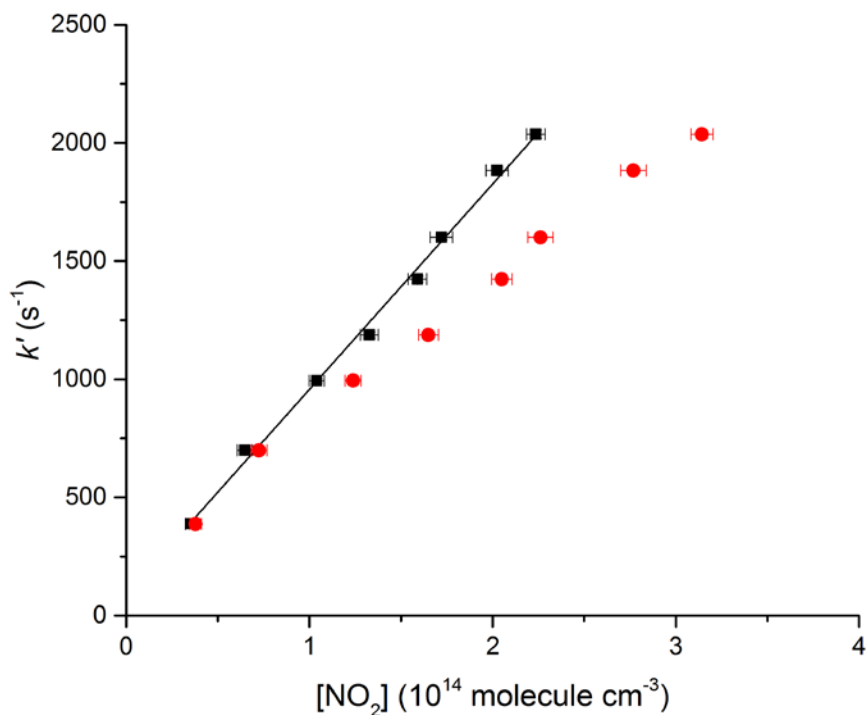
Figure S1. Red circles: Bimolecular plot of the OH reaction with NO₂ measured at 78.8 Torr N₂ and 217 K. The black squares were obtained by accounting for loss of NO₂ via N₂O₄ formation.
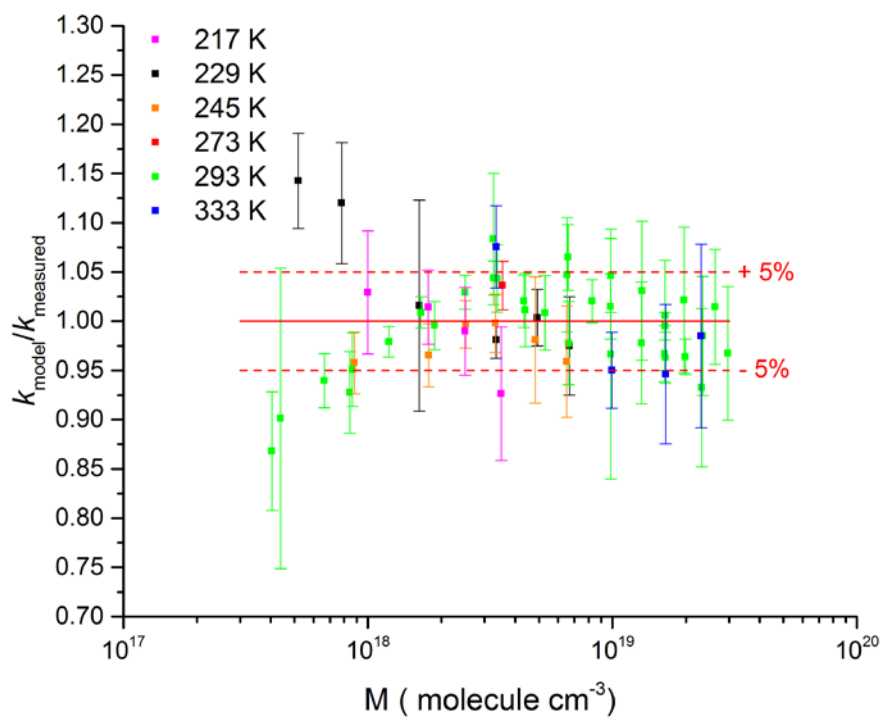
Figure S2. Ratio of the parametrised rate coefficient (k_{param}) to measurements (k_{meas}) as a function of the molecular density (M) for 6 different temperatures.
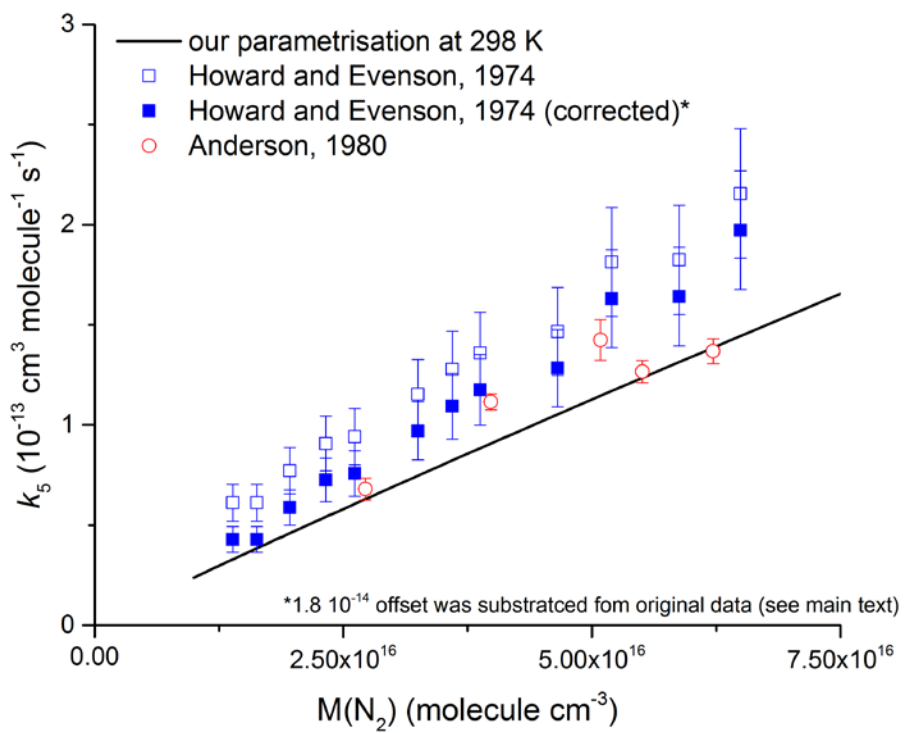
Figure S3. Comparison of the present parametrisation with low-pressure measurements by Howard and Evenson (1974) (open and closed blue squares) and Anderson (Anderson, 1980) (open red circles).
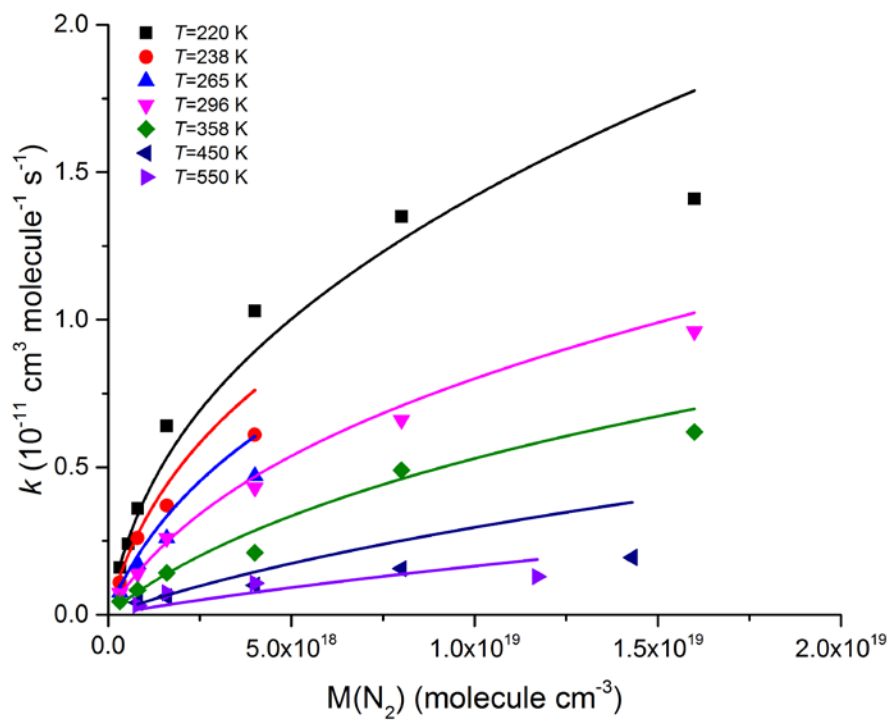
Figure S4. Comparison of the present parametrization with values of k_5 reported by Anastasi and Smith (1976), who report 36% overall uncertainty in k_5 (2 σ)
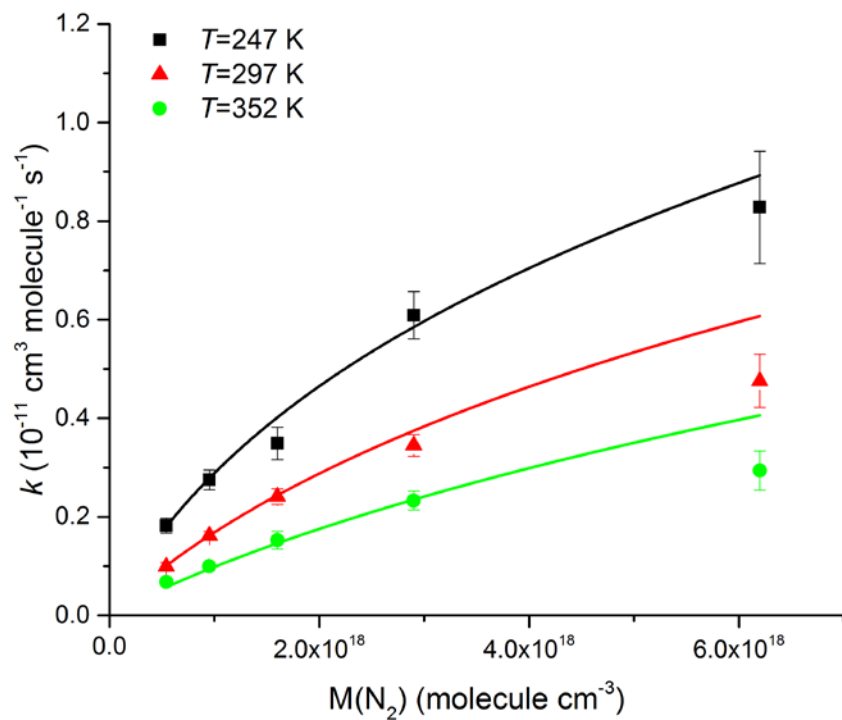
Figure S5. Comparison of the present parametrization with values of k_5 reported by Wine et al. (1979) where the error bars (2σ) represent total overall uncertainty.
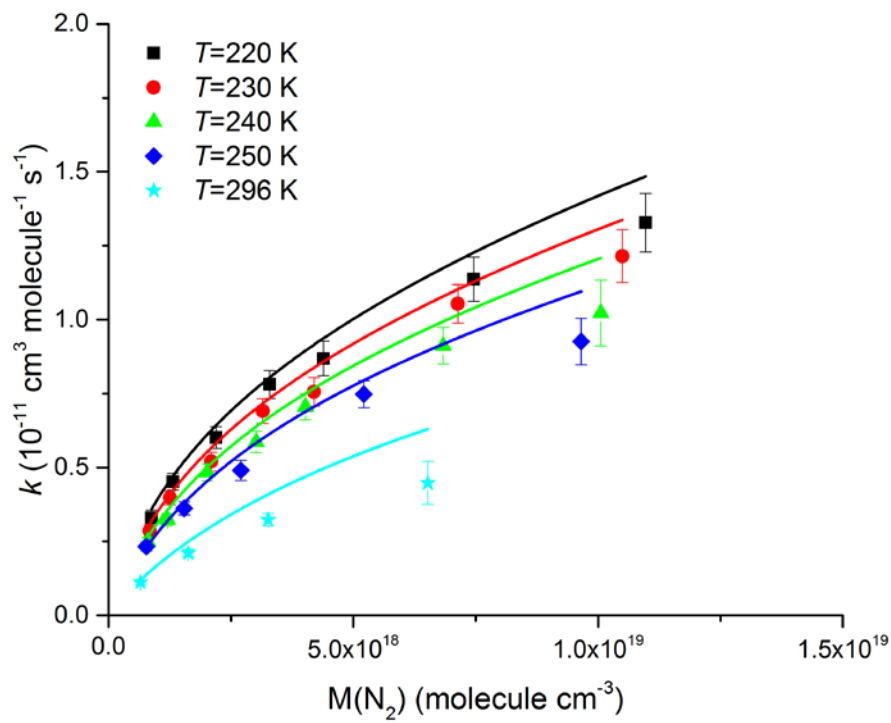
Figure S6. Comparison of the present parametrization with values of k_5 reported by Brown et al. (1999) where the error bars (2σ) represent total overall uncertainty.
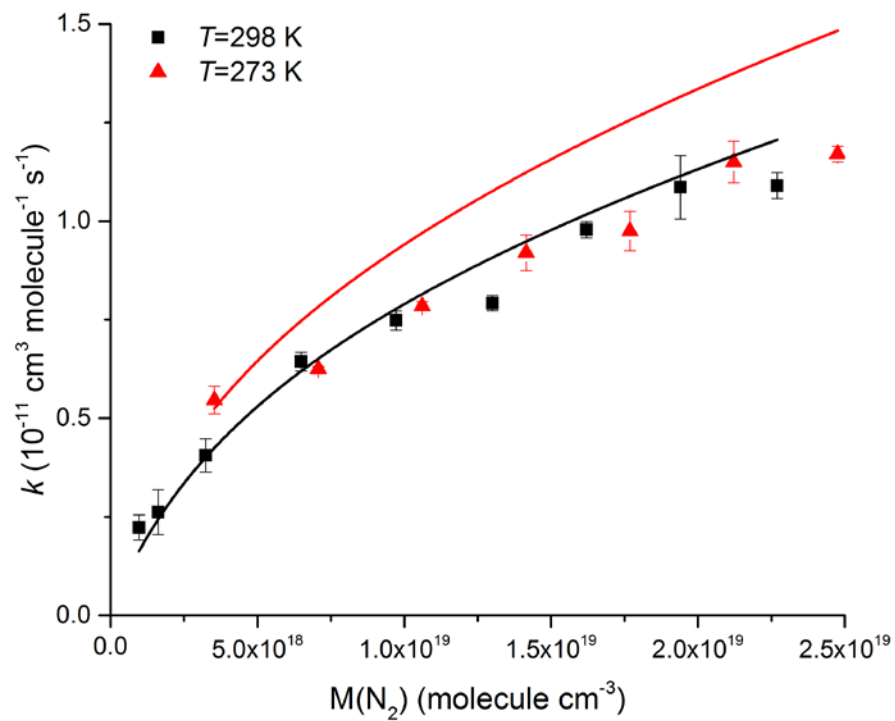
Figure S7. Comparison of the present parametrization with values of k_5 reported by D'Ottone et al. (2001) where the error bars (2σ) represent total overall uncertainty.
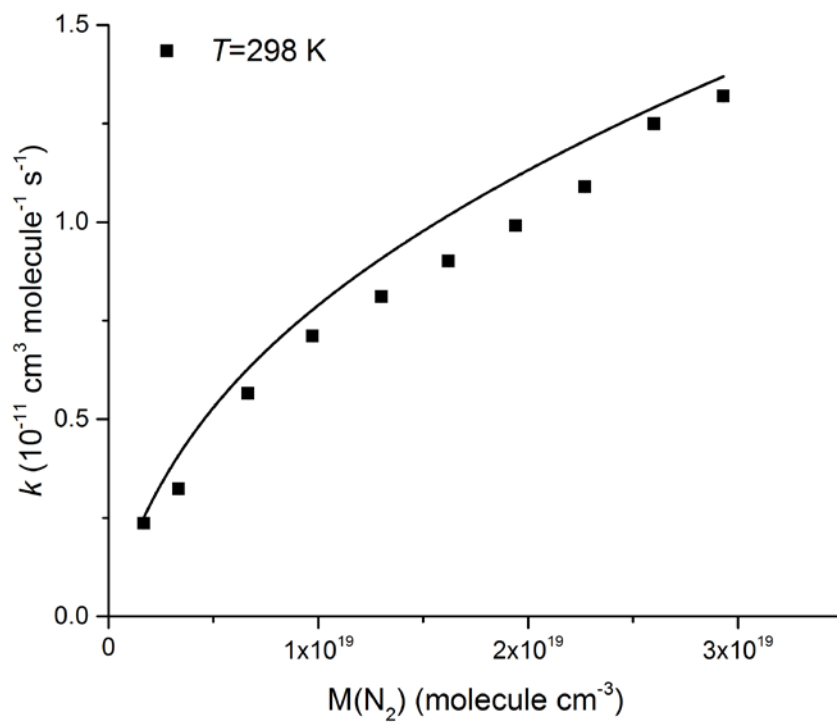
Figure S8. Comparison of the present parametrization with values of k_5 reported by Mollner et al. (2010). The reported 2 σ (statistical) uncertainty is < 2% is within the symbol size.
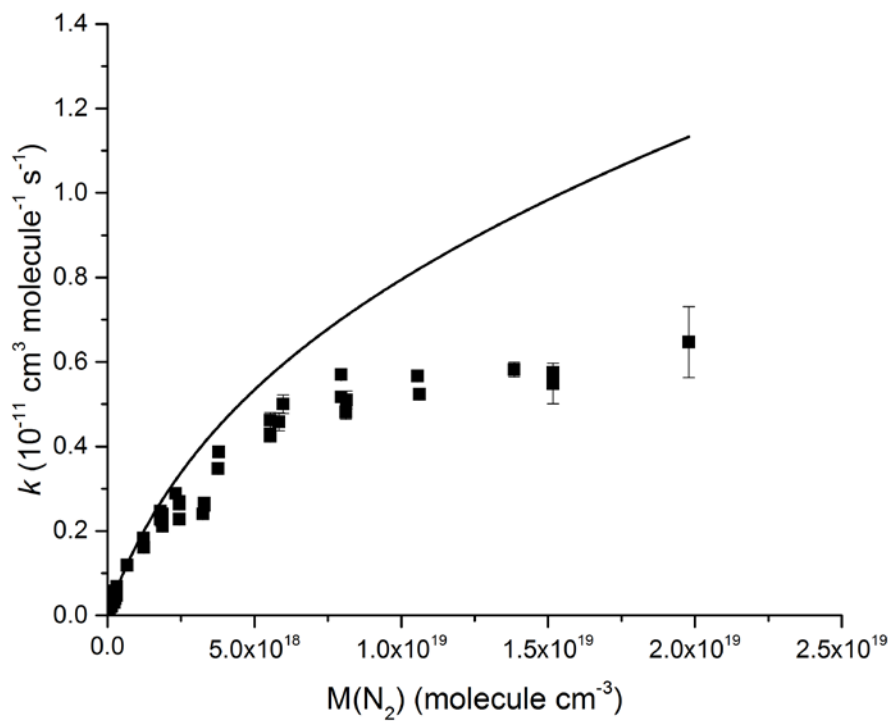
Figure S9. Comparison of the present parametrization with values of k_5 reported by Donahue et al. (1997) where the error bars (2σ) represent total overall uncertainty.
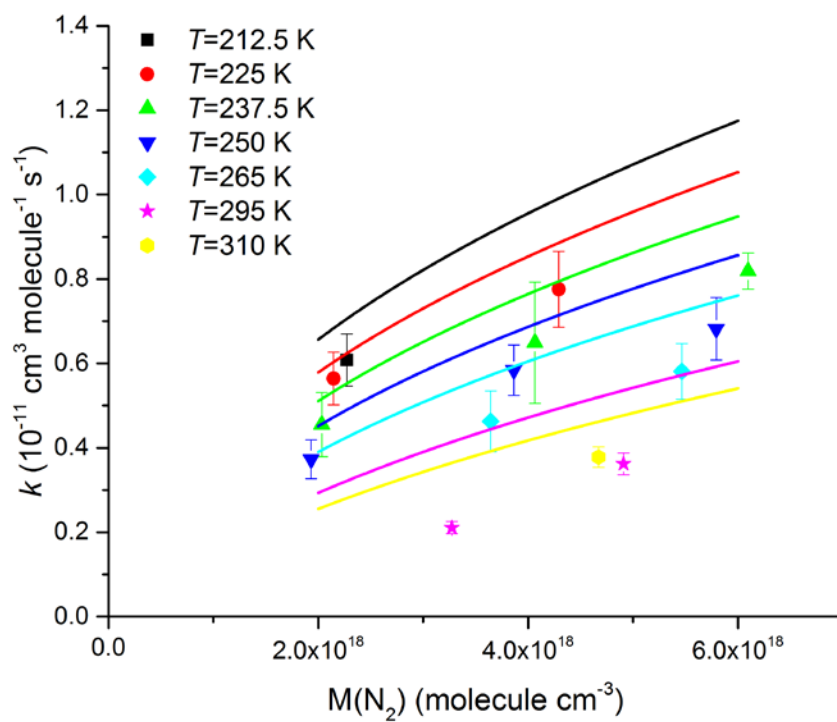
Figure S10. Comparison of the present parametrization with values of k_5 reported by Dransfield et al. (1999).

References

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