High pressure inside nanometre-sized particles influences the rate and products of chemical reactions

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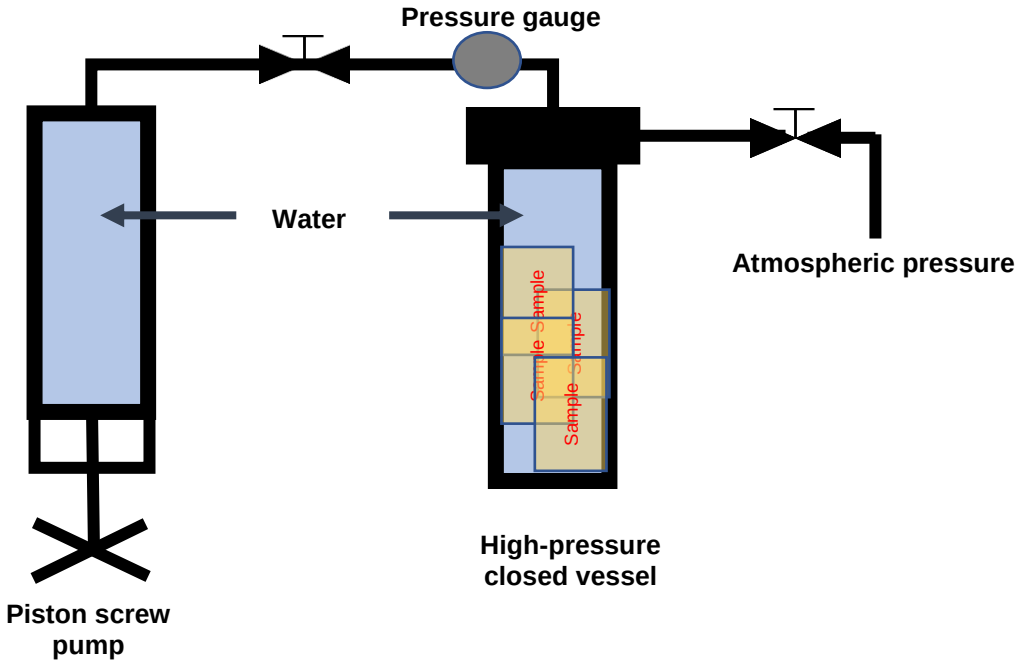

Figure S1. Schematic of the experimental set-up used to probe the impact of pressure on atmospheric chemical reactions.

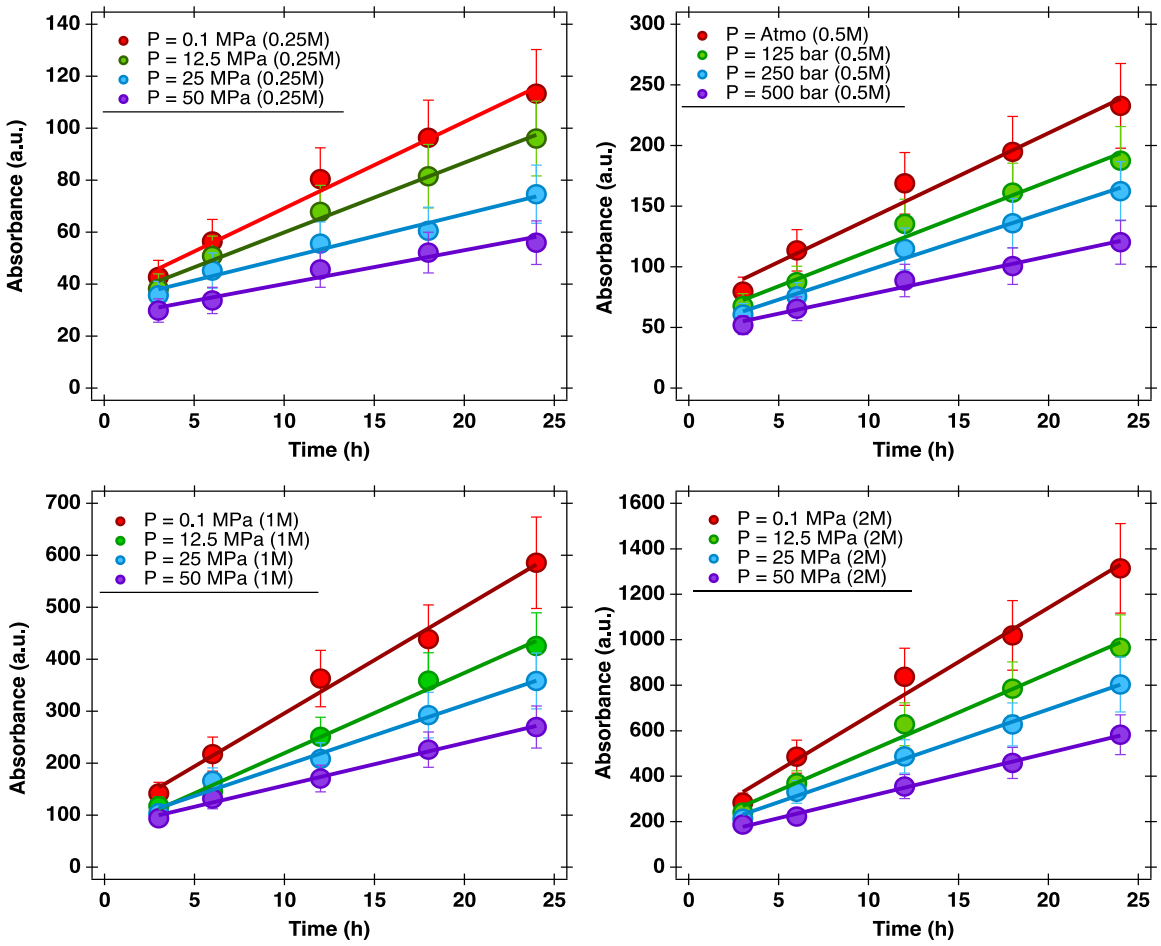

Figure S2. Absorbance of light-absorbing glyoxal reaction products at different pressures of reaction of 0.25 M; 0.5M; 1M and 2M glyoxal with 2 M AS, as function of reaction time (3, 6, 12, 18 and 24 hours).

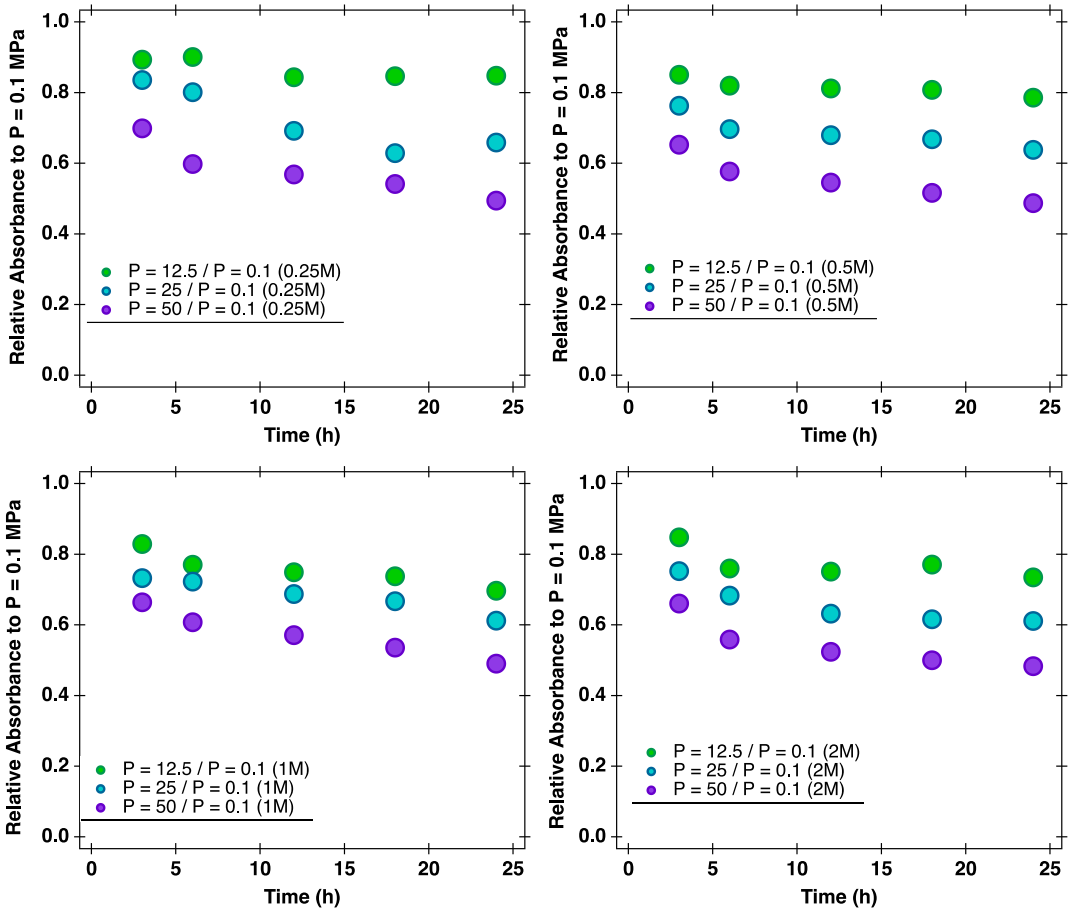

Figure S3. Relative absorbance of light-absorbing glyoxal reaction products at different pressures of reaction of 0.25 M; 0.5M; 1M and 2M glyoxal with 2 M AS, as function of reaction time (3, 6, 12, 18 and 24 hours).

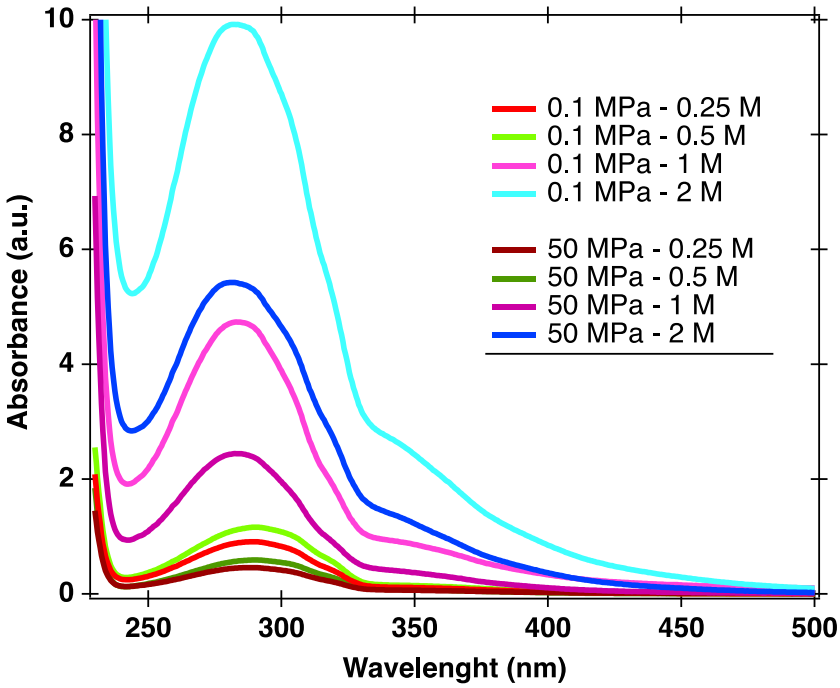

Figure S4. Absorption spectra of the reaction of glyoxal in 2 M ammonium sulphate solution after 24 hours, showing the formation of light absorbing compounds. The absorbance was retrieved by multiplying the signal intensity by the dilution factor.

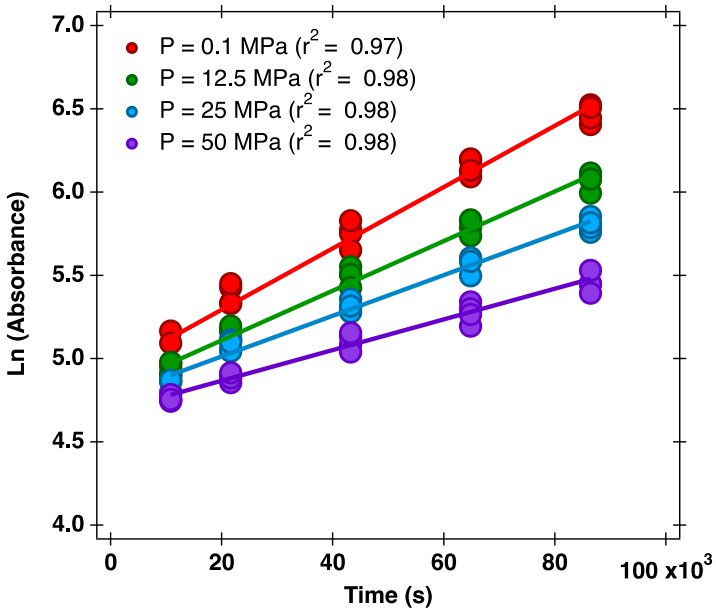

Figure S4. First-order kinetic fit to the UV/Vis absorbance of light-absorbing glyoxal reaction products.