Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Benzene line list. Observed and calculated wavenumbers of the transitions assigned to v_{11} for benzene, ordered for increasing energy. The headings J', K' and J'', K'' indicate the values of the rotational quantum numbers for the upper and lower states of transitions, respectively. The weights used in the fitting of band constants are also reported (see the main text for description).