

SUPPLEMENTARY INFORMATION

Surface fractal dimension, water adsorption efficiency, and cloud nucleation activity of insoluble aerosol

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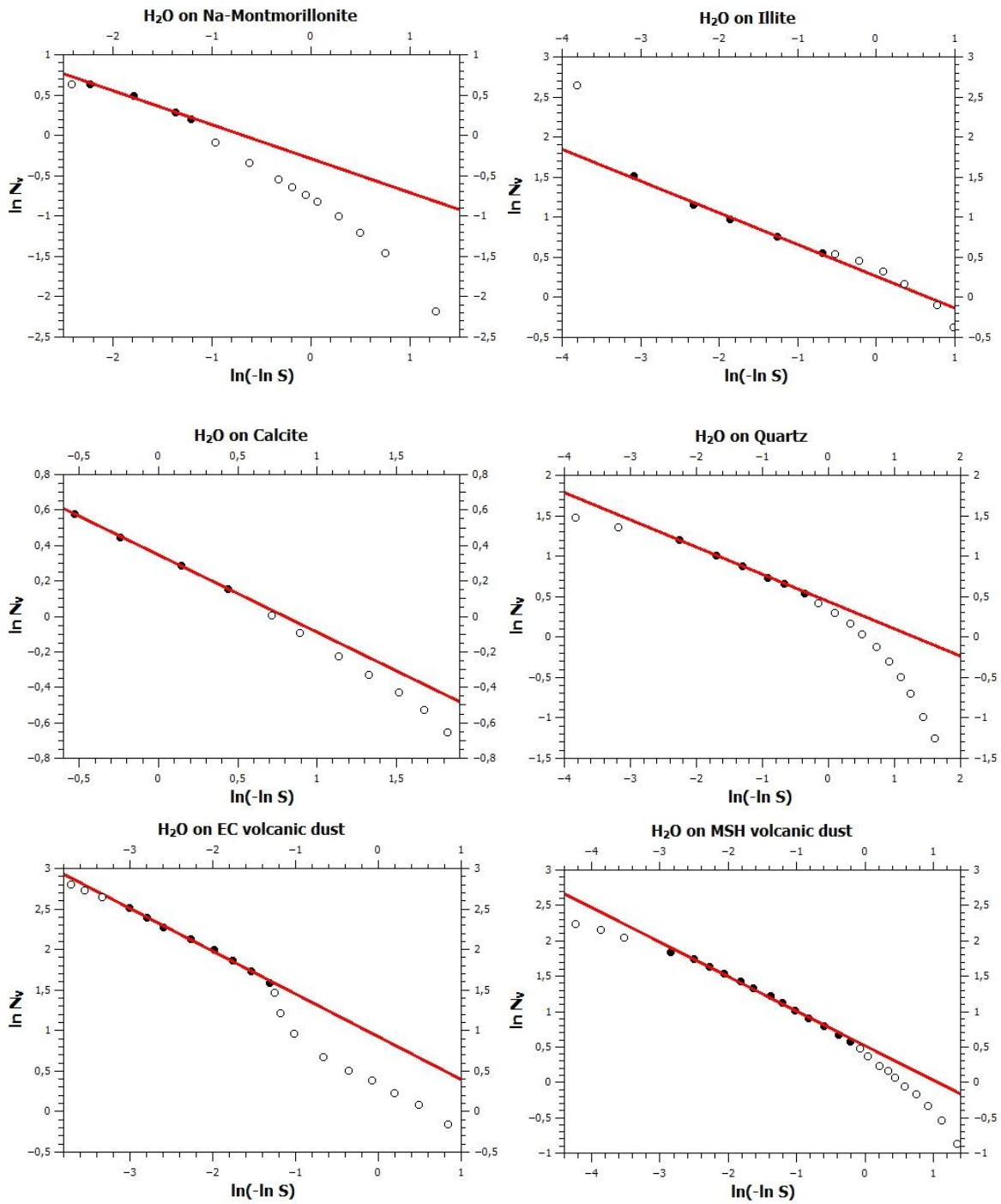
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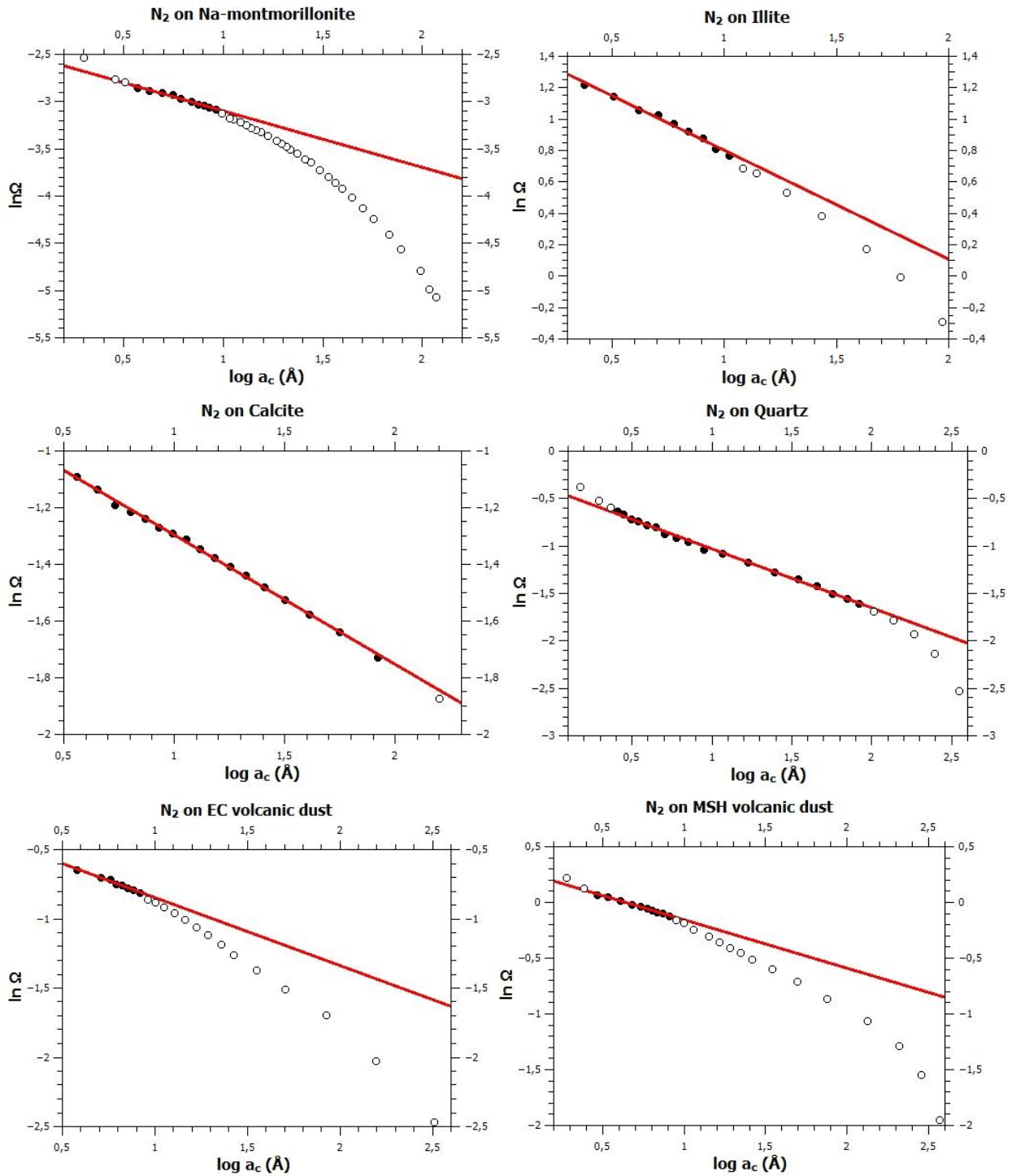
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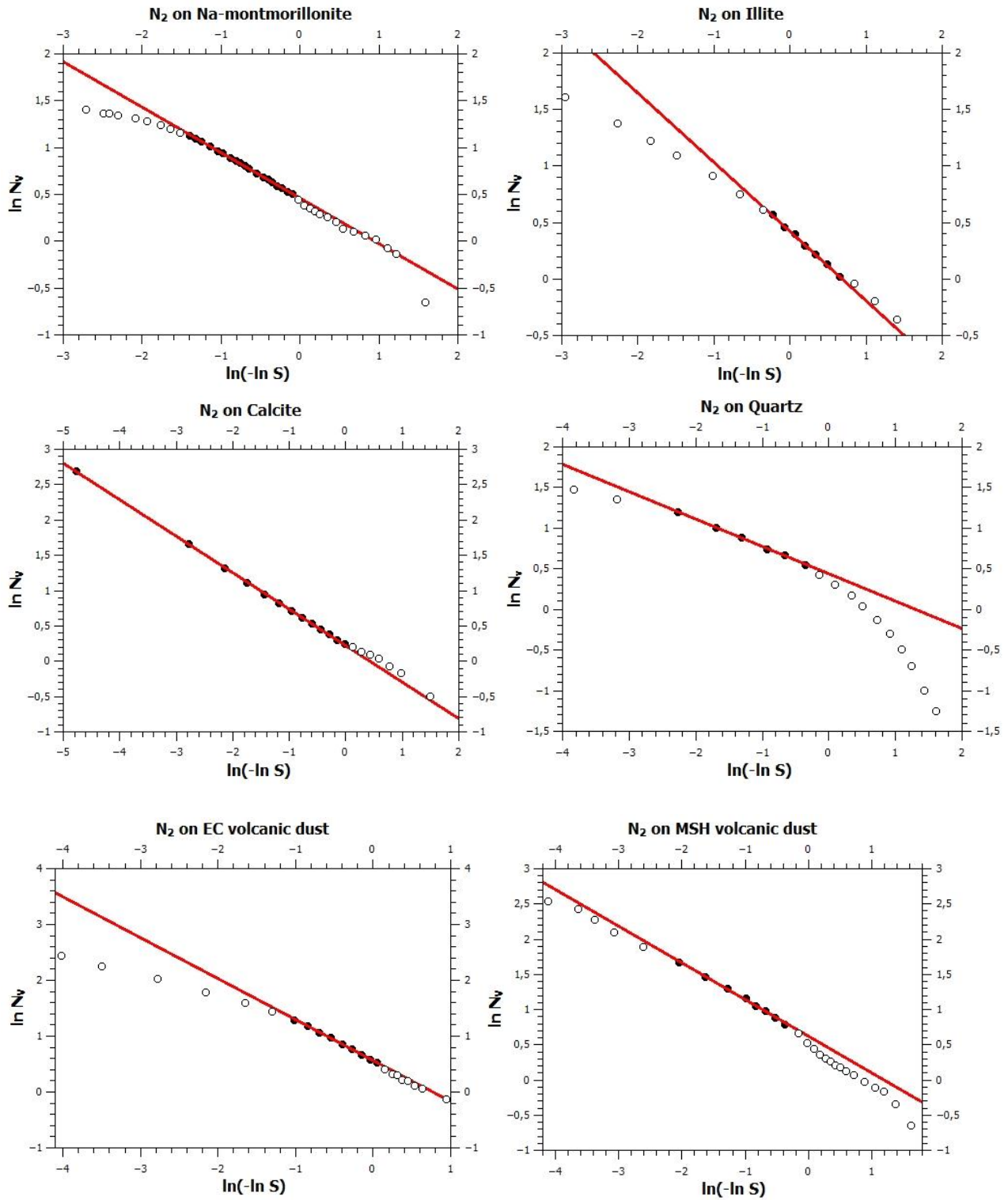
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Supplementary Figure 1. FHH plots of water adsorption on Na-montmorillonite (Hung et al., 2015), Illite (Branson and Newman, 1983), Calcite (Morimoto et al, 1980), Quartz (Malandrini et al., 1997), El Chichon volcanic dust (Delmelle et al., 2005), and Mt. St. Helens volcanic dust (Delmelle et al., 2005). The $B/(3-D)$ -values shown in Table 1 are obtained from the slopes of the linear fits (red lines) to the data points indicated with full circles.



Supplementary Figure 2. Thermodynamic fractal analysis of Na-montmorillonite (Hung et al., 2015), Illite (Pernyeszi and Dékány, 2002), Calcite (Tsai, 2013), Quartz (Malandrini et al., 1997), El Chichon volcanic dust (Delmelle et al., 2005), and Mt. St. Helens volcanic dust (Delmelle et al., 2005). The $D_{N_2}(\text{TD})$ -values shown in Table 1 are obtained from the slopes of the linear fits (red lines) to the data points indicated with full circles.



Supplementary Figure 3. FHH plots of nitrogen adsorption of Na-montmorillonite (Hung et al., 2015), Illite (Pernyeszi and Dékány, 2002), Calcite (Tsai, 2013), Quartz (Malandrini et al., 1997), El Chichon volcanic dust (Delmelle et al., 2005), and Mt. St. Helens volcanic dust (Delmelle et al., 2005). The $D_{N_2}(f\text{-FHH})$ -values shown in Table 1 are obtained from the slopes of the linear fits (red lines) to the data points indicated with full circles.

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