



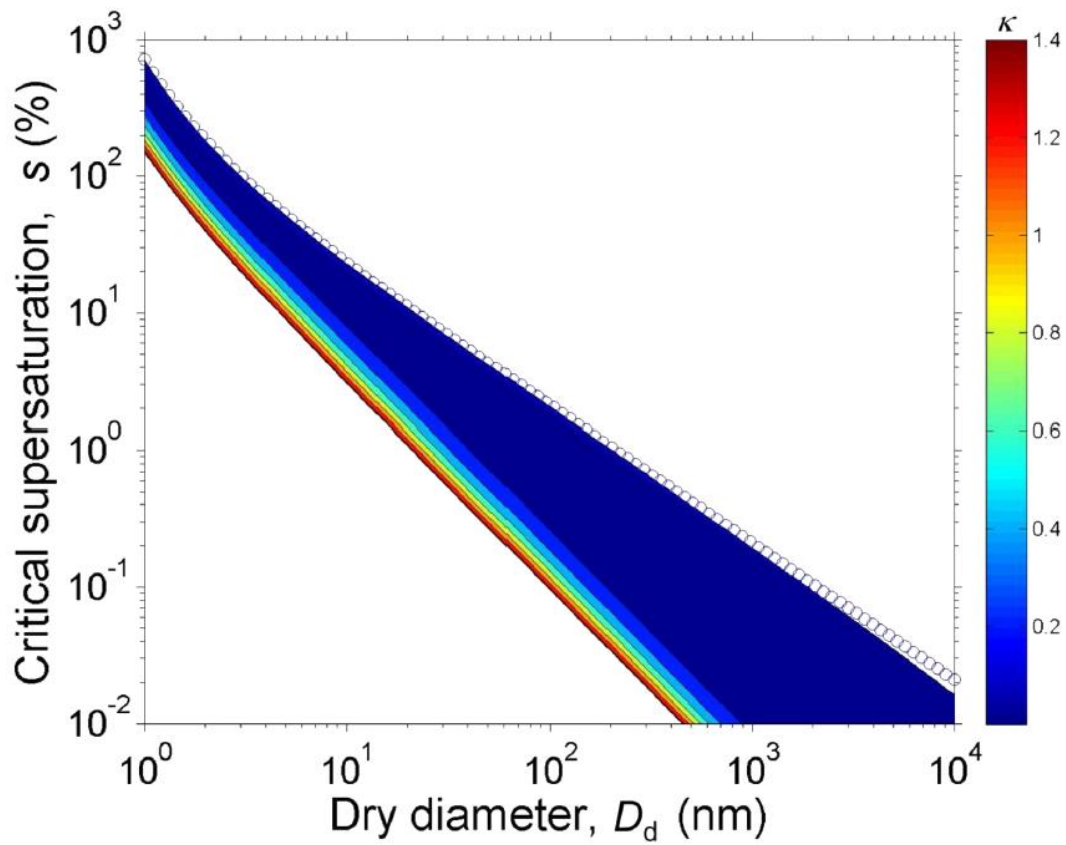
*Supplement of*

## **A broad supersaturation scanning (BS2) approach for rapid measurement of aerosol particle hygroscopicity and cloud condensation nuclei activity**

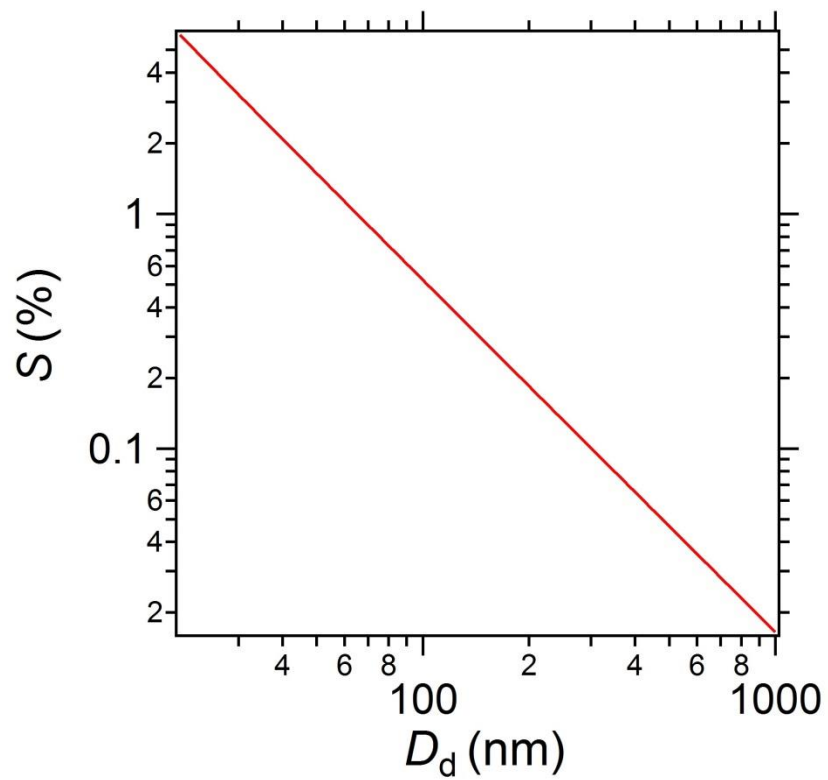
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**Figure S1:** Critical water vapor supersaturation for the activation of aerosol particles with different dry diameter and chemical composition. The color bar indicates the  $\kappa$  values. The open circles are references to water droplets.



**Figure S2:** Critical water vapor supersaturation for the activation of aerosol particles with different dry diameter and  $\kappa$  of 0.05.