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Using different assumptions of aerosol mixing state and chemical composition to predict CCN concentrations based on field measurements in urban Beijing

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Figures

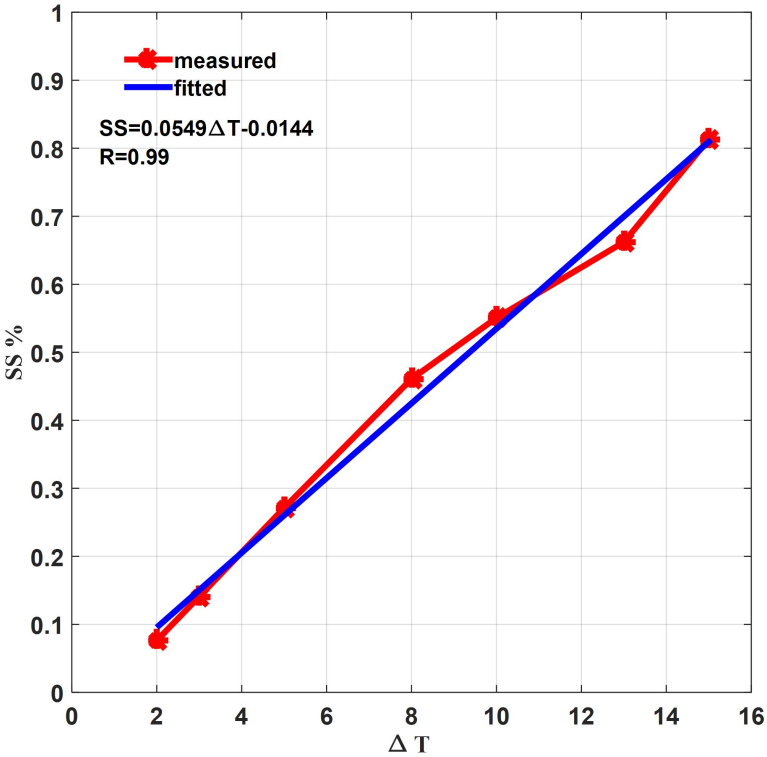

Figure S1. Variation of supersaturation as function of Delta temperature. A pure ammonium sulfate aerosol was used to calibrate the supersaturations levels of the CCNc, with longitudinal temperature gradients of 2, 3, 5, 8, 10, 13, 15℃.

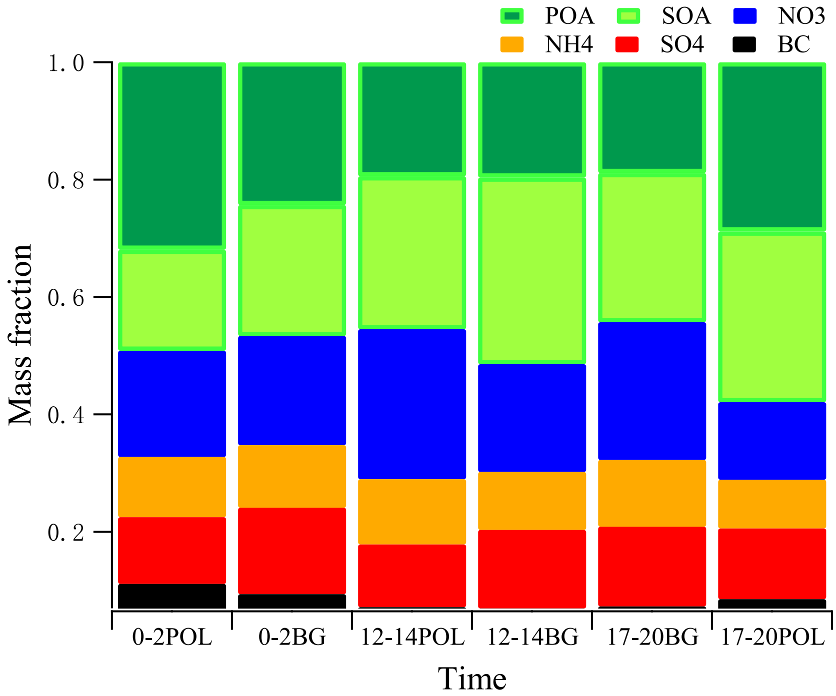

Figure S2. The variations of bulk chemical composition mass concentration fraction during three selected periods (0000–0200 LT, 1200–1400 LT, 1700–2000 LT) under background and polluted conditions.

Table S1. Summary of the critical diameter during three selected periods (00:00-02:00, 12:00-14:00, 17:00-20:00) under polluted and background conditions.

SS%	0-2POL	0-2BG	12-14POL	12-14BG	17-20POL	17-20BG
0.12	178.07±7.72	188.30±20.88	169.10±6.32	174.47±12.72	174.06±9.32	185.42±18.40
0.14	138.41±7.79	139.54±18.23	132.01±6.72	137.58±12.88	137.74±9.31	146.55±15.10
0.23	90.94±6.06	88.00±6.76	92.43±6.93	92.25±10.34	99.24±7.83	96.90±10.54
0.40	63.32±6.91	62.08±5.33	72.47±6.22	67.86±9.10	77.63±8.57	71.45±11.69
0.76	45.97±7.22	44.82±5.71	51.95±4.78	47.24±6.10	57.61±5.75	51.25±7.95

Table S2. Summary of the maximum active fraction (MAF) during three selected periods (00:00-02:00, 12:00-14:00, 17:00-20:00) under polluted and background conditions.

SS%	0-2POL	0-2BG	12-14POL	12-14BG	17-20POL	17-20BG
0.12	0.83±0.03	0.83±0.05	0.88±0.01	0.87±0.06	0.87±0.02	0.78±0.08
0.14	0.85±0.03	0.81±0.04	0.90±0.02	0.82±0.06	0.88±0.03	0.80±0.06
0.23	0.89±0.01	0.83±0.04	0.89±0.02	0.84±0.06	0.89±0.02	0.80±0.05
0.40	0.89±0.01	0.85±0.03	0.91±0.01	0.87±0.04	0.90±0.01	0.85±0.04
0.76	0.91±0.01	0.88±0.02	0.92±0.01	0.88±0.04	0.91±0.01	0.88±0.02