Daytime and nighttime aerosol soluble iron formation in clean and slightly-polluted moisture air in a coastal city in eastern China

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Contents of this file

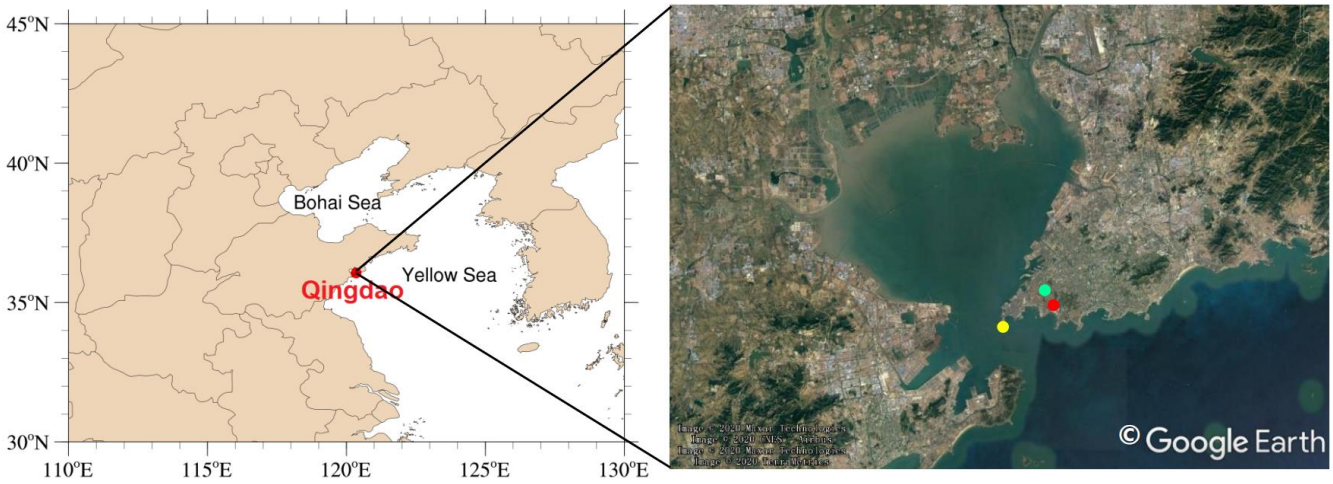

Fig. S1. Location of the sampling site. In the right panel, the red dot shows the location of the sampling site. The green dot shows the location of Qingdao Meteorological Bureau. The yellow dot shows the location of the air quality monitoring station in Qingdao (the west sub-station of the Shinan District).

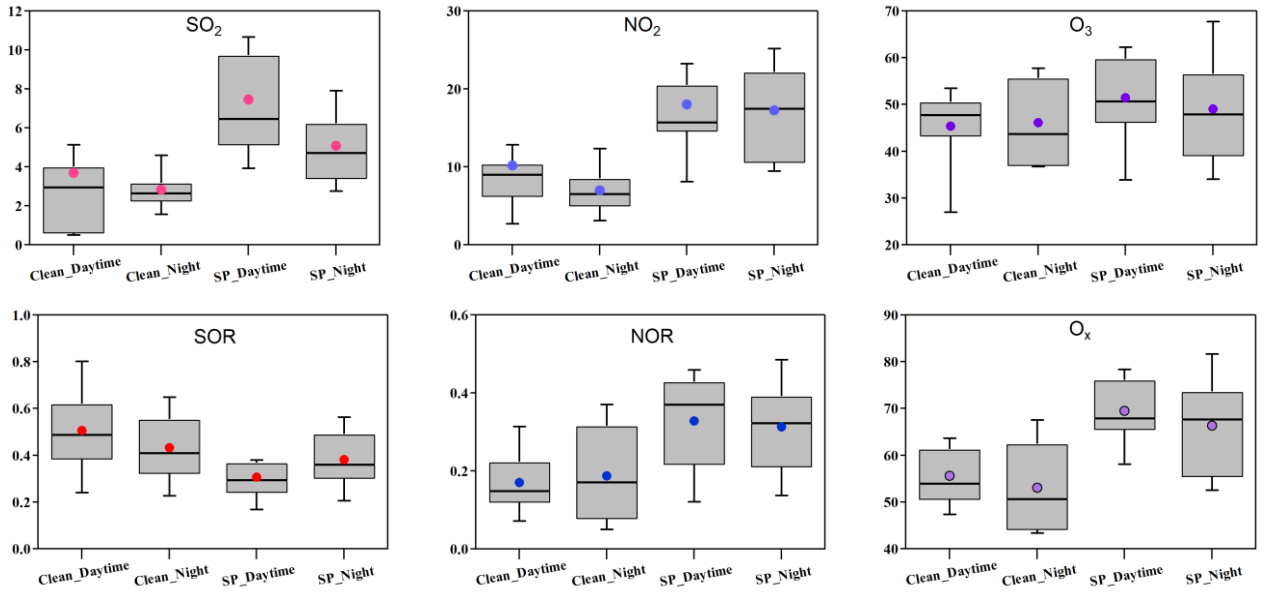

Figure S2. Box plots of several chemical parameters. Box and error bars represent the 25th, 50th 75th, 10th, and 90th percentiles, respectively. The dots within the boxes represent the arithmetic means.

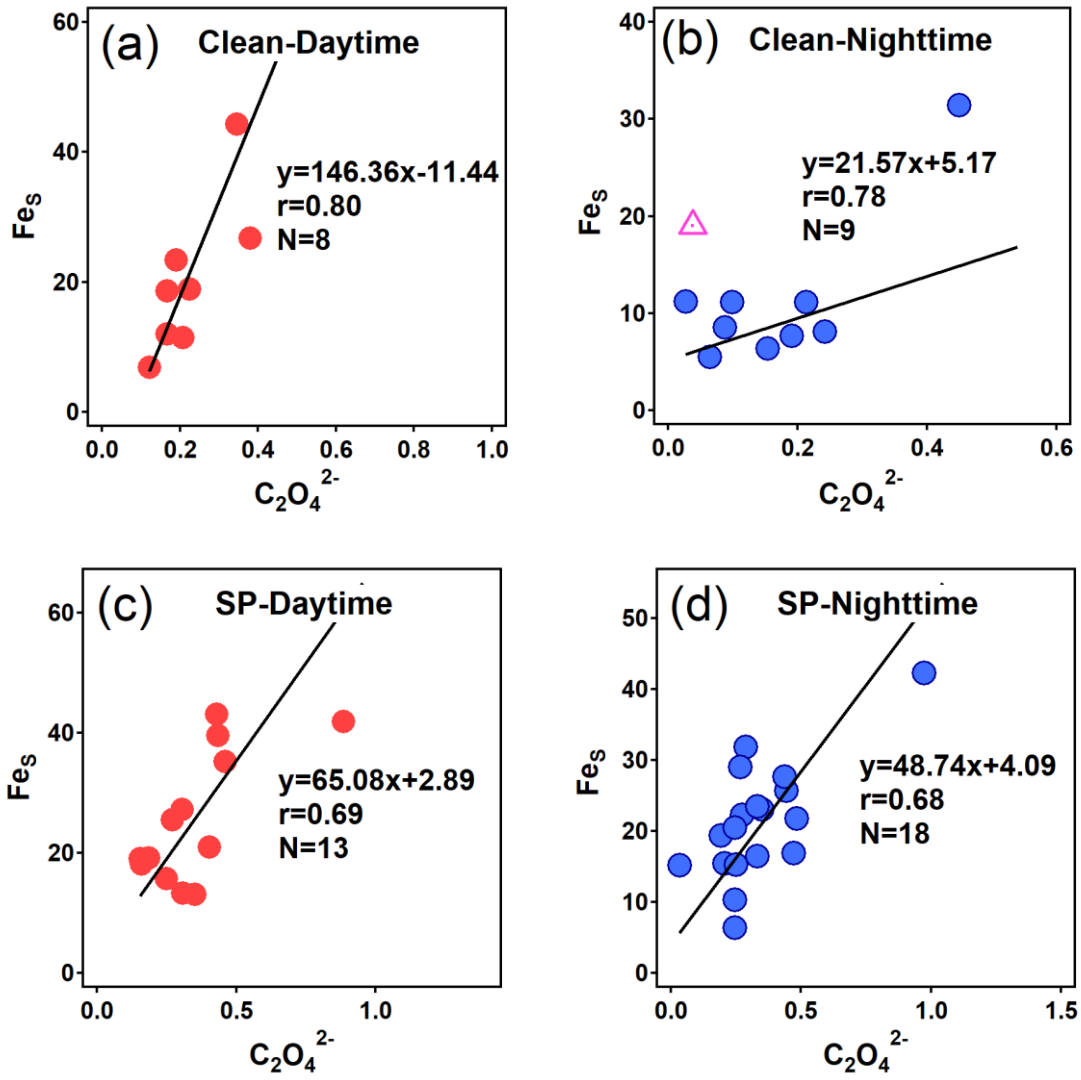

Figure S3. Relationships between soluble Fe (Fe_S, unit: ng m^{-3}) and oxalate (unit: μg m^{-3}). An extreme point (marked by a pink triangle, $\%Fe_S = 37.2\%$) in (b) was removed to obtain the more robust correlation coefficient.

Table S1. Detection limits of the analysis instruments (unit: μg L^{-1} for WSIs and elements, and μg for OC and EC).

Species	DL_j	Species	DL_j
Na^+	20.0	V	0.0030
NH_4^+	20.0	Cr	0.0025
K^+	10.0	Mn	0.0055
Mg^{2+}	10.0	Fe	0.0139
Ca^{2+}	20.0	Ni	0.0287
F^-	10.0	Cu	0.0060
Cl^-	40.0	Zn	0.0770
NO_3^-	10.0	As	0.0151
SO_4^{2-}	10.0	Se	0.4062
$C_2O_4^{2-}$	10.0	Rb	0.0020
OC	0.20	Sr	0.0054
EC	0.20	Cd	0.0030
Al	0.0454	Ba	0.0022
Mg	0.0754	Pb	0.0026

Table S2. Classification results of aerosol samples.

Sample Types	Sample Number
Clean Periods Samples	19
Slightly-polluted Periods Samples	32
Heavily-polluted Periods Samples	6
Fog-impacted Samples	12
Dust-related Samples	70