Figure S1. The detailed land use information around the KBIC site.
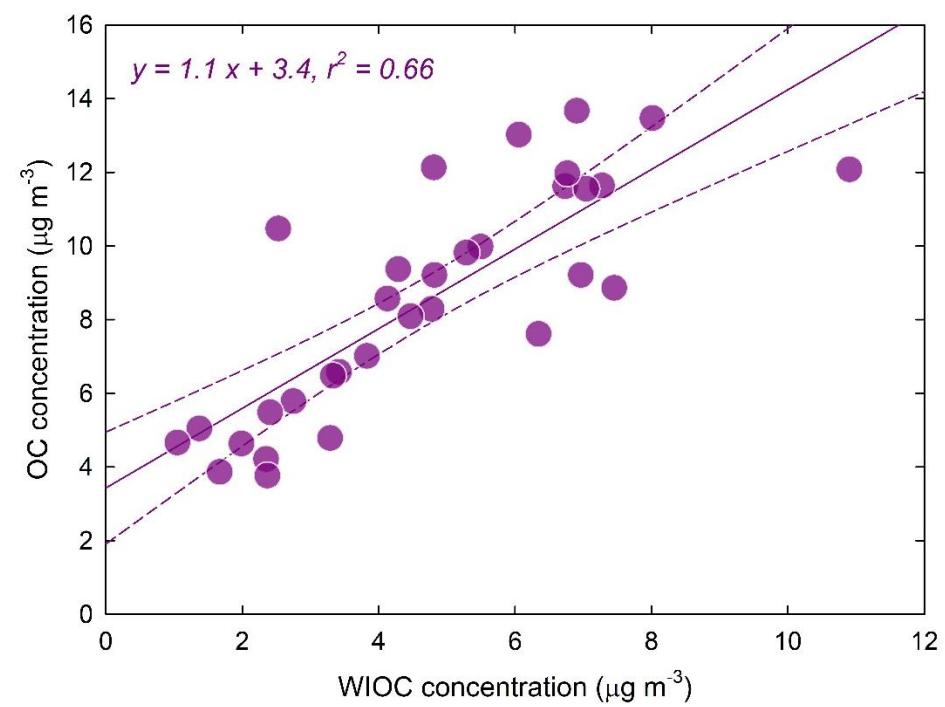
Figure S2. Linear regression between WIOC and OC concentrations at the KNU site.

Table S1. Size-segregated mass concentrations ($\mu g\ m^{-3}$) of PM using MOUDI at the KNU site in a previous study (Kim, 2017).

| Date	$PM_{0.18}$	$PM_{0.18-0.32}$	$PM_{0.32-0.56}$	$PM_{0.56-1.0}$	$PM_{1.0-1.8}$	$PM_{1.8-3.2}$	$PM_{3.2-5.6}$	$PM_{5.6-10}$	$PM_{0.32}$	$PM_{0.32-10}$	$PM_{0.32}/PM_{0.32-10}$
Sep.05, 2011	2.47	3.84	12.0	7.76	5.60	5.68	6.11	5.72	6.31	42.9	0.15
Sep.09, 2011	1.76	0.74	1.17	0.39	1.02	0.74	0.43	0.90	2.50	4.65	0.54
Sep.17, 2011	1.60	1.51	3.52	0.53	1.02	0.49	1.02	0.25	3.11	6.83	0.46
Sep.20, 2011	2.86	2.00	6.95	4.46	3.76	3.31	4.46	3.39	4.87	26.3	0.18
Sep.23, 2011	3.10	2.98	13.6	11.8	7.56	3.50	17.2	6.31	6.07	60.0	0.10
Sep.02, 2012	2.90	5.35	11.5	10.8	13.3	3.43	3.11	2.74	8.26	44.8	0.18
Sep.05, 2012	2.07	3.56	4.10	4.26	1.90	1.28	2.28	3.29	5.63	17.1	0.33
Sep.08, 2012	4.85	6.22	10.7	6.09	6.13	2.94	5.68	4.23	11.1	35.7	0.31
Sep.17, 2012	3.40	1.59	3.06	1.97	2.85	3.82	4.02	3.19	4.99	18.9	0.26
Sep.20, 2012	1.25	1.13	4.22	2.17	3.14	6.77	9.12	7.53	2.38	33.0	0.07
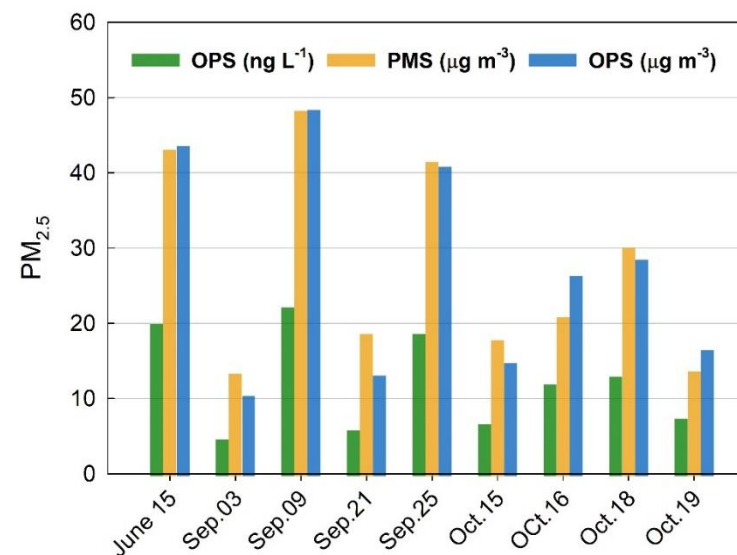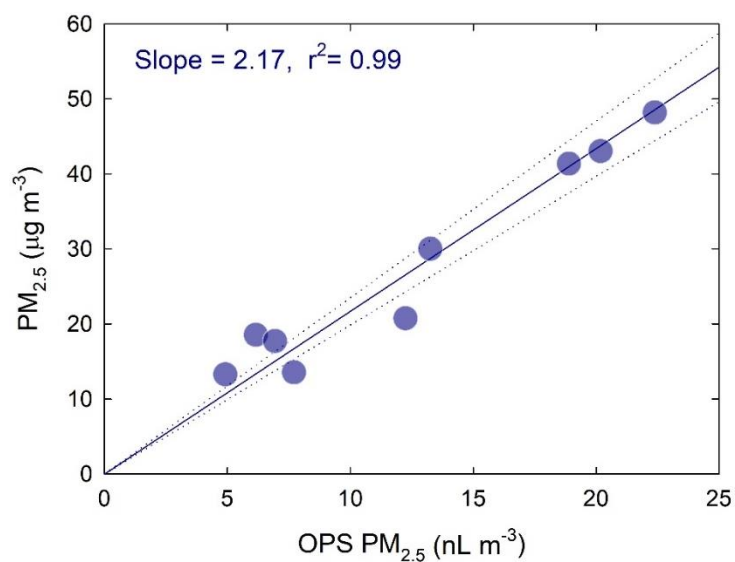
Figure S3. Correlation between OPS $PM_{2.5}$ volume concentration and $PM_{2.5}$ mass concentration measured by gravimetric method (left) and comparison of $PM_{2.5}$ volume concentration (ng L^{-1}) by OPS (green bar), $PM_{2.5}$ mass concentration ($\mu g\ m^{-3}$) measured by a gravimetric method using PMS instrument (yellow bar), and $PM_{2.5}$ mass

concentration (µg m⁻³) estimated by OPS volume concentration multiplied by particle density of 2.17 g cm⁻³ (blue bar).
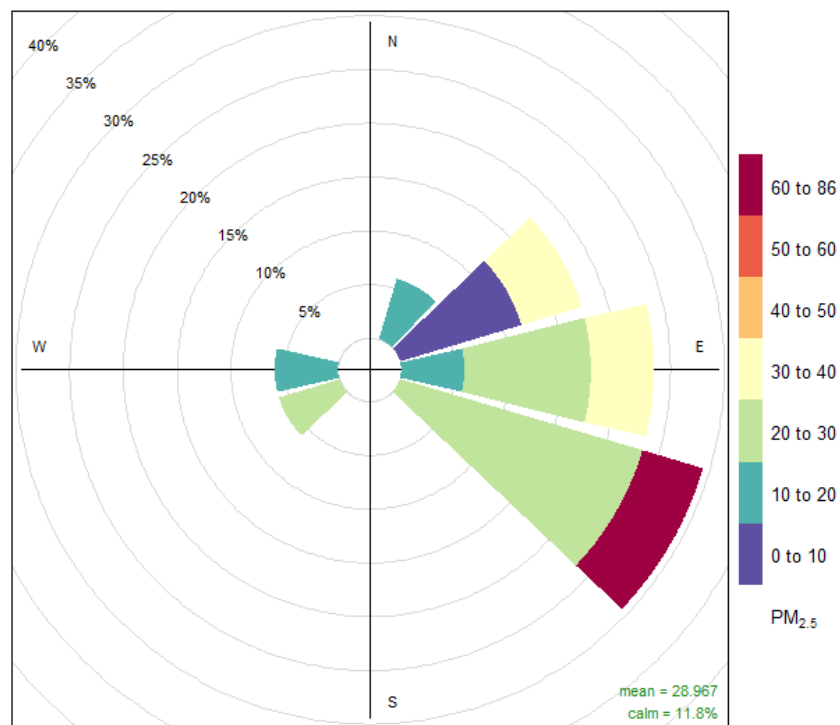
Figure S4. Pollution rise of PM₂.₅ at the KBIC site.