

This is the supplementary information

Table S1 Average concentrations ($\mu\text{g m}^{-3}$) of crustal elements in $\text{PM}_{2.5}$ for the different seasons from spring 2005 to spring 2008

Year	Season	Mg	Al	K	Ca	Fe
05	Spring	0.7	2.7	2.0	3.6	2.1
05	Summer	0.2	1.2	1.2	0.8	0.7
05	Autumn	0.4	2.2	0.9	1.5	0.9
05/06	Winter	0.3	0.7	1.7	1.0	0.7
06	Spring	1.2	4.2	2.6	2.9	2.7
06	Summer	0.3	0.5	1.7	1.6	0.7
06	Autumn	0.4	0.7	2.1	1.7	1.0
06/07	Winter	0.5	1.0	2.3	1.9	1.1
07	Spring	0.7	2.0	1.9	2.8	1.6
07	Summer	0.2	0.6	2.6	1.9	0.8
07	Autumn	0.5	1.1	2.1	2.9	1.4
07/08	Winter	0.7	1.8	2.3	2.3	1.6
08	Spring	0.9	2.4	1.9	3.3	1.9

Table S2 Origin and sources of $\text{PM}_{2.5}$ during high particle concentration episodes

Peak No.	Analytical Method				Origin	Sources
	Backward Trajectory	FA	SEM	EF		
Peak I	■		■	■	Source II	Long-range transport soil dust and local re-suspended soil particles
Peak II	■		■	■	Source II	Long-range transport soil dust and local re-suspended soil particles
Peak III		■			Source II	Different anthropogenic sources and refuse disposal
Peak IV				■	Source II	Long-range transport soil dust and different anthropogenic sources
Peak V				■	Source III	Long-range transport soil dust and local re-suspended soil particles
Peak VI				■	Source III	Long-range transport soil dust, local re-suspended soil particles and different anthropogenic sources
Peak VII				■	Source I	Long-range transport soil dust, local re-suspended soil particles and different anthropogenic sources

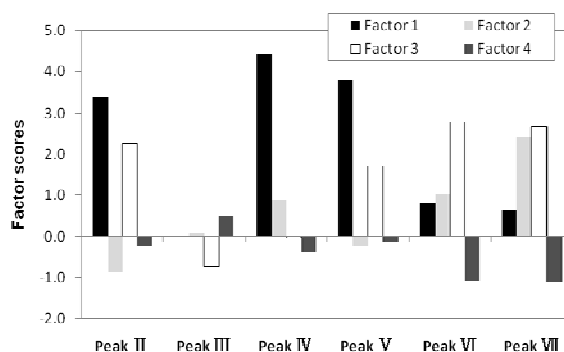


Fig.S1 Factor scores of peak II to peak VII (peak I was not included in FA due to the not enough elements as other samples for FA)