Supplemental Material:

Table S1: Summary of median and distribution of indoor and outdoor $PM_{2.5}$ species concentrations

Species	Indoor Concentration N=13				Outdoor Concentration N=13			
	Median	IQR	Min	Max	Median	IQR	Min	Max
Mass	23.85	20.67	3.901	74.36	43.78	9.397	28.74	58.07
BC	2.073	0.961	0.378	4.192	3.379	0.961	2.795	5.691
Na	0.232	0.087	0.020	0.419	0.413	0.119	0.245	0.609
Mg	0.097	0.080	0.014	0.275	0.327	0.130	0.195	0.457
Al	0.236	0.160	0.052	0.919	0.830	0.459	0.560	1.559
Si	0.510	0.413	0.080	2.138	1.734	1.096	1.125	3.611
S	2.406	1.461	0.526	5.199	3.727	1.900	2.333	8.639
Cl	0.036	0.031	0.002	0.117	0.041	0.029	0.010	0.187
K	0.185	0.113	0.035	0.666	0.420	0.128	0.279	0.687
Ca	0.252	0.361	0.048	1.336	1.365	0.508	0.814	2.431
Ti	0.012	0.014	0.002	0.052	0.055	0.028	0.035	0.094
V	0.009	0.004	0.002	0.013	0.016	0.005	0.012	0.027
Cr	0.001	0.000	0.000	0.002	0.003	0.001	0.002	0.004
Mn	0.006	0.004	0.001	0.013	0.019	0.008	0.012	0.030
Fe	0.186	0.160	0.033	0.663	0.779	0.367	0.542	1.272
Ni	0.003	0.002	0.001	0.004	0.006	0.002	0.004	0.009
Cu	0.008	0.005	0.002	0.031	0.018	0.010	0.010	0.037
Zn	0.045	0.033	0.003	0.067	0.067	0.038	0.034	0.251
Br	0.014	0.008	0.001	0.023	0.024	0.005	0.014	0.036
Sr	0.002	0.002	0.001	0.008	0.009	0.003	0.005	0.012
Zr	0.002	0.001	0.000	0.004	0.004	0.002	0.003	0.007

Concentrations are expressed in $\mu g/m^3$

Table S2: Summary of median and distribution of indoor and outdoor PM_{10} species concentrations

Species	Indoor Concentration N=7				Outdoor Concentration N=7			
	Median	**IQR**	**Min**	**Max**	**Median**	**IQR**	**Min**	**Max**
Mass	35.11	28.06	18.31	76.46	119.5	16.75	86.76	145.6
BC	2.683	1.185	1.521	4.293	4.139	1.420	3.728	6.683
Na	0.284	0.071	0.208	0.430	0.322	0.124	0.193	0.462
Mg	0.273	0.273	0.089	0.669	1.042	0.227	0.800	1.203
Al	0.672	0.791	0.207	2.416	2.524	0.527	2.144	4.018
Si	1.568	1.747	0.418	5.799	6.478	1.408	5.481	10.331
S	2.560	1.155	1.833	3.669	4.173	1.600	2.140	6.400
Cl	0.072	0.035	0.014	0.102	0.144	0.022	0.029	0.626
K	0.289	0.390	0.208	0.949	0.926	0.174	0.853	1.393
Ca	1.390	2.148	0.343	5.121	7.827	1.585	7.082	10.999
Ti	0.043	0.066	0.015	0.158	0.212	0.046	0.189	0.324
V	0.011	0.005	0.007	0.017	0.024	0.004	0.018	0.026
Cr	0.002	0.003	0.001	0.007	0.014	0.002	0.010	0.017
Mn	0.012	0.018	0.006	0.038	0.060	0.018	0.050	0.086
Fe	0.596	0.841	0.231	1.995	3.064	0.644	2.559	4.331
Ni	0.004	0.003	0.003	0.008	0.015	0.002	0.010	0.017
Cu	0.012	0.015	0.008	0.041	0.035	0.027	0.023	0.072
Zn	0.059	0.026	0.041	0.087	0.129	0.105	0.080	0.377
Br	0.020	0.007	0.011	0.024	0.029	0.003	0.026	0.044
Sr	0.010	0.013	0.003	0.025	0.046	0.010	0.032	0.061
Zr	0.004	0.007	0.000	0.011	0.012	0.010	0.010	0.022

Concentrations are expressed in $\mu g/m^3$

Figure S1: Harvard samplers collecting PM_{10} and $PM_{2.5}$ inside a Kuwaiti home.

Figure S2: Harvard samplers collecting PM_{10} and $PM_{2.5}$ outside a Kuwaiti home.

Table S3: P-values from Shapiro-Wilks test of normality, t-test with identity means, t-test with log-transformed means, and Wilcoxon test, comparing fine element indoor to outdoor concentration in dust events versus no dust events (Corresponds to Figure 2)

Species	Shapiro-Wilks test	t-test	log t-test	Wilcoxon[a]
Mass	0.012	0.042	0.019	0.014
BC	0.943	0.040	0.075	0.022
Na	0.999	0.167	0.228	0.138
Mg	0.548	0.038	0.059	0.022
Al	0.169	0.060	0.063	0.022
Si	0.200	0.063	0.054	0.022
S	0.146	0.118	0.135	0.101
Cl	0.104	0.005	0.005	0.002
K	0.100	0.091	0.055	0.035
Ca	0.160	0.049	0.035	0.022
Ti	0.102	0.056	0.047	0.022
V	0.868	0.021	0.046	0.014
Cr	0.049	0.110	0.047	0.073
Mn	0.691	0.021	0.050	0.014
Fe	0.262	0.049	0.053	0.022
Ni	0.864	0.024	0.046	0.051
Cu	0.361	0.466	0.231	0.234
Zn	0.266	0.071	0.077	0.035
Br	0.728	0.004	0.047	0.005
Sr	0.018	0.140	0.093	0.101
Zr	0.411	0.159	0.452	0.366

[a] We were not able to rely on Wilcoxon tests due to the high number of ties

Table S4: P-values from Shapiro-Wilks test of normality, t-test with identity means, t-test with log-transformed means, and Wilcoxon test, comparing coarse-to-fine mean ratios in indoor versus outdoor. (Corresponds to Figure 3)

Elements	Shapiro Wilks	t-test	log t-test	Wilcoxon[a]
Mass	0.157	<0.001	0.001	<0.001
Fe	0.250	<0.001	0.002	0.001
Ca	0.114	<0.001	<0.001	0.001
Si	0.425	0.001	0.011	0.001
Al	0.107	0.003	0.011	0.007
Ti	0.405	<0.001	0.000	0.001
K	0.451	<0.001	0.002	0.001

[a] We were not able to rely on Wilcoxon tests due to the high number of ties

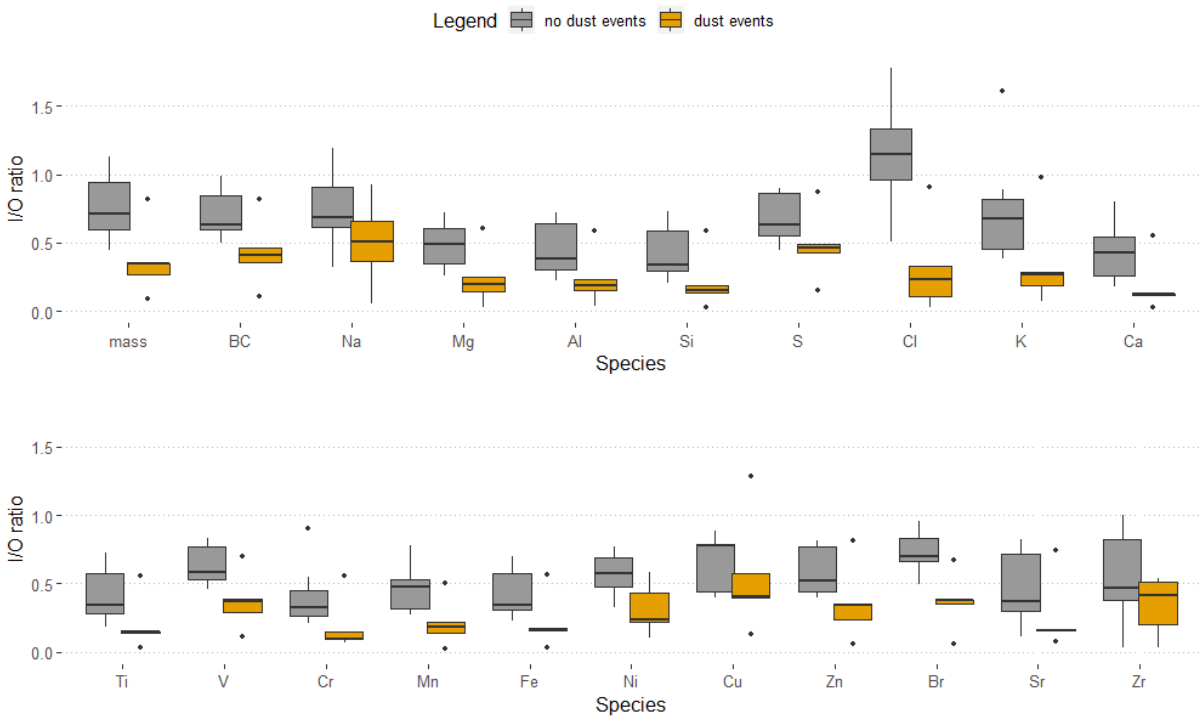

Figure S3: Box plots illustrate the difference between I/O concentration ratios of $PM_{2.5}$ mass, BC and 19 elements during dust and non-dust events after excluding H2.

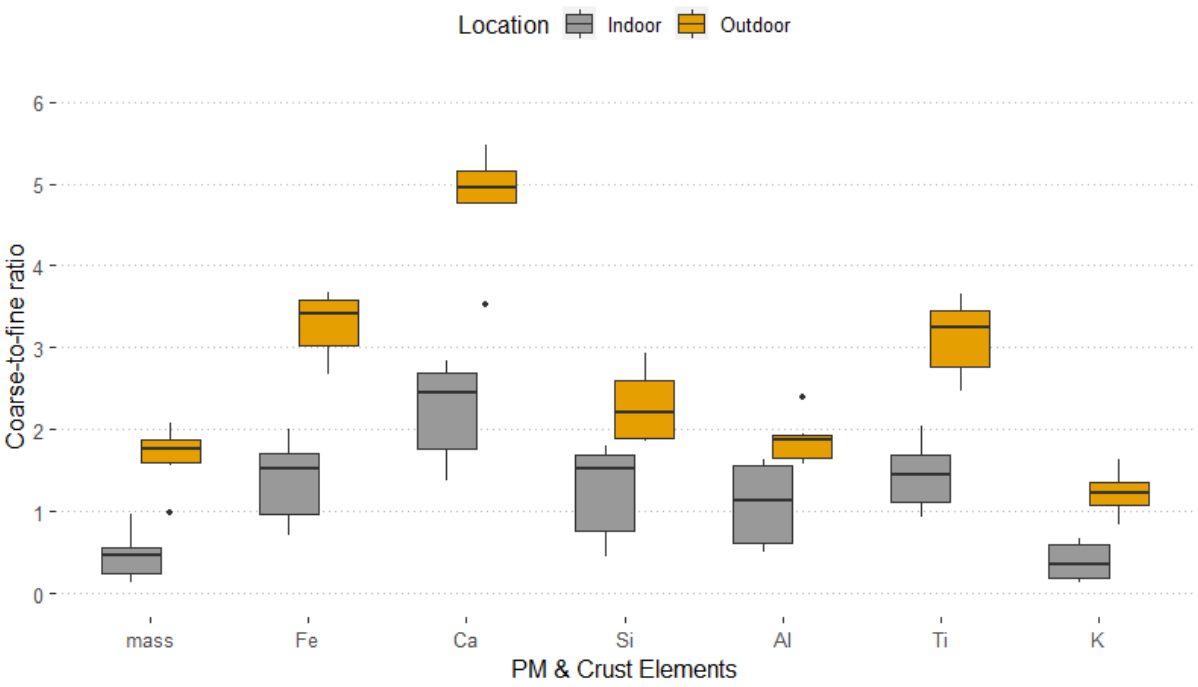

Figure S4: Box plot illustrates coarse-to-fine particle ratios of mass and elements measured indoors and outdoors after excluding H2.

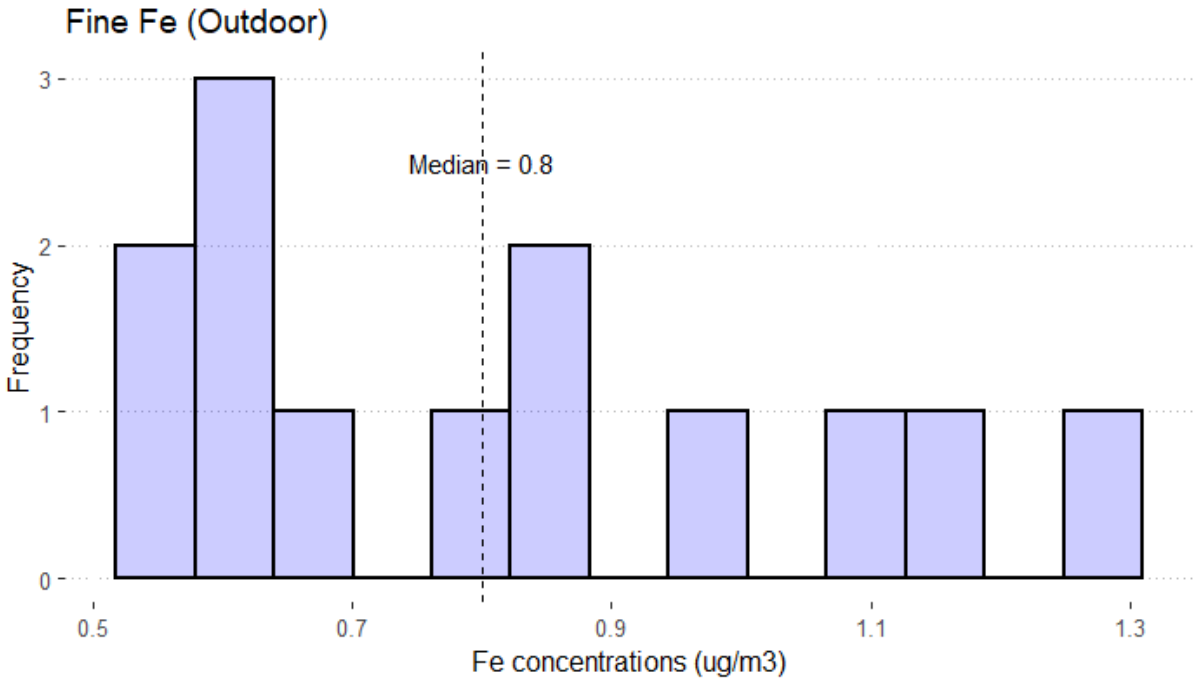

Figure S5: Histogram illustrates the median of outdoor fine Fe concentrations that we utilized as a threshold for dust storm events identification.