Supplementary Materials

Table Captions

Table S1. The campaigns of the study and average values of meteorological parameters.

Table S2. Mean mass concentration in neq m\(^{-3}\) of water soluble ions.

Table S3. Statistics for metals indoor and outdoor concentrations for PM10.
Table S1. The campaigns of the study and average values of meteorological parameters.

<table>
<thead>
<tr>
<th>Period</th>
<th>PM fraction</th>
<th>Sampling site</th>
<th>Sampling time period</th>
<th>Number of filters</th>
<th>Chemical Analysis</th>
<th>Meteorological conditions (average values)</th>
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<tbody>
<tr>
<td></td>
<td>PM10</td>
<td>indoors &amp; outdoors</td>
<td>period A= 00:00-12:00</td>
<td>40 indoors &amp; 40 outdoors</td>
<td>ions QC/EC metals</td>
<td>Temp. (°C)</td>
</tr>
<tr>
<td>Campaign 1</td>
<td>22/12/2012-11/1/2013</td>
<td>✓ ✓ ✓ ✓</td>
<td>24h</td>
<td>✓ ✓ ✓</td>
<td>8.8±3.3</td>
<td>72±13</td>
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<tr>
<td>Campaign 2</td>
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<td>✓ ✓ ✓ ✓</td>
<td>31 indoors &amp; 31 outdoors</td>
<td>✓ ✓</td>
<td>10±2.9</td>
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<td>Campaign 3</td>
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<td>PM2.5</td>
<td>✓ ✓</td>
<td>16 outdoors</td>
<td>✓ ✓</td>
<td>11±2.1</td>
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Table S2. Mean mass concentration in neq m\(^{-3}\) of water soluble ions.

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<tr>
<th></th>
<th>PM10 (Campaign 1)</th>
<th></th>
<th>PM2.5 (Campaign 2)</th>
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<th>PM2.5 (Campaign 3)</th>
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<tr>
<td></td>
<td>(neq m(^{-3}))</td>
<td>in       out in       out</td>
<td>in       out</td>
<td>in       out</td>
<td>in       out</td>
</tr>
<tr>
<td>Cl(^-)</td>
<td>13.3</td>
<td>27.9      13.9</td>
<td>22.3</td>
<td>12.8</td>
<td>32.7</td>
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<tr>
<td>NO(_3^)(^-)</td>
<td>24.1</td>
<td>52.8      24.9</td>
<td>46.6</td>
<td>23.4</td>
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<tr>
<td>PO(_4^{3-})</td>
<td>47.7</td>
<td>50.7      43.9</td>
<td>45.8</td>
<td>51.5</td>
<td>54.7</td>
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<tr>
<td>SO(_4^{2-})</td>
<td>71.6</td>
<td>103       69.8</td>
<td>94.1</td>
<td>73.3</td>
<td>111.4</td>
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<td>sum</td>
<td>163</td>
<td>241       159</td>
<td>215</td>
<td>168</td>
<td>264</td>
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<tr>
<td>NH(_4^+)</td>
<td>43.9</td>
<td>70        46</td>
<td>67.4</td>
<td>41.6</td>
<td>72.7</td>
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<td>K(^+)</td>
<td>19.2</td>
<td>23.6      19.5</td>
<td>17.7</td>
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<td>25.9</td>
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<td>Mg(^{2+})</td>
<td>10</td>
<td>10.8      8.76</td>
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<td>9.24</td>
<td>12.2</td>
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<td>Ca(^{2+})</td>
<td>114</td>
<td>96        73.1</td>
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<td>Na(^+)</td>
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<td>Cneq/Aneq</td>
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Table S3. Statistics for metals concentration in PM10 (in μg m\(^{-3}\)).

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</table>
Figure Captions

**Figure S1 (a).** Relationship between indoor and outdoor OC for PM10

**Figure S1 (b).** Relationship between indoor and outdoor EC for PM10

**Figure S1 (c).** Relationship between indoor and outdoor OC for PM2.5

**Figure S1 (d).** Relationship between indoor and outdoor EC for PM2.5
Fig. S1 (a)

\[ y = 0.5135x + 5.3155 \]

\[ R^2 = 0.7411 \]
Fig. S1 (b)

\[ y = 0.6175x + 0.7185 \]

\[ R^2 = 0.7341 \]
Fig. S1 (c)

$y = 0.622x + 3.4456$

$R^2 = 0.6595$
Fig. S1 (d)

\[ y = 0.7859x + 0.3931 \]

\[ R^2 = 0.5689 \]