Geophysical Research Abstracts
Vol. 13, EGU2011-12110, 2011
EGU General Assembly 2011
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Effect of multi-pollutants on conservation treatments exposed to different European environments

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Multi-pollutants are a consequence of the different emissions (industrial, civil, transport) which are produced in our current urban environments. These constitute a major threat to the cultural heritage buildings located in these areas, causing corrosion and colour alteration in the historical materials. For the conservation of our heritage, many conservation products are commonly used. In these polluted environments, degradation is suffered also by these treated surfaces. Considering this, the aim of the present study is to better understand the deterioration processes occurring within the surfaces and to establish correlations between the variation of the pollutant concentrations and the physico-chemical changes detected. Calcium carbonate containing substrates of different type have been treated with different conservation products and exposed in 10 different environments throughout Europe. The most critical pollution parameters are being measured, as well as physico-chemical parameters such as colour, contact angle or surface variations. The experiment is currently in progress and will last at least 1 year.