



## **Nitrogen dioxide spatial distribution in a southeastern spanish city: a passive sampler study**

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The increase of vehicular traffic in urban areas in recent decades has produced an increase in NO emissions and its subsequent transformation into NO<sub>2</sub>.

Because of the unique characteristics of urban areas, important gradients in atmospheric pollutant concentrations can exist. As such, a complete characterization of different zones in a city requires an elevated number of sampling points.

Passive samplers are an economically viable option when an elevated spatial resolution is desired and they have been widely utilized to carry out these types of studies.

In the present work the results are shown of two NO<sub>2</sub> measurement campaigns using passive samplers at 80 locations. The campaigns took place in a city in southeastern Spain during winter and summer of 2006. The structural characteristics of the city, as well as vehicular traffic emissions, determine the spatial distribution of the pollutant. The results show a decrease in NO<sub>2</sub> concentrations in summer as a consequence of high solar radiation and a reduction in NO emissions. Lastly, the spatial distribution of the two campaigns is compared.

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