**Indicators of performance for construction photocatalytic materials**

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**Abstract**

Photocatalytic pavements are promising substrates for the abatement of NOx pollution from motor vehicles due to the large area that they provide, close to the emission focus, and its relatively flat configuration that favours the interaction between the solar light irradiation and the photocatalyst. Since envisaging the environmental potential of this technology (Hoffmann et al,1995), a wide number of laboratory-scale tests have been performed in order to evaluate the NOx depolluting properties of TiO2 photocatalytic materials ([Ballari et al. 2010](#_ENREF_3), [Bengtsson &Castellote 2010](#_ENREF_5), [Chen &Poon 2009](#_ENREF_10), [Folli et al. 2012](#_ENREF_13), [Jimenez-Relinque et al. 2015](#_ENREF_17)). However, the experimental conditions of lab-scale tests usually are not representative of the environmental conditions. Then the corresponding results may lack the required information for prediction of the behaviour of a material exposed to real outdoor climates. Within this context, the project LIFE-PHOTOSCALING ([http://www.life-photoscaling.eu/](#_ENREF_14)) intends to establish the instruments to scaling up from laboratory measurements to application in cities. In particular, the project aims at developing a decision support tool to assess the sustainability of materials in particular environments based on the evaluation of its behavior according to three different types of indicators (photocatalytic efficiency, intrinsic performance and possible side effects). In this work, the indicators and sub-indicators initially set out, the results obtained for 10 different combinations of substrate and photocatalyst implemented at pilot plant scale in demonstrator platforms, and the indicators finally retained for evaluating and scoring the performance of construction photocatalytic materials are presented and discussed.

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