

## On Board Exhaust Emission Monitoring Of Road Vehicles - A High Tech Solution To Pollution From Traffic?

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Abstract- A significant proportion of the atmospheric pollution that exists particularly in urban areas arises from road vehicles and primarily cars. The European Commission (EC) have introduced a series of regulations, the so called EURO Emission directives from Euro I in 1991 to the present day Euro IV. This legislation and similar ones in other global regions have helped to greatly reduce emission levels from road transport. However, a massive increase in the number of cars on the road have meant that pollution due to a number of gases and particulate species remains to be a problem. This paper describes an approach based on optical fibre sensors which has shown to be an effective means of measuring the gases and particulates in question by using sensing technologies which are both robust and potentially cost effective such that they may be included as part of an on board monitoring system for the car of the future.