

Laser Induced Breakdown Spectroscopy as analytical tool for spectrochemical characterisation of trace elements in Particulate Matter generated from in-use Diesel engine passenger vehicles

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Abstract: The particulate matter (PM) exhaust emissions generated from Diesel engine driven vehicles are forming significant sources of toxic and metallic nanoparticles into the air and surrounding atmosphere mainly in heavily traffic areas in large metropolitan locations or cities suburbs. Previously, we reported that particulate matter generated from in-use Diesel engine passenger vehicles are chemically composed of different major as well as minor chemical elements. In this research, we apply LIBS - laser induced breakdown spectroscopy technique for qualitative comparative study of trace elements detected in different PM collected from in-use Diesel engine passenger vehicles.