Abstract

Air pollution has emerged as a serious problem affecting health and environment. Out of many pollutants Carbon Monoxide (CO) gas is considered as a silent and lethal killer. In large urban areas such as Delhi, the CO emissions from the Transport sector pose unprecedented risks to the commuters and inhabitants. In order to eradicate the adverse impact of CO pollution, there exists a need for an early warning system, which may be of immense help to manage and
regulate ambient CO concentrations. In this research paper an attempt is made to forecast CO gas based on historical data using artificial neural network (ANN). Real time 8 hourly average CO emission data of eleven years (1996-2006), day time (14.00hrs-22.00hrs) from ITO square of Delhi has been used for modelling and simulation study. Results of ANN studies show that these models are better suited to provide efficient and closer-to-reality forecasting in order to initiate policy measures which can be helpful to alleviate the excessive CO accumulations. Based on ANN modelling, an appropriate short-term management measures such as a pre-warning mechanism for air pollution episodes may be developed.

References


Index Terms

Keywords

Concentration  Forecasting  Artificial Neural Network (ann)  Real Time Analysis  Modelling