

An analyzer to measure the quantity and size of pollutants and aerosols in smoke emission

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CMU researchers invented an analyzer capable of measuring the quantity and size of pollutants and aerosols in smoke emissions, providing an equally accurate, lower-priced, local Thai substitute for pollution [monitoring equipment](#) imported from abroad. Small particles resulting from combustion processes in a variety of sectors including the burning of industrial waste, transportation (exhaust), and agriculture create environmental and health problems. Monitoring and controlling pollution levels is crucial. Producing an accurate, locally available and lower-priced emissions analyzer will make it easier to monitor [air pollution levels](#) in Thailand.

One of the researchers, Assoc. Prof. Dr. Nakorn Tippayawong, Department of Mechanical Engineering, Faculty of Engineering, Chiang Mai University, informed that the underlying system developed to measure [aerosols](#) modeled on electrical principles can be used to measure [soot particles](#) from burning. The emissions analyzer is made from materials, equipment and production technology produced inside Thailand. The analyzer is accurate, provides multi-channel measurement that can be conducted simultaneously, and produces results rapidly. It also includes automation and process control measurement software. The system is safe and uses low voltage. Moreover, the analyzer is less

expensive than the comparable tool imported from abroad.

The research team is composed of Assoc. Prof. Dr. Nakorn Tippayawong from the Faculty of Engineering, Chiang Mai University and Dr. Panich Intra from the College of Integrated Science and Technology, Rajamangala University of Technology Lanna. The project is supported by NECTEC : Thailand : National Electronics and Computer Technology Center. The project was awarded the “Invention Awards Honor for Year 2011 of National Research Council Award” in the field of Engineering and Industrial Research.

Provided by Chiang Mai University

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