

## **The L S Theobald Lecture: Measuring airborne nanoparticles, and related topics**

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Poor air quality continues to remain high on political and public agendas. There is now general consensus on the health and environmental benefits of reducing the ambient concentration of particulate matter. However, questions remain about what are the best metrics for assessing the exposure of the public and how to characterise the changing sources, composition and concentrations of these pollutants. This presentation describes the landscape of current air quality measurements that relate to (nano-)particles in air and the recent developments in the field. It then describes the ongoing work to standardise and quality assure these methods to enable trends in the measured concentrations of these pollutants to be accurately assessed and to provide confidence in the data produced at different locations. The presentation will then address emerging issues in the wider chemical measurement space highlighted by the increasing importance of measurements that have the nature of a count, such as the ones described here, and finishes by considering the implications of the forthcoming revision of the International System of Units for this discipline.