



Breath Analysis for Medical Diagnosis

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Abstract

The purpose of this review is to highlight the advances in technology and understanding in the field of breath analysis for medical diagnosis. A critical review of the methods of breath collection, treatment, and analysis is given, highlighting the problems facing the field and areas where promising advancement has been made. One particular area of interest is centered around electronic noses, ideally, portable devices which aim to mimic biological olifactory systems in analysing gases to produce odor fingerprints. Furthermore, recent work has shown it is possible to modify the basic sensor materials to both improve their performance, increase their tolerance to factors such as water vapour interference which

often leave the sensor system de-sensitized to the gaseous biomarkers, and enhance their selectivity. It will be shown how it is possible to accurately quantify concentrations of VOC's and make disease diagnosis from analysis of the collected data which compare favorably with traditional medical diagnostic techniques.

Keywords

Sensors, Breath Analysis, Electronic Nose, Cancer Detection