Bismuth molybdate Thin Films for ethanol sensor

Possible use: Breathalyser

Drunk driving puts us in imminent danger, a simple alcohol detection can give you information whether you are fit to drive or not.

Strong Conductivity Changes in alpha bismuth molybdate semiconductor material on exposure to minute levels of alcohol

Conductivity changes through redox reaction

High sensitivity to 10 ppm can be detected
Sensor immune to humidity
Oxygen vacancies being highly mobile, sensor completely reversible
Bismuth molybdate thin films show fast response and takes only two seconds to reach equilibrium

Low cost Spray pyrolysis route to develop thin films of Bismuth molybdate
Stoichiometry depending on starting concentration
Sensitivity increases with increase in temperature
Beta phase sensors show comparatively lower resistance in air
Ethanol detection possible even at 100-150°C using beta phase

Procedure for Technology Transfer  Technology Request Form

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