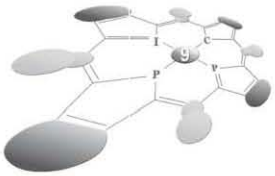

# Development of acoustic wave sensors based on cobalt corroles for carbon monoxide detection

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Carbon Monoxide is a well known dangerous compound acting as a "silent killer" due to its undetectable features: colourless, tasteless and odourless. For the human body cells CO manifest its quick deadly action when the organism is exposed in a concentration above 30 ppm and recently the World Health Organization has established a risk assessment in the concentration order of 10 ppm for 8 hours of exposure. Therefore, there is still an ongoing necessity to develop a device able to detect with high sensitivity and specificity the presence of low CO concentration in indoor air. Recently, we have reported the outstanding affinity an infinite selectivity of cobalt(III)corroles for CO over $O_2$ and $N_2$ [1] and in this present project, founded by the French National Research Agency (ANR), we describe the development of an efficient and cost-effective surface acoustic wave (SAW)-based sensor, exploiting cobalt corroles as sensing material for CO detection. Several cobalt corroles bearing targeted functional group were tested in order to enhance the interaction of CO vs $N_2$ and $O_2$, to optimize the textural properties of the sensing layer and increase the long-term stability of the incorporated metallocorrole.[2]

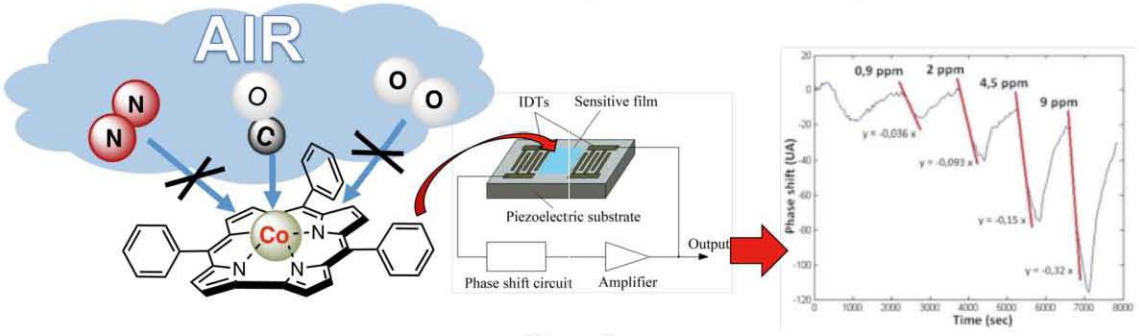


**Figure 1**

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