



I am **Maria Giuseppina Bruno**, PhD student in “Mechanical, Manufacturing Management and Aerospace Innovation” at the University of Palermo. I got my bachelor degree in Chemical Engineering on July 2018 and my master degree in Process Chemical Engineering on March 2021. During the last months of my graduation course I developed my master thesis at the Applied Physical Chemistry Laboratory of the University of Palermo; in particular, the research was focused on the development of electrochemical sensors in biomedical field and thanks to this experience I have developed a propensity for research. My PhD project is named “Sensors for real-time monitoring of oxidative stress” and it focuses on the health and safety of operators of manufacturing industries who are often exposed to accidents or diseases. Therefore, my project tries to develop a device that detects the level of hydrogen peroxide in exhaled air in

real time in order to indicate the onset of serious diseases that are related to the condition of oxidative stress. The device must have micrometric dimensions since it must be transportable and wearable, infact, it must be inserted in the masks used by operators.