

Dr. Mary DE FEUDIS

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Mary DE FEUDIS has been an associate professor at CY Cergy Paris University since 2019. In 2018, she obtained a double PhD in Physics and Nanosciences (University of Salento, Italy) and in Physics and Material Sciences (Université Sorbonne Paris Nord, France). Throughout her career, she has conducted extensive research on diamond materials and their various technological applications, such as particle sensors for high-energy physics and power electronic devices. This work has led to expertise in several research fields, ranging from the controlled synthesis of high-quality films, to the production of electrical contacts in graphite and/or metal on diamond, to the integration of the final device on the acquisition board and the characterization of its performance.

Currently, she is working on the controlled synthesis of diamond nanoparticles containing color centers, useful for developing quantum sensors in the context of high-pressure physics. In 2024, she joined the Institut de Recherche de Chimie Paris, where she will implement her new research project intitled "NanoG4V," funded by the ANR (AAPG 2024, ANR JCJC). This project focuses on developing a new generation of nanodiamonds containing quantum-quality color centers for applications such as magnetic field detection under extreme pressure and temperature conditions, nanoscale thermometry, and imaging of living cells for medical science. The project will start in early 2025 and will include the enrolment of several students in internships, doctoral theses and post-doctoral studies.

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