

## **Post-doc position available at MPQ Laboratory**

**(University Paris Diderot, Paris, France)**

A two-year post-doc position is available in the Quantum Materials and Phenomena Laboratory in Paris (MPQ), in the framework of the project "High performance operation of THz Quantum cascade lasers". The aim of the project is to gather several different competences in order to improve the performances of THz quantum cascade laser (QCL): from growth and processing to bandstructure design and theoretical modelling.

The post-doc will work on the theoretical modelling of the transport in quantum cascade lasers. In particular, she/he will develop a model to study the role of the coherence in resonant tunnelling transport. The aim of the theoretical modelling is not only to simulate device properties, such as current threshold and optical power, but also to investigate quantum phenomena related to the coherent transport induced by tunnelling currents. The post-doc will work in close collaboration with the experimental groups involved in the project.

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