

**Position for a doctoral student in optics/laser physics/ spectroscopy / photonics in the group of Dr. Nathalie Picqué at the Max-Planck Institute of Quantum Optics in Garching near Munich (Germany)
August 2019**



We are looking for a highly motivated early stage researcher (doctoral student) to join our research group at the Max-Planck Institute of Quantum Optics. The position is funded by the European Commission via a Marie-Sklodowska-Curie-Actions Innovative Training Network (MSCA ITN) on microresonator-based frequency combs (Project “MICROCOMB: Applications and fundamentals of microresonator frequency combs”, https://cordis.europa.eu/project/rcn/218500_en.html).

The specific research project will be focused **on the development of novel spectrometers using chip-based frequency-comb sources of ultrashort laser pulses**. These spectrometers will then be applied to broadband molecular spectroscopy and kinetics. The project is multidisciplinary. The early stage researcher will develop and optimize advanced scientific instruments involving photonics, nonlinear optics, laser physics and frequency metrology and he/she will demonstrate that these create new opportunities in trace gas sensing and analytical chemistry.

We offer **stimulating working conditions in a small and creative research group**. Our laboratories are equipped with state-of-the-art instrumentation. The Max-Planck Institute of Quantum Optics provides a world-class scientific environment with outstanding scientists and visiting scholars. Part of the work will be performed in collaboration with research groups within the Innovative Training Network, who are amongst the leaders in their field.

The ideal candidate will be **qualified in physics, optical engineering or a related subject**. He/she must hold a Master's degree (or a degree that is equivalent in level). He/she should have a passion for experiments in atomic, molecular and optical physics (AMO) and should be stimulated by challenging projects. He/she must be highly proficient in spoken and written English, with skills for scientific writing. He/she should be self-driven, reliable, motivated and hard working. A solid educational background in AMO physics is needed and first experience (such as internship, master thesis etc) in research areas such as frequency metrology, precision spectroscopy, optical frequency combs is advantageous. The candidate must not have been awarded a doctoral degree at the time of his/her recruitment.

As a MSCA-ITN mobility rule, the candidate must not have resided or carried out his/her main activity (work, studies etc.) in Germany for more than 12 months in the last 3 years prior to recruitment.

The position includes **a competitive salary**. Exact salaries are based on MSCA ITN funding rules, including living allowance, mobility allowance and family allowance (according to eligibility). The position will be based in Garching near Munich, with occasional travelling to conferences and workshops and to some of the collaborators within the MSCA ITN.

Enquiries and applications should be addressed to Dr. Nathalie Picqué (nathalie.picque@mpq.mpg.de) and should contain a curriculum vitae, a list of publications (if applicable), a short motivation letter (explaining why the applicant would like to join our group and indicating his/her desired starting date), transcripts of undergraduate and graduate grades and the contact details of at least 2 scientists who know well the candidate and who are able to provide a recommendation letter. Even for pre-application inquiries, we strongly encourage potential applicants to always send a full application file, as this helps answering the questions by the candidates.

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