

## Novel methods for optical microscopy of fluorescence samples

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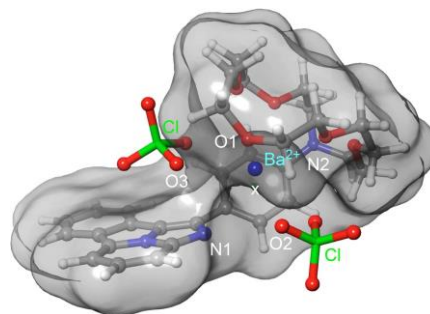
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The group of Prof. Gabriel Molina-Terriza in the Material Physics Center (San Sebastian, Spain) seeks a highly motivated, talented researcher looking for a post-doctoral position in the general area of fluorescence microscopy. The successful candidate will work in collaboration with the group of Prof. Gómez Cadenas (DIPC) to apply novel microscopy techniques in order to build an optical system, which will be integrated in the NEXT detector (<https://next.ific.uv.es/next/>). The successful candidate will work in a state-of-the-art laboratory environment with access to several laser sources, including a Ti:Sap tunable continuous wave laser, diode lasers, pico-second lasers, etc. The researcher will be integrated in a group of highly dedicated professionals, working in the areas of quantum optics and Nanophotonics.

The project that the successful candidate will join is mainly devoted to the detection of changes in the fluorescence spectrum of specially designed molecules. The candidate will also collaborate in building a confocal microscope dedicated to the detection of fluorescence molecules and the detection of light from coloured centers in diamond. Thus, the candidate will need to design and operate different microscopy systems, program and use different types of detectors, ranging from intensified CCD cameras to Time Correlation detection systems, and to analyse the acquired data.



The candidates should have a PhD in Physics or Optical Engineering and extensive experimental experience in Microscopy, optical fluorescent systems or confocal microscopes. Experience with the use of spatial light modulators, programmable logic devices such as FPGAs, and Python programming to remotely control the equipment will be favourably considered.

Applications should be forwarded directly to [gabriel.molina.terriza@gmail.com](mailto:gabriel.molina.terriza@gmail.com) including a full CV with a list of publications, a representative peer-reviewed manuscript from the applicant's career and a letter of interest.

[1] Observation of cooperatively enhanced atomic dipole forces from NV centers in optically trapped nanodiamonds, [Nature Physics](#), [arXiv:1511.04665](https://arxiv.org/abs/1511.04665)

[2] Fluorescent bicolour sensor for low-background neutrinoless double  $\beta$  decay experiments, [Nature](#) (2020)