



Open Position: Research Fellow on biotic photonic nanostructures

Research Centre: Optics Institute - Spanish National Research Council (CSIC)

Location: Madrid, Spain

Research Field: Natural Photonics and Biomimetics

Career Stage: PhD holder

The Biotic Photonics Laboratory at the Optics Institute – CSIC in Madrid is seeking a Research Fellow (PhD holder) to support the laboratory's research within the ENIGMA project, funded by the Research Council of Norway and coordinated by NTNU in Trondheim.

In the ENIGMA project, we will use diatom microalgae as nanofactories for the cost-effective, environmentally friendly, and natural production of photonic nanostructures for a wide range of applications. We will combine biotechnology and nanophotonics to develop tailored bio-photonic nanostructures for specific applications.

The work will involve a strong focus on the optical and morphological characterization of natural biosilica nanostructures extracted from diatom cells, which will be isolated from culture collections in Norway, Portugal, and Spain.

The successful candidate should have a solid background in building and modifying optical setups for inspecting natural photonic structures. Candidates with experience in cell culturing and/or bio-laboratory work will be highly regarded.

Description of the Biotic Photonics Lab (BIOPHO Lab)

The BIOPHO Lab is part of the Optics Institute (IO-CSIC) of the Spanish National Research Council, the largest research organization in Spain and one of the largest in Europe. Our research focuses on the fundamental aspects of light-matter interaction in biological systems, particularly on photosynthetic organisms, where photonic elements may play a role in light management. We are passionate about translating these discoveries into practical applications.

The successful candidate will work under the supervision of Dr. Martin Lopez Garcia, Principal Investigator of the ENIGMA project and head of the BIOPHO Lab at CSIC, who has an established track record in natural photonics research. For more information in the activities of the group contact Martin Lopez Garcia

This full time post is available immediately on a fixed term for 30 months with possibility for extension. For any queries about this position do not hesitate in contacting Dr. Martin Lopez-Garcia (martin.lopez@csic.es)

Job Requirements

Applicants should meet the following requirements:

- PhD Degree in Optics, Photonics, Biology, Biophysics or other related fields;
- Strong experience in experimental photonics



- Experience with biomaterials or/and nanomaterials processing
- International research track record.
- Candidates with knowledge in optical modelling of photonic structures and/or programming instrumentation skills will be highly ranked.

Personal Skills

- Capability for inter and multidisplinary research and to stablish ties with teams in between physics and biology.
- Strong motivation to work in an interdisciplinary environment, with the ability to pay close attention to detail and to meet deadlines;
- Excellent communication skills and experience in the dissemination of results to the scientific community are expected.

Languages

- Upper advance level in oral and written English is required.