



PhD position in organic photovoltaics at ICMAB

We offer a PhD position to carry out research related to understanding and developing photovoltaic and optoelectronic devices based on organic semiconductors.



The candidate will join the team led by Mariano Campoy-Quiles, which is a team of around 10-15 physicists, chemists, material scientists and engineers, whose mission is to contribute to find solutions that will help to provide clean energy to everybody. The team is part of the [Nanopto group](#), which is generally devoted to materials for energy and photonic applications.

Mariano's team focusses on the experimental development of organic and hybrid based materials for applications in energy (photovoltaics and thermoelectrics) as well as optoelectronics (e.g. photodetectors). The group has a strong background on advanced spectroscopic techniques as well as a broad processing toolkit. In the framework of a recent European project, the team has used those two experimental strengths to create high-throughput (combinatorial) screening methods that allows to investigate materials in depth and taking little time and raw material. This approach enables more systematic investigations of materials, as well as creative undertakings (effective Friday afternoon experiments;-). The group has an extensive collaboration network with researchers working at the most prestigious international centres, which we intend to nurture.

The **current position** will focus on further exploring the use of the aforementioned methods for the fields of organic photovoltaics and optoelectronics. As the properties (e.g. colour, mechanical properties, etc.) of organic semiconductors can be chemically tuned, these technologies could be adapted to a variety of applications, such as powering IoT or portable devices, building integration, semitransparent windows, spectral sharing in greenhouses for agriculture, etc. Moreover, given the low processing temperatures, compatibility with roll-to-roll deposition and no need for vacuum, organic based devices are considered one of the most sustainable alternatives to current technologies. The program will be undertaken mostly in collaboration with other members of the group or external/international collaborators, with the possibility to carry out research stages.

Main Tasks

To develop the project, the candidate will learn how to use a large variety of techniques and methodologies. The main tasks that will be carried out within the project include:

- Fabrication and testing of organic photovoltaic devices
- Advanced spectroscopic characterization of materials
- Development of versatile processing methods



- Exploration of novel device concepts, for instance based on optical microcavities.

Requirements

- We are looking for a creative and motivated PhD candidate, who enjoys being part of a team.
- The fellow should hold a Bachelor degree in Chemistry, Physics, Materials Science or Nanoscience, related engineering disciplines, and hold a recognized Master degree (or equivalent).
- Some experience in materials processing and/or optics/photonics would be an added value.

Conditions

- The contract will be full time.
- Gross annual salary in the range of other PhD fellowships from the MICINN.
- Duration of 3 years with the possibility of extension.
- The starting date will be approximately from September/October 2021.

The successful candidate will work in an international environment and will receive a strong multidisciplinary training and work in a dynamic team.

How to apply

Interested candidates should send a motivation letter (where you introduce yourself, previous experience in relation to the post and future goals) and a detailed CV, including the academic record, and a list of references with contact details by email to Dr. Mariano Campoy Quilles (mcampoy@icmab.es). Please, label your documents CV-Intramural-XXX.pdf and Letter-Intramural-XXX.pdf, replacing XXX by your surname.

Deadline

The initial closing date for application is 25th of July, 2021. However, in the interest of gender equality, this may be extended until the ratio between female and male applicants is reasonable.

About ICMAB

ICMAB is one of the world's leading institutes in Materials Science research, located at Campus UAB, very close to Barcelona. One of the main ICMAB's strategic objectives and missions is to make an impact in the field of new materials for applications in energy, electronics and health.

ICMAB provides facilities, state-of-the-art equipment and most importantly, excellent scientists and professionals, to assure you a rewarding environment. In the last years, we have grown up to build up a team devoted to project managing, technology transfer, innovation, communication, maintenance, technical services and administration, to team up with the researchers for the advancement of science.

The diversity of our people and the interdisciplinary research fields related to Materials Science ensures an enriching and inspiring working environment. If you are an enthusiastic and highly motivated person and would like to work in a multidisciplinary and multicultural environment, join us!