

IMDEA Nanociencia. PhD positions within “Severo Ochoa” Programme for Centres of Excellence

IMDEA-Nanociencia is recruiting highly motivated individuals to contribute to the next phase of active growth offering training positions (PhD) funded by the ‘Severo Ochoa’ (SO) Programme (Grant SEV-2016-0686), whose mission is to develop high quality interdisciplinary research in the frontiers of Nanoscience within our strategic areas.

IMDEA-Nanociencia offers PhD fellowships contracts (1+3 years) for highly motivated students who wish to carry out a promising scientific career in any of our SO strategic areas within the listed scientific topics:

Organic Nanosystems for Light Harvesting and Energy Conversion

SO.I.1 Novel organic & hybrid nanomaterials for efficient harvesting of light & nanofabrication of solar cells

SO.I.2 Atomically resolved investigation of optical properties of single molecules and other nano-objects

SO.I.3 Time-resolved spectroscopies in the few femtosecond time range and its theoretical modelling

Fundamental Properties of 2D Materials

SO.II.1 Artificially stacked van-der-Waals heterostructures beyond graphene & 2D-based devices.

SO.II.2 Proximity effects in novel 2D materials (superconductivity, spin textures, topologically, Majorana)

SO.II.3 Theoretical modelling of the 2D systems

Nanomedicine

SO.III.1 Novel nanotechnology approaches fighting cancer: synthesis of metallodrugs, multi-functionalized magnetic nanoparticles and magnetic hyperthermia effects.

SO.III.2 Super-resolution optical spectroscopy at the level of the internal structure of single cells and nanomanipulation at the single molecule level.

SO.III.3 Antibacterial clinical surfaces by low-cost nanostructuring

Nanomagnetism and Critical Raw Materials

SO.IV.1 New generation of Rare-Earth-free permanent magnets

SO.IV.2 Topologically protected spin-orbitronics systems

SO.IV.3 Advanced catalyst nanomaterials with functional applications

Application Requirements

- Applicants must have completed their master degree courses in chemistry, physics, biology, engineering or related discipline in the 2016-2017.
- It is recommended an average mark of > 8.00 (0-10 scale).
- Applications should be sent electronically to jobs.nanociencia@imdea.org.
- The subject of the mail should start with your preferred scientific topic of interest followed by the family name and name of the applicant (ie. *subject: SO.II.1 Smith John*).
- One compressed file including the following documents in PDF format (note the limitations in the number of pages):
 - Motivation letter (max. 1 page),
 - Short curriculum vitae (max. 2 pages)
 - Copy of Academic Transcripts
 - Two recommendation letters

Deadline for applications: **November 1st, 2017**

Specific requirements

- Previous experience in chemistry, physics, biology, engineering or related discipline would be an advantage.
- You should only apply if: -You are a talented, highly motivated individual. -You have a keen interest in science in general. -You are looking for an exciting and ambitious project to work on. -You have an outstanding academic record. -You are a creative thinker. -You are a problem solver. -You enjoy working both individually and as part of a team.

Benefits

- We offer one-year contract with the possibility of renewing for three more years, if results are satisfactory. Gross salary will be according to standard regulation in Spain at the Madrid Institute for Advanced Studies in Nanoscience (IMDEA Nanociencia). The selected candidate is expected to start in December 2017

Eligibility and Evaluation Criteria¹

- Candidates may be of any nationality. No age restrictions apply.
- Applicants must be able to communicate fluently in English
- At the time of recruitment eligible candidates must be in the first four years of their research careers and with no doctoral degree, thus complying with the definition of Early Stage Researcher (ESR).
- The individual evaluation of the applications will be accomplished on the basis of two criteria:
 - **Curriculum Vitae of the candidate (70%)**: Academic results, which include the academic transcripts, and research experience, including publications and participation in research projects, will be evaluated. Transferable skills, mobility and experience in the industry sector will be regarded as valuable contributions.
 - **Quality of the motivation letter** detailing the research interests (30%).

Evaluation and Selection Procedure

- Applicants will receive an automatic response as acknowledgement of receipt of their application.
- Applications which fail the eligibility check will be informed of their ineligibility.
- Applications which are deemed to be eligible will receive confirmation that they have passed the eligibility check and are under evaluation.
- The SO IMDEA-Nano Scientific Committee will evaluate the applications. The Committee is composed by six scientific experts (the Scientific Director and the responsible of each of the five SO strategic areas), three Deputy Directors, and chaired by the Director of the Institute.
- If required, appropriate external referees for each individual proposal will be selected in order to advise on the quality of the applicants based on CV and the motivation letter.
- On the base of the referee reports, the SO IMDEA-Nano Scientific Committee will decide whether the candidate is promoted to the second evaluation phase, a video interview, and finally will provide the final ranking of applications
- Funded applications will be identified at this point and published on the IMDEA-Nanociencia web page.

¹ IMDEA Nanociencia is signatory of the “*European Charter for Researchers and Code of Conduct for their Recruitment*” and strongly committed to implement their requirements.