

Oggetto: BANDO NANO AR 26-2024 MO PRIN - PUBBLICA SELEZIONE PER IL CONFERIMENTO DI 1 ASSEGNO DI RICERCA POST DOTTORALE PER LO SVOLGIMENTO DI ATTIVITÀ DI RICERCA SUL TEMA “CARATTERIZZAZIONE TEORICA, TRAMITE CALCOLI DI TEORIA DEL FUNZIONALE DENSITÀ, DELLE PROPRIETÀ ELETTRONICHE E STRUTTURALI DI MAGNETI A SINGOLO ATOMO SU SUPERFICI DI OSSIDI” (prot. 203356 del 13-6-2024) – ADDENDUM REQUISITI

Premesso che:

- Nel bando n. NANO AR 26-2024 MO PRIN, nella versione in inglese sono stati indicati come requisiti soltanto i titoli di studio
- Vista la necessità di completare i requisiti del bando anche con l'esperienza come da richiesta del responsabile scientifico Dott. Valerio Bellini prot.189686 del 4-6-2024
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Dispone che

- La pagina **ABSTRACT OF VACANCY CALL NANO AR 26/2024 MO PRIN** venga così sostituita:

ABSTRACT OF VACANCY CALL NANO AR 26/2024 MO PRIN

DESCRIPTION OF PROGRAM/PROJECT: The research work will focus on the study by density-functional theory (DFT) and model Hamiltonian methods of rare-earth single atom magnets (SAMs) deposited on or integrated in oxide substrates. The anchoring of the SAMs will be determined by a systematic analysis of the adsorption and defect formation energies, while the electronic and magnetic ground state properties will be obtained by state-of-the-art all electron computational codes such as Wien2K, employ hybrid exchange-correlation functionals. The DFT calculations will be integrated by spin-model Hamiltonian approaches, to calculate spin-excitations and extract x-ray adsorption spectra. The main goal is to determine the most favorable systems, varying the type of adsorbed elements as well as the oxide substrates, to achieve long magnetic stability times and strong anisotropies.

RESEARCH AREA: Physics

RESEARCH THEME: “Theoretical characterization, by means of density-functional theory calculations, of the electronic and structural properties of single atom magnets on oxide surfaces ” within the research project PRIN 2022 – PE3 codice Cineca 2022KXN79M “Rare-earth single atom MAGnets aNchorEd aT oxIde Surfaces as a platform for new low-consumption magnetic dEVICES (MAGNETISE)” - CUP B53D23004280006, funded by the European Union – Next Generation EU in the context of the National Recovery and Resilience Plan, Mission 4 “Istruzione e Ricerca” – Component 2 “dalla Ricerca all’Impresa” – Investment 1.1, “Fondo per il Programma Nazionale di Ricerca e Progetti di Rilevante Interesse Nazionale (PRIN)”

CONTRACT OF: 12 months

GROSS REMUNERATION: € 22.000,00

QUALIFICATIONS AND EXPERIENCE:

- Master degree in Physics, Chemistry, Engineering, Materials Science and related disciplines;
- Ph.D (at least 3 years) in Physics, Chemistry, Engineering, Materials Science and related disciplines
- Experience in first-principle density functional theory calculations on nanostructured materials
- Good level of English and some knowledge of Italian

DEADLINE FOR APPLICATIONS: July 1st, 2024

Candidates residing outside of Italy must send the application and all the documents listed in Annex A to the following e-mail address: nano.recruitment@nano.cnr.it

PLEASE INDICATE THE CALL NUMBER IN THE SUBJECT OF THE EMAIL

The application form must be filled in using the attachments A-B-C- of this call (send only signed PDF files). Candidates will receive an e-mail confirming receipt of the application.

TYPE OF SELECTION: the submitted applications will be evaluated by CNR. A reserve list of accepted applications will be set up. These candidates will be invited for an interview that will be **held on July 16, 2024 h. 10.00 a.m. by videoconference.**

For any information please contact: nano.recruitment@nano.cnr.it or supporto.reclutamento@spin.cnr.it

- che ogni altra condizione e previsione contenuta nel Bando di cui trattasi rimanga invariata.

Il Direttore f.f. Istituto Nanoscienze

(Dott.ssa Lucia Sorba)