

Two-year Post-Doctoral position

at the [Physics Department of the University of Milan \(Italy\)](#), in the field of first-principle investigation of hybrid organic/antiferromagnetic interfaces.

The position is offered in the context of the EU-funded FET project “SINFONIA”

(<https://www.sinfonia-fet.eu/>) aiming to the development of perspective spintronics devices, where the coupling of magnetic perturbations and optical stimuli at hybrid interfaces are addressed at the experimental and theoretical level.

Theoretical analysis, based on density functional theory methods, will be applied to interfaces formed between organic molecules and antiferromagnetic substrates. The work will focus on the adsorption of individual molecules and thin layers on various surfaces, for the determination of electronic, magnetic, and spectroscopic properties of the coupled system.

The candidate should have a strong theoretical background in Solid State Physics, Surface Science and/or Molecular Physics, and numerical simulations. Required qualifications include a PhD in Physics (Condensed Matter), Chemistry, or Materials Science. Previous experience with density functional theory calculations and with standard DFT codes (Quantum-ESPRESSO, VASP, SIESTA, ...) is a must; the knowledge of excited-state formalism and related simulation packages (Yambo, ...) is recommended. Good communication skills in English are required, knowledge of the Italian language may be helpful but is not mandatory. The successful candidate is expected to work in a team that is part of the [Solid State Theory group at UNIMI](#) and to supervise graduate/undergraduate students.

The position is initially for **24 months**, with the possible extension within the SINFONIA project. The examination procedure will be opened in the next months with a starting date around May 2022, allowing some flexibility to be agreed upon. The possibility to accept the position without waiting for VISA application procedures is considered a plus.

For additional inquiries and expressions of interest please contact [Guido Fratesi](#) providing a curriculum vitae (including research interests and accomplishments, full publications list, relevant certificates/diplomas/awards list) and full contact details of two references supporting the application. Selected candidates will be interviewed via teleconference.

Guido Fratesi

<https://sites.google.com/site/guidofratesi/>