

## POSTDOCTORAL POSITION: COMPUTATIONAL MODELING OF ADVANCED MATERIALS

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Laboratory of Advanced Materials and Strategic Minerals (LMM,  
<https://dfi.ufla.br/portal/infraestrutura/laboratorio-de-materiais-avancados-e-minerais-estrategicos-lmm>)

The NanoMat research group at UFLA invites applications for a postdoctoral research position in computational modeling and multiscale simulation of functional materials. The group values technical rigor, methodological depth, and scientific independence.

This position is particularly suitable for candidates seeking to consolidate an independent scientific profile. The selected candidate will be supervised by Prof. Raphael L. M. Lobato, in collaboration with Prof. Jenaina R. Soares, within the framework of research activities in Advanced Materials and Strategic Minerals.

The candidate is expected to take intellectual leadership in a defined subproject and contribute as first author to high-quality, peer-reviewed international publications. Research activities will focus on:

- Atomistic simulations of the physical and chemical properties of solids, surfaces and molecules using density-functional theory-based methods
- Multidisciplinary research with applications in environmental and soil science, as well as renewable energy materials.

The project involves scientifically challenging problems at the interface of electronic structure and atomistic modeling.

### Required Qualifications

- PhD in Physics, Chemistry, Materials Science, Engineering, or related fields
- Demonstrated experience in:
  - Density Functional Theory (DFT)
  - High-Performance Computing (HPC) environments
  - Scientific programming (Python, Fortran, C/C++, or similar)

- Atomistic simulations and multiscale modeling
- Strong written and spoken English

### **Expected Profile**

We are looking for a researcher who:

- Is able to conduct independent research
- Has a strong record of first-author publications in international journals
- Is interested in taking intellectual leadership within a defined subproject
- Values technical rigor and methodological depth
- Seeks to consolidate an independent scientific profile

### **Fellowship Details**

- Finep SET-C Fellowship – BRL 5,850.00/month (tax-exempt)
- Initial duration: 12 months
- Possible extension subject to performance and funding availability
- Location: Federal University of Lavras (Lavras, Minas Gerais, Brazil)
- On-site dedication required

### **Application Procedure**

Interested candidates must complete the online application form:

<https://forms.gle/MGrmaZ7H9EgKZmLq8>

Application deadline: March 6

Interview: March 9-13

Results: March 16.

Contact: Prof. Dr. Raphael Longuinhos Monteiro Lobato ([raphael.lobato@ufla.br](mailto:raphael.lobato@ufla.br))