



## Graduate student and Postdoc research positions in electrical transport, magnetometry, and spin spectroscopy of novel quantum materials

Applications are invited to join Prof. László Forró's group at the "*Stavropoulos Center for Complex Quantum Matter*", University of Notre Dame, Indiana, USA, which is a newly founded entity within the Physics Department.

We seek highly motivated candidates for the following positions:

- **3 Graduate student positions (Ph.D.; 4 years) and**
- **1 Postdoc (1-2 years; extendible)**

Our research group focuses on the study of electrical, magnetic, and optical properties of novel materials, such as photovoltaic perovskites, low-dimensional layered materials, hydrogen-rich compounds, and novel superconductors with a strong focus on their synthesis. With advanced experimental techniques, we investigate their basic properties and select those which offer the most promising functionality. Apart from high-end standard techniques available in our lab (DC+AC electrical transport up to high pressures, magneto-transport, heat capacity, and VSM magnetometry in a PPMS equipped with dilution fridge; 4 K cryocooler with optical windows; and conventional X-band ESR operating in the 4 - 1000 K range), we have in-house access to SQUID magnetometry and IR spectroscopy (4 K to 300 K; 0 T to 16 T) and to on-campus user facilities (e.g., HRTEM, SEM, clean rooms, Raman-spectroscopy, NMR @ 300-800 MHz, etc.).

We seek candidates with strong experimental skills, a very good background in condensed matter physics, and high motivation for scientific research.

- The tasks of the **Postdoctoral** fellow are to investigate the transport and magnetic properties of novel materials and to supervise graduate student(s) assigned to her/him. Priority will be given to a person mastering high-pressure techniques (Diamond anvil, Bridgman, self-clamped). Knowledge of the above-mentioned experimental techniques is also advantageous.
- **Graduate students** will work in: i) novel superconductors, ii) in thermoelectric research, and iii) magnetic materials and heterostructures.

Applications should be sent by email to Prof. Laszlo Forro ([lforro@nd.edu](mailto:lforro@nd.edu)), cc: Dr. Bence G. Markus ([bmarkus@nd.edu](mailto:bmarkus@nd.edu)) including CV, and academic transcripts of the highest degree, motivation letter, including names and contact info of references. Review of the candidates will begin January 31<sup>st</sup> 2023, and will continue until all positions are filled.