



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. László Forró (lforro@nd.edu), cc: Dr. Bence G. Márkus (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 31st, 2022, and will continue until all positions are filled.