Dr. Aparajita Singha (MPI-FKF)

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MAX-PLANCK-INSTITUT FÜR
FESTKÖRPERFORSCHUNG

PhD student position with the thesis topic: "*High-resolution magnetometry using color-centers at low-temperature and ultra-high vacuum*"

The research group of Dr. Aparajita Singha at the Max Planck Institute for Solid State Research (MPI-FKF) announces this new PhD position. This thesis will focus on establishing a working recipe for using highly-sensitive novel quantum sensors (such as nitrogen vacancies in diamond) at low-temperatures and ultra-high vacuum. This is the first crucial step towards achieving high-resolution magnetometry and quantum sensing down to single molecular level. The research will be conducted by using a variety of state-of-the-art experimental techniques at the intersection of physics and surface chemistry.

What do we expect from you?

You need to be a highly motivated and enthusiastic experimentalist with a strong background and M.Sc. degree (or equivalent) in Physics/Optics, who is also excited to work in a dynamic team of young physicists at one of the world-leading centers for solid state research. In particular, you need to have

1. Excellent understanding of experimental condensed matter physics
2. Excellent working experience on optics and optical setups
3. Very good working experience with programming language (preferred Phyton)
4. Technical proficiency in scanning probe methods (STM and/or AFM)

It is advantageous to have experiences with handling cryogenic and/or UHV setups.

MPI-FKF endeavors to achieve gender equality and diversity. Furthermore, we seek to increase the number of women in areas where they are underrepresented and therefore explicitly encourage women to apply.

Why join us?

The position will be financially supported through the Emmy Noether programme of the DFG. You will be working in a dynamic and young team of physicists. Besides, you will experience a highly conductive work culture that encourages the development of your scientific mind and allows you to explore excellent networking opportunities.

How to apply?

Earliest possible starting date is 1st July, 2022. Interested candidates should contact Dr. Aparajita Singha via email by submitting a short motivation letter, CV, and the contact details of two referees.