The research group Spectroscopic sensing of the Leibniz Institute of Photonic Technology (IPHT) and the Institute of Physical Chemistry of the Friedrich Schiller University offers a position for Hiwi and a topic for Bachelor/Master thesis in pharmaceutical spectroscopy.

Within the scope of this project novel spectroscopic systems based on novel optical fibers and fiber arrays will be exploited for highly sensitive and intrinsically specific Raman spectroscopy with applications in the pharmaceutical analytics and medical diagnosis.

Your qualification: University studies (B.Sc. or M.Sc.) in physics, photonics, medical optics, chemistry, scientific instrumentation, laser-optotechnology, medical-technology, or related disciplines

Your skills and interest:
- Experimental and technical skills and interest in optical setups and instrumentation
- Knowledge in Raman spectroscopy and data analysis would be helpful
- Interest in interdisciplinary work and scientific ambition

We offer:
- Attractive research environment with excellent instrumental equipment
- Possibility of interdisciplinary cooperation
- Young and dynamic team with interdisciplinary background

Literature
Highly sensitive broadband Raman sensing of antibiotics in step-index hollow-core photonic crystal fibers, ACS Photonics (2017)
Fiber enhanced Raman spectroscopic analysis as a novel tool for diagnosis and monitoring of diseases related to hyperbilirubinemia and hyperbiliverdinemia, Analyst (2016) 141, 6104-6115
Fiber array based hyperspectral Raman imaging for chemical selective analysis of malaria infected red blood cells Analytica Chimica Acta (2015), 894, 76-84
Fast and highly sensitive fiber enhanced Raman spectroscopic monitoring of molecular H₂ and CH₄ for point-of-care diagnosis of malabsorption disorders in exhaled human breath, Analytical Chemistry (2015), 87, 2, 982
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New Ways to Guide Light, Science (2009), 296, 276 / Photonic crystal fibres, Nature (2003), 424, 847

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