





# dr. Silke Stähler-Schöpf

Head of students Lab

Munich-Centre for Advanced Photonics (MAP)

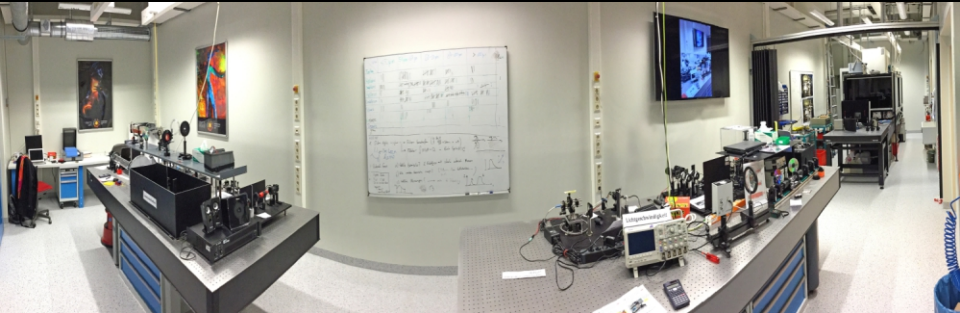
LMU Munich at Max Planck Institute of Quantum Optics

## PhotonLab - The students Lab at MPQ

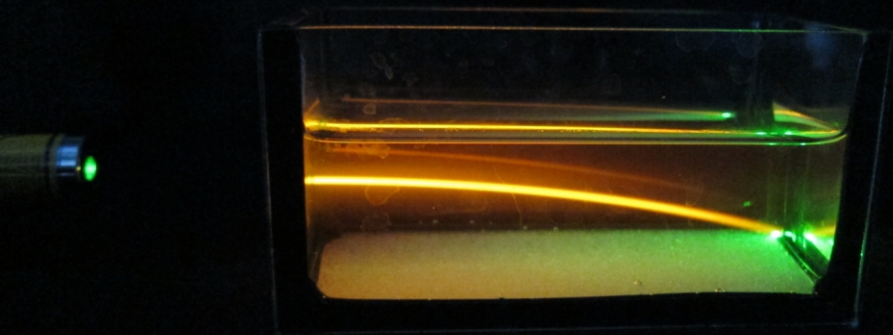
What is the thickness of one hair? What is an interferometer and what is it used for? How can I use a laser to find out, whether I got ametropia? What is a Femtosecond laser and what is it used for? All these questions can be examined at the PhotonLab. The PhotonLab is a laser laboratory for high school students and the experiments are especially designed for them. After a short talk, the students can visit a real lab where the scientists are at work and then they can try the experiments at the PhotonLab.

The PhotonLab, is a cooperation between the Munich-Centre for Advanced Photonics, the Faculty of Physics at the Ludwig Maximilian University (LMU) and the Max Planck Institute of Quantum Optics (MPQ).

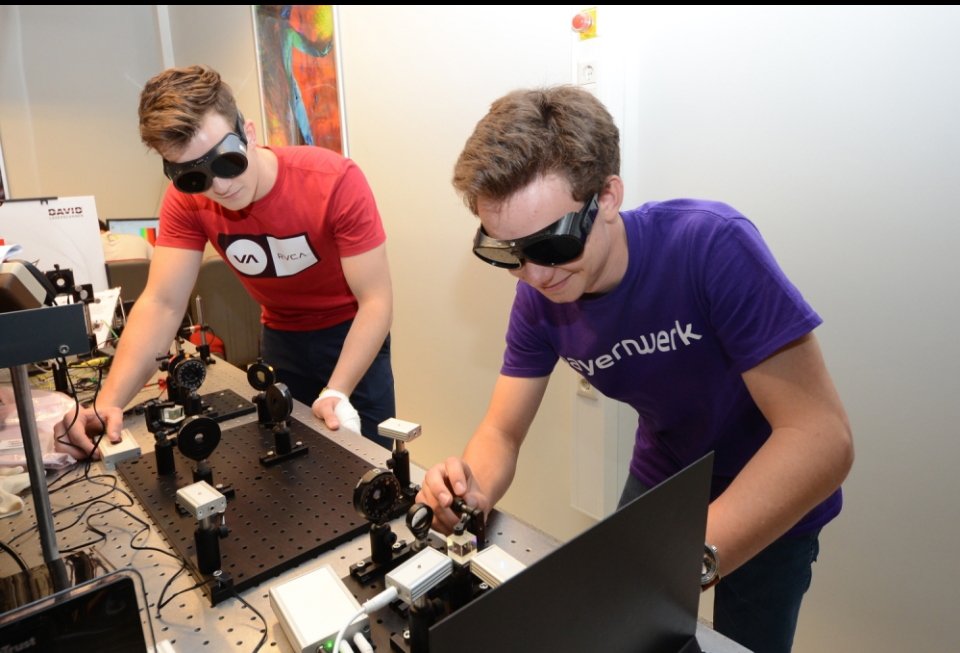
# PhotonLab - the laser laboratory for school students



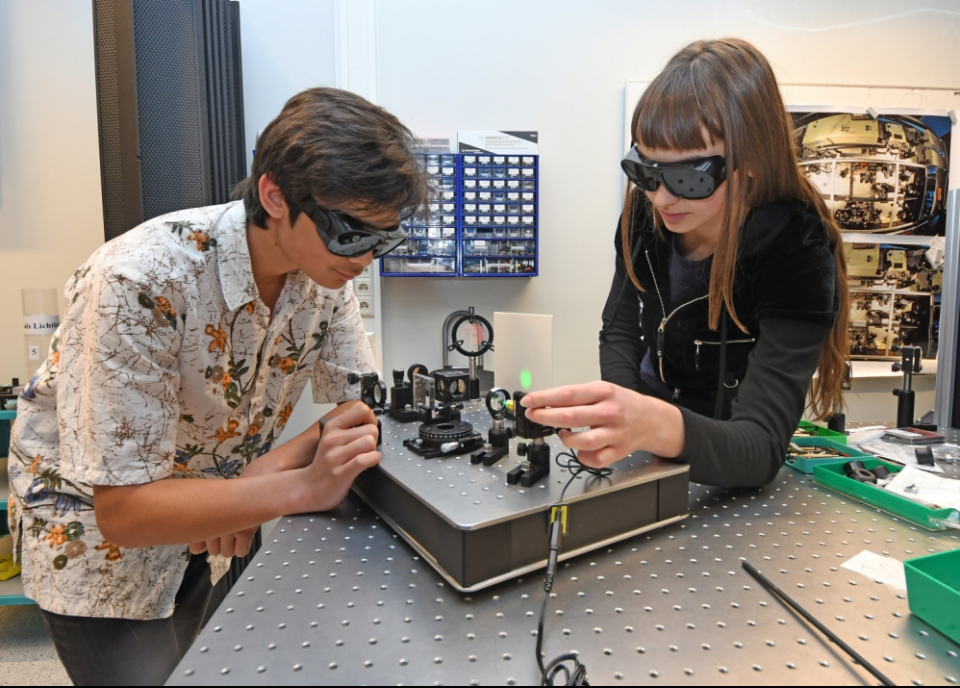
The laser laboratory for school students, PhotonLab, is cooperation between the Munich-Centre for Advanced Photonics, the Faculty of Physics at the Ludwig Maximilian University (LMU) and the Max Planck Institute of Quantum Optics (MPQ). This experiment lab is especially designed for high school students in the 9th grade and above, and is located within the MPQ at the Garching Research Campus. The lab has space for about 20 students to experiment; larger groups of up to 30 students will be divided into two, splitting their time between the labs and exploring the research campus with our Campus Quiz.



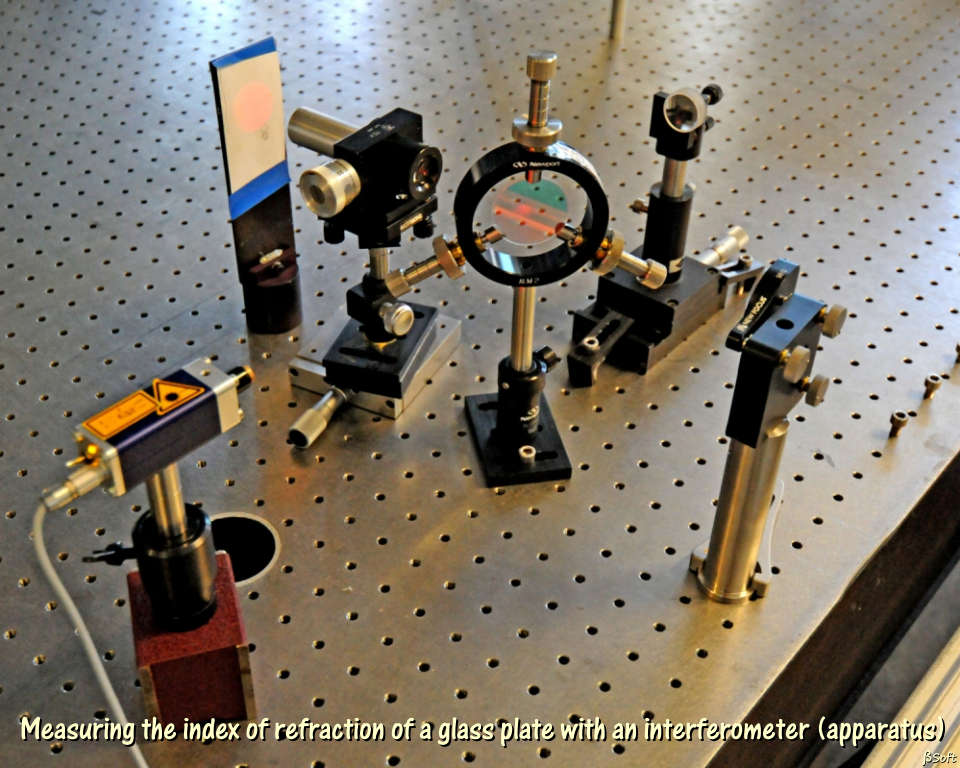
*A gradient in sugar concentration bends the laser light, which is visible due to a fluorescent Material*



*Two students try to send some information with the experiment „Quantum Cryptography“*



Measuring the index of refraction of a glass plate with an interferometer

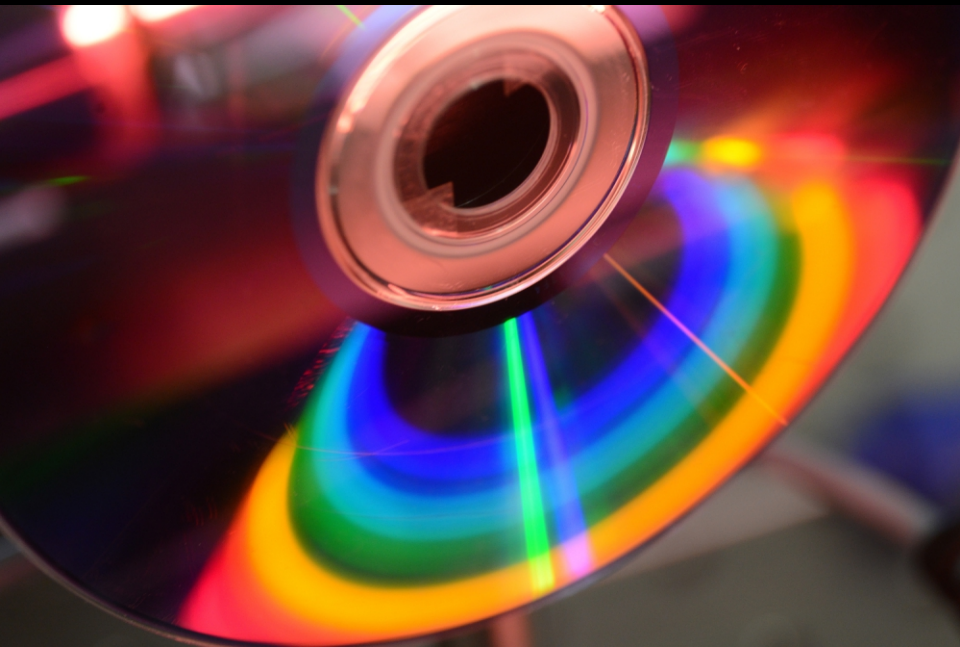


Measuring the index of refraction of a glass plate with an interferometer (apparatus)

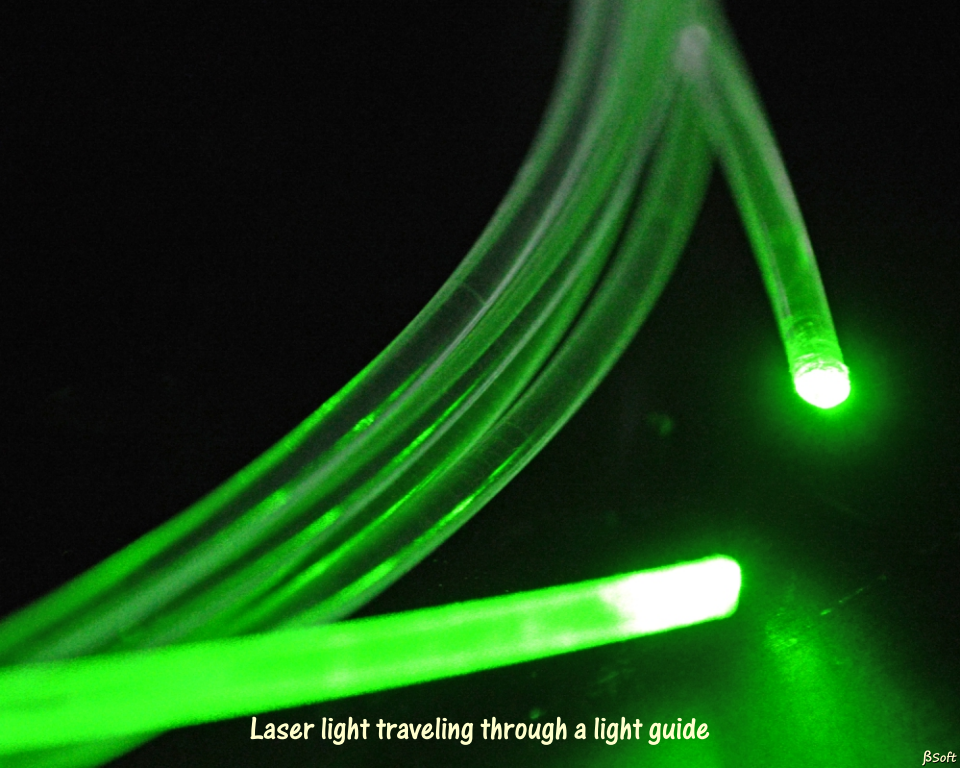


*Using laser-speckles to determine the vision of an eye*

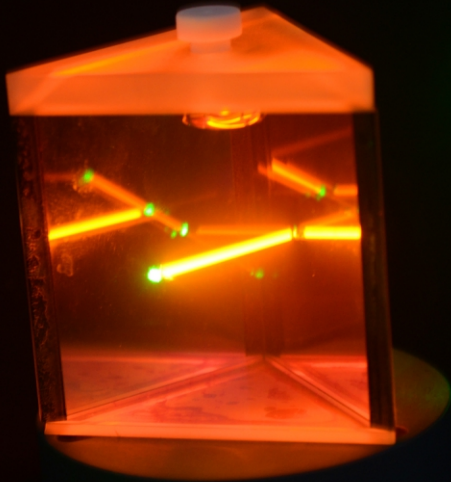




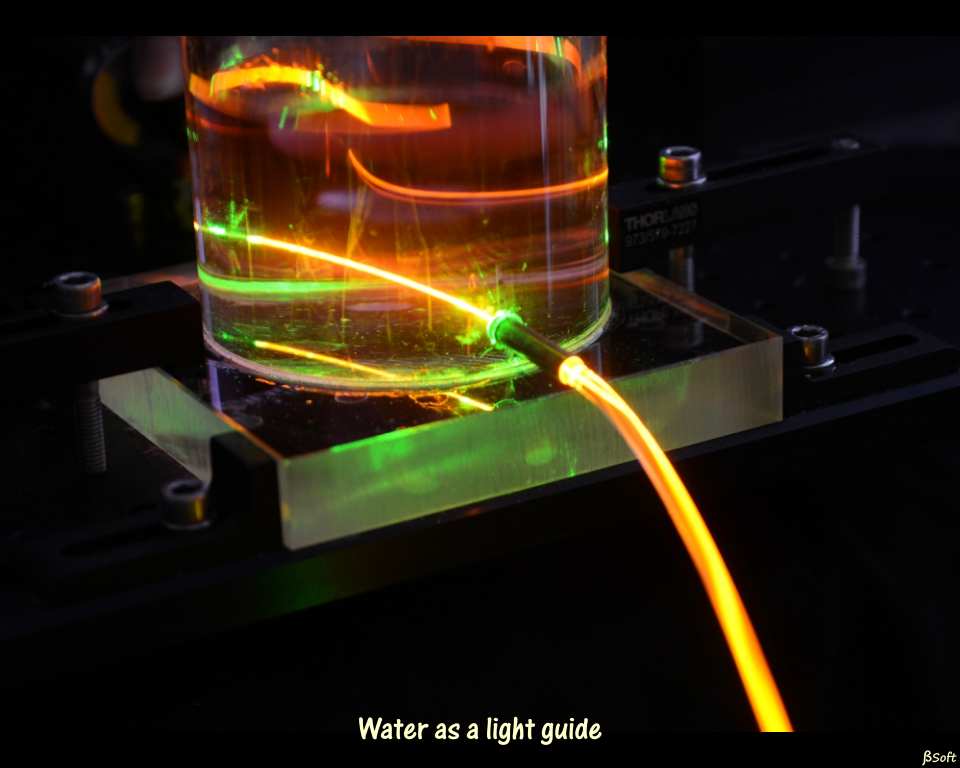
Using a CD as a grid



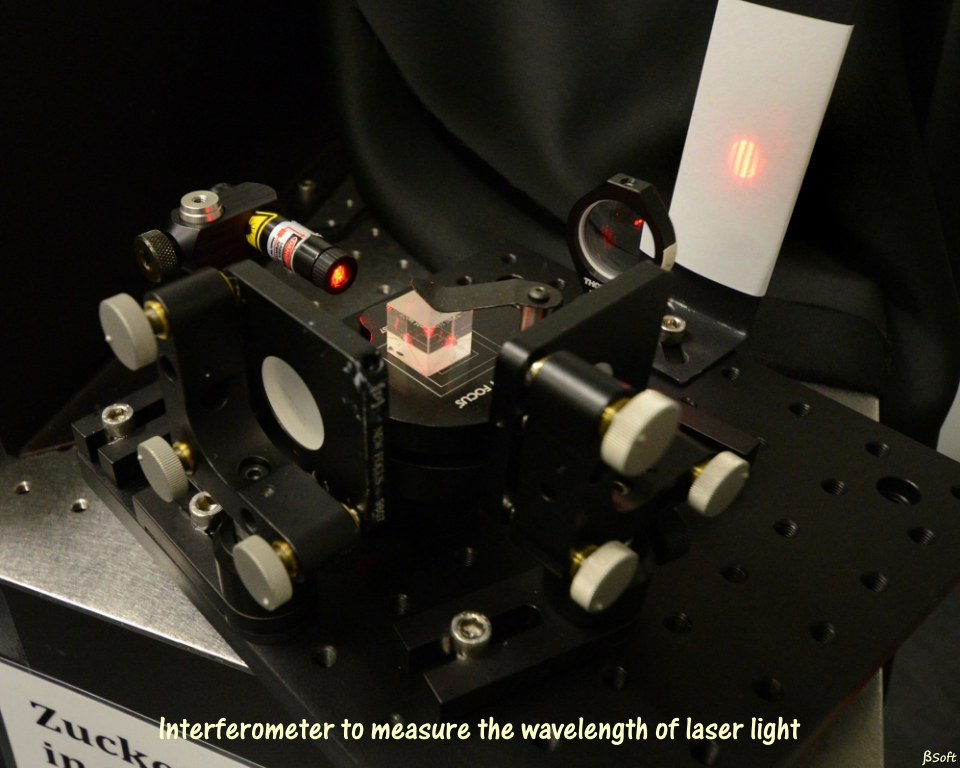
Laser light traveling through a light guide



*Hollow prism filled with a fluid to determine its sugar concentration*



*Water as a light guide*



*Interferometer to measure the wavelength of laser light*