Max-Planck-Institut für Struktur und Dynamik der Materie



Max Planck Institute for the Structure and Dynamics of Matter

Seeking a Master project in crystallography?

The group of Prof. <u>Dwayne Miller</u> is seeking a graduate student interested in chemical physics and crystallography. You will work in an international group (18 different nationalities!), with the possibility to visit the University of Toronto and participating in a multidisciplinary environment.

Unravelling the optical properties of DNA and nucleic acids is essential to understanding their biochemical functions and pathology, such as the influence of UV light on cancer formation. To clarify the complicated dynamics of DNA nucleic acids, it is necessary to employ highly sophisticated, time-resolved multidimensional spectroscopy techniques.

We have investigated the photoinduced relaxation processes in a number of nucleotides and DNA in physiological liquid. Your Master project will be targeted on creation of mono and poly crystalline nucleic acids and single stranded DNA, to be able to compare the effects of solvation. Following this goal, the Master's project will be focused on "Crystallization and surface deposition of DNA and nucleic acids and their characterization by electron diffraction and optical spectroscopies".

To apply, if interested or just curious, please contact <u>Prof. Miller</u> via email: <u>dwayne.miller@mpsd.mpg.de</u>.

http://www.mpsd.mpg.de/71153/Coherent_Control_and_Multidimensional_Spectroscopy_

