



In the group of Molecular- and Nanophysics (www.nanophysics.uni-freiburg.de) we are looking for motivate students for a

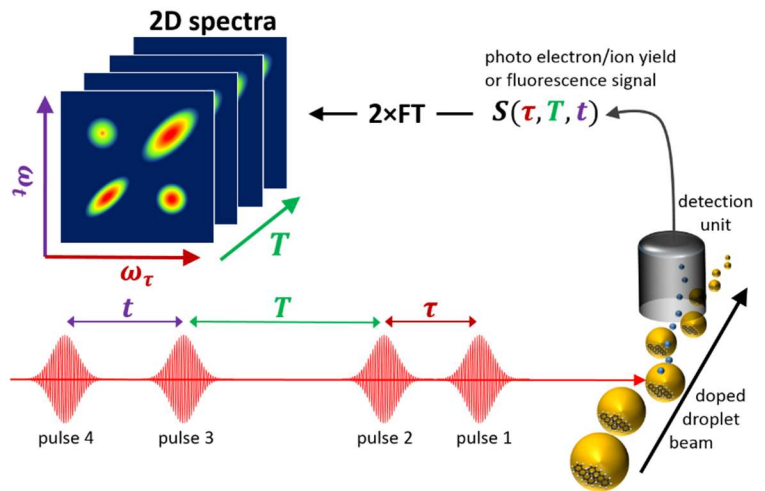


Bachelor/Master/Teacher Graduate Thesis

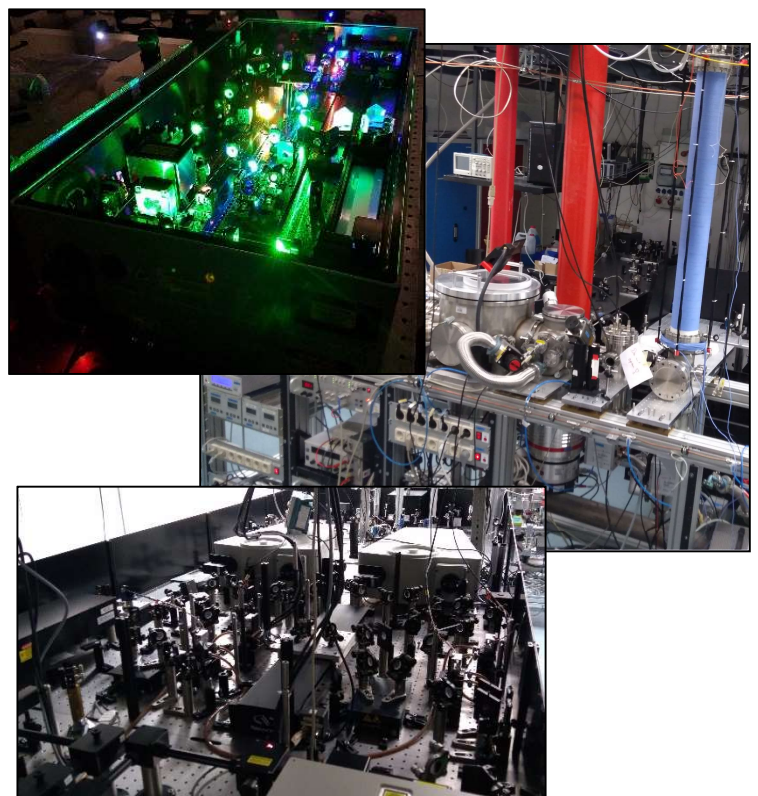
interested in exciting projects in the field of

2D-Spectroscopy: Looking at Ultra-fast Coherent Processes

In many fields of research, biological processes are purely explained with classical mechanisms. However, recent experiments indicate that quantum mechanical effects have a substantial contribution to the remarkable efficiency of photosynthesis. However, the interpretations of the experiments have been controversially discussed and corresponding theoretical models are still developing. Therefore, it is important to look at simple model systems of nature in well-defined laboratory conditions. Within this context, we aim to investigate charge and energy transport in simple, isolated donor-acceptor-systems. With multidimensional coherent spectroscopy the sample is illuminated by a sequence of several precisely controlled ultra-short laser pulses, and the induced processes are detected by means of fluorescence, photoelectron or photon yields. In particular, this allows us to directly observe coherent dynamics.



Within this exciting project, we offer interesting theses covering different fields: **Optics, laser, vacuum technology, electronics, programming, digital signal analysis.** We are always looking for active and motivated students interested in experimental physics



For further information please contact

Prof. Frank Stienkemeier

University of Freiburg - Institute of Physics
Hermann-Herder-Str. 3, 79104 Freiburg
Room 501 Physics Highrise

fon +49 761 203-7609

www.nanophysics.uni-freiburg.de
stienkemeier@uni-freiburg.de