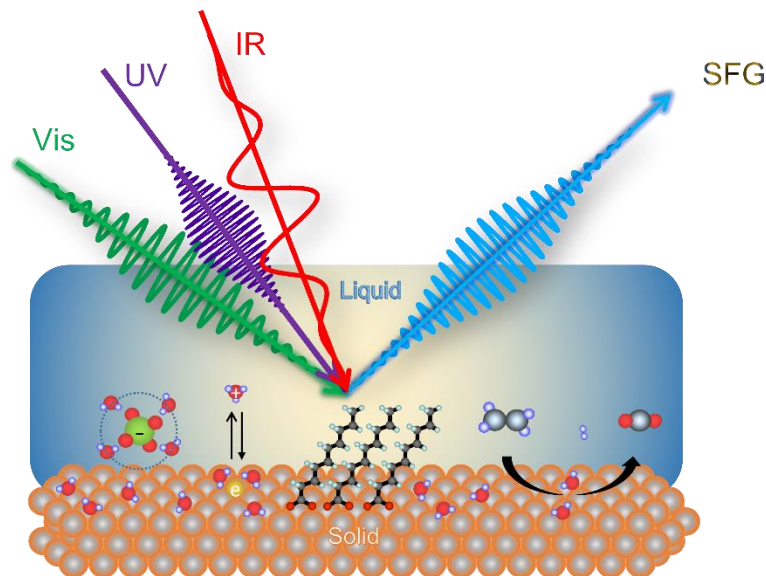


<https://uni-due.zoom.us/j/61481460592?pwd=NTBkdk1xNWtFdnk1TTdtZkiOUllzUT09> (gilt für alle Vorträge)

Employing a coherent second order nonlinear optical spectroscopy to study condensed matter interfaces

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Condensed matter interfaces are ubiquitous in nature and are important for daily life. While important, gaining molecular level structural information at these interfaces are extremely challenging. Being a second order nonlinear optical process, sum frequency generation (SFG) has unique selection rule and is intrinsically sensitive to the interfacial species. In this talk I will try to explain how SFG works as an important tool to study the symmetry, the ordering and the absolute orientation of the interfacial species at various interfaces based on my previous work. The mathematics behind the selection rule, the properties of the second order susceptibility at various interfaces will be discussed. In the end, some personal perspective and remark will be given for the application of SFG for electrified interfaces.