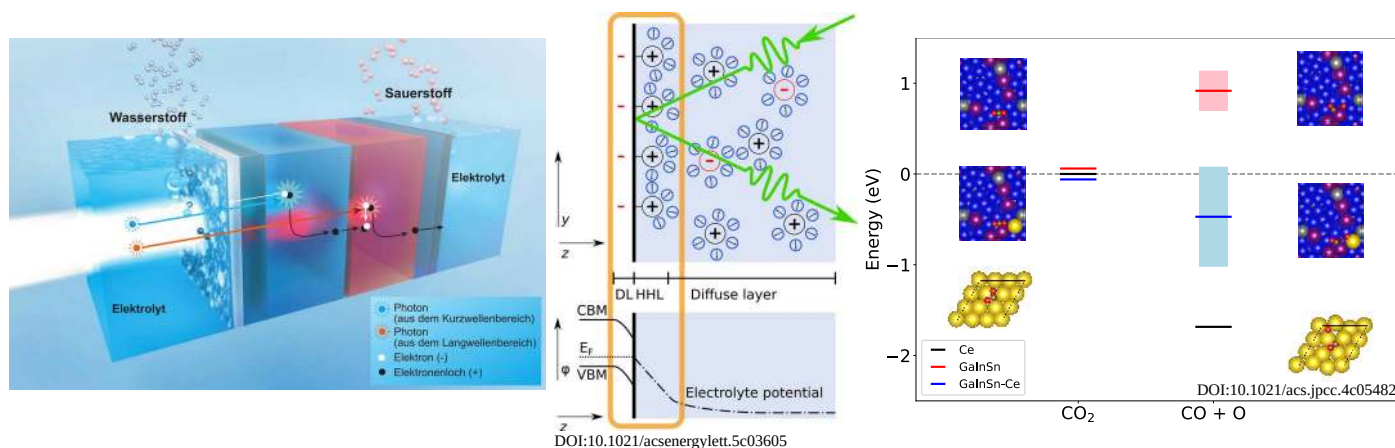


# Two open postdoc positions and one PhD position at the Institute of Physical and Theoretical Chemistry

- Postdoc position (theory/computation) in code development for computational spectroscopy** on electrochemical interfaces. Our group investigates electrochemical interfaces by means of density-functional theory (DFT) and optical reflection anisotropy spectroscopy (RAS). For the atomistic interpretation of experimental RAS data with structural models from DFT, we use computational RAS in combination with molecular dynamics simulations. In this DFG-funded position, your task is to either add new features (e.g. GW...) to the RAS module in the Yambo code, that we have recently re-implemented, or to add a RAS implementation to the TDDFT module in CP2K. In this position, you will have the chance to work together with the international, highly motivated teams of these two open-source codes. Requirements: Completed PhD in chemistry, physics or related field and experience with code development. *Position for up to two years, to be filled as soon as possible.*
- Postdoc position (experiment) in solar water splitting and electrochemical carbon dioxide removal (CDR).** We are seeking a postdoc who joins the H2Demo project on solar water splitting ([www.h2demo.de](http://www.h2demo.de)) and, later on, the NETPEC project on carbon dioxide removal ([www.netpec.org](http://www.netpec.org)). Your task will be to join the H2Demo team and modify solar cells for high-efficiency (solar-to-hydrogen >18%) photoelectrochemical water splitting implementing them into a demonstrator device. In the NETPEC-project, you will work on liquid-metal catalysts for the electrochemical reduction of CO<sub>2</sub> to solid carbon for permanent storage. Requirements: Completed PhD in chemistry, physics or related field and experience with electrochemistry or surface science. *Position until end of October 2028, to be filled as soon as possible.*
- PhD position (experiment) in spectroscopy at electrochemical photoelectrode and battery interfaces.** In this project, you will investigate two electrochemical systems by two complementary operando spectroscopies to unravel potential-induced restructuring processes at electrode interfaces. Gallium phosphide will be the photoelectrode system in aqueous electrolytes, where we aim for understanding and controlling potential-dependent surface states by means of RAS and electrochemical impedance spectroscopy. The second type of systems will be battery electrodes based on highly oriented pyrolytic graphite, where we want to better understand processes such as the formation of solid electrolyte interphases. Requirements: Completed M.Sc. in chemistry, nano-science, physics or related field. *Position for three years, to be filled as soon as possible.*



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[www.uni-tuebingen.de/specsy](http://www.uni-tuebingen.de/specsy)

**Application form:**

<https://dibbler.iptc.uni-tuebingen.de/index.php/apps/forms/s/dRFzyY8RrK5btYnqH4DNog3r>