

Electrochemistry: Raman spectroscopy coupling

The main goal of the experiment is to detect corrosion products in their state of formation using Raman microscopy. One example, which is pretty well described in the literature, is the passivation reaction of iron in solutions containing NaOH. Due to the electrochemical treatment of the sample a thin layer of oxide is produced. Raman microscopy can give information about the composition of the layer. In a similar way, one can investigate the corrosion product formation of iron sulfides. The latter are important in processes, where dissolved H₂S is present. H₂S corrosion, also known as sour corrosion, is of great interest for the oil and gas industry. Exact details about the planned experiments have still to be cleared.

There is also a possibility to perform experiments with samples of the participants. For this, please contact us as soon as possible in order to discuss further details.