

This collection contains raw data for the manuscript titled "Ruthenium Assemblies for CO₂ Reduction and H₂ Generation: Time Resolved Infrared Spectroscopy, Spectroelectrochemistry and a Photocatalysis Study in Solution and on NiO". Raw data pertains to photoelectrocatalysis experiments where the molecular photocatalysts were immobilised on NiO thin films, and exposed to light in a three-electrode cell with an applied external electrical bias. Details of the experimental setup are in the paper. Data here is in three sections: 1. gas chromatography data, 2. UV-visible absorption results and 3. electrochemistry data from the three-electrode cell setup.

In general the file names for the data contain sufficient information, together with the manuscript, to identify the experiment and the system used.

From the manuscript the compounds are identified as per the titles below, corresponding to file identifies in this folder:

Ru = Ru(dceb)bpt

Ru-Re = Ru(dceb)bptRe(CO)₃Cl

Ru-Pt = Ru(dceb)₂bptPtI₂

For the electrochemical measurements the file names contain the pH conditions and the scan rate where appropriate, all which can be cross-referenced against the manuscript. Within the raw data the files are appropriately labelled so that one can determine what bias the experiment was run at where a chronoamperometry (chronoamp) experiment was performed.