Project Title: Selective, efficient and clean chemical hydrogenation using new electrochemical catalysts

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This PhD studentship is in a new research area which involves the development and understanding of molecular electrochemical catalysts for synthesis. The project will involve both the synthesis of molecular catalysts for attaching to surfaces as well as measurements and electrochemical synthesis. A primary aim is to demonstrate that electrochemistry can be used with surface grafted molecular catalysts to selectively, efficiently and cleanly achieve hydrogenation reactions which are usually carried out using solution phase homogeneous catalysis or with heterogeneous catalysts under high pressure. The studentship will promote a range of interdisciplinary skills including synthesis, catalysis, electrochemistry and measurement techniques.