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Abstract

The electrochemical activation of C-X bonds requires very negative electrode potentials. Lowering the overpotentials and increasing the catalytic activity requires intensive electrocatalytic research. A profound understanding of the reaction mechanism and the influence of the electrocatalyst allows optimal tuning of the electrocatalyst. This can be achieved by combining electrochemical techniques with electron paramagnetic resonance (EPR) spectroscopy. Although this was introduced in the mid-twentieth century, the application of this combined approach in electrocatalytic research is underexploited.