

## **Spectroelectrochemistry Y2K: An analytical approach**

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A simple spectroelectrochemical system has been designed to carry out cyclic voltammetry, square wave voltammetry, bulk electrolysis with coulometry and recording spectroscopy experiments on oxidised/reduced species in a single shot. The cell is made with standard joints for Schlenk line operations and provision for spectroscopic measurements. Optical fibre technology has been used in the world for the first time to carry out experiments on *in situ* spectroscopy of the solution before and after the coulometry. Electrochemical systems (CH instruments, USA), CCD array spectrometer (Ocean Optics, USA) and home-made electrodes have been used to establish the techniques. The spectroscopy and electrochemistry systems are connected by optical fibre 10 mm path length dip probes. Spectroscopic signals and data are processed separately by hand held CCD array spectrometer connected to PC which eliminates the need for a separate spectrophotometer and allows connection to existing electrochemical system for spectral measurements. In the year 2000, two days of student labour may be reduced to two hours, that too without transferring the air-sensitive solution.