Chemnitz University of Technology
Chair of Measurement and Sensor Technologies
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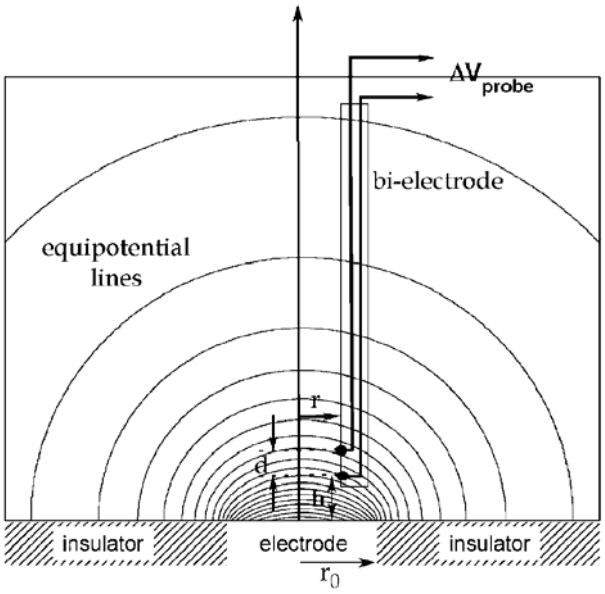
Master Thesis

Automatic Mechatronic Measurement Set-up for Local Impedance Spectroscopy

Task

Impedance Spectroscopy is a powerful measurement method used in many application fields especially in electrochemistry and material science.

Local electrochemical impedance spectroscopy is an excellent method to provide information about the influence of local variations of impedance and to analyze phenomena seen in global impedance measurements.



Target of this work is to build up a measurement set-up including special electrodes, a positioning system and control software. Most of the hardware parts except special electrodes are available or already commanded. In a first step a bi electrode will be constructed and realized. In the second step the measurement set up for Impedance measurement should be realized. The control software should be realized in LabView.

Requirements

- Motivation to work independently
- Knowledge about the design of electric circuits and mechatronic components
- Electrical and mechanical knowledge
- LabView skills preferable

Supervision

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