

Theory Monday, May 31st

- 09:00 **Welcome**
- 09:30 **Voltage, Current, Time**
Mathematical and physicochemical basics of EIS
Dr. C. A. Schiller
- 10:30 *Coffee Break*
- 11:00 **The Connection between Structure, Processes, and Impedance of Electrochemical Objects**
Dr. C. A. Schiller
- The Contributions of Electrochemical Processes I:**
Discrete and Distributive Impedance Models
Dr. C. A. Schiller
- 12:30 *Lunch*
- 14:00 **The Contributions of Electrochemical Processes II:**
Models for Processes with Mass Transport
Dr. W. Strunz
- 14:30 **Theoretical Aspects for Testing Impedance Data**
Basics of the Kramers-Kronig- and the Z-Hit algorithms
Dr. W. Strunz
- 15:00 **Photo-Electrochemical Techniques:**
Dynamic and Spectral Measurements on DSSC, OSC, OLED, and Electrochromic Devices
Dr. M. Multerer
- 15:30 *Coffee Break*
- 16:00 **Introduction to Nonlinear Frequency Response Analysis (NFRA)**
Novel technique to measure the non-linear processes and to get additional information than EIS
M.Sc. W. Saddique
- 19:00 *Dinner & Social Evening*

Practical Courses Tuesday, June 01st

Practical Courses (rotating through the courses in groups)

- Course 1: **Understanding Alternative Solar Cell Concepts – The Application of Intensity Modulated Photo Current (Voltage) Spectroscopy in Combination with EIS + fitting**
Dr. M. Multerer
- Course 2: **Artefacts in EIS Measurements of Low Impedance Samples**
Dr. C. A. Schiller
- Course 3: **Artefacts in EIS Measurements of High Impedance Samples**
Dr. W. Strunz
- Course 4: **Combination and Automation of Measurements with Script**
Dipl. Ing. S. Fröba
- Course 5: **EIS-Measurements and Data Processing applied on a Fuel Cell Model**
Dr. N. Wagner
- Course 6: **From Measurements to Physical Parameters - Interpretation and Modelling of Electrochemical Impedance Spectra on the Example of a Battery Model**
Dr. J. Odrobina
- 09:00 **Organizing groups**
- 09:20 **First course**
- 10:10 **Changing course**
- 11:00 *Coffee Break*
- 11:30 **Changing course**
- 12:20 *Lunch*
- 13:50 **Changing course**
- 14:40 **Changing course**
- 15:30 *Coffee Break*
- 16:00 **Changing course**
- 19:00 *Dinner*

Practical Courses Wednesday, June 02nd

Practical Courses (rotating through the courses in groups)

- Course 7: **Integration of Zahner Equipment into Battery and Fuel Cell Test Stands**
Dr. M. Multerer
- Course 8: **Photo Current Spectroscopy (CIMPS-pcs) Applied on Perovskite, Monolithic-, Organic- and Dye-Sensitized Solar Cells**
Dr. C. A. Schiller
- Course 9: **Handling Changing States During EIS Measurements**
Dr. W. Strunz
- Course 10: **Parallel Measurements on Individual Cells in Battery and Fuel Cell Stacks**
Dipl.-Ing. S. Fröba
- Course 11: **Coating & Laminate Testing through Combined AC- & DC- Methods**
Prof. Dr. R. Kaus
- Course 12: **Battery Cycling**
Dr. J. Odrobina
- 09:00 **First course**
- 09:50 **Changing course**
- 10:40 *Coffee Break*
- 11:10 **Changing course**
- 12:00 **Changing course**
- 12:50 *Lunch*
- 14:20 **Changing course**
- 15:10 **Changing course**
- 16:00 **End**

30th Kronacher Impedanztage (Kronach Impedance School) 2021

Program

31.05 – 02.06, 2021

Management

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Seminar Location

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