

## Theory Monday, April 16<sup>th</sup>

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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 into THALES XT Software Package**

Software Package for Electrochemical Applications & Data Evaluation

*M.Eng. E. Schmidt & B.Sc. A. Lau*

19:00 *Dinner & Social Evening*

## Practical Courses Tuesday, April 17<sup>th</sup>

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**Practical Courses** (rotating through the courses in groups)

Course 1: **Understanding Alternative Solar Cell Concepts – The Application of Intensity Modulated Photo Spectroscopy in Combination with EIS + fitting**

*Dr. M. Multerer*

Course 2: **Combined Impedance and Spectro-Electrochemical Absorbance Measurements Applied on Conductive Polymers**

*Dr. C. A. Schiller*

Course 3: **Sequencing procedures (i.e. for battery cycling) and polarisation methods**

*Dr. B. Röseler & B.Sc. A. Lau*

Course 4: **Artefacts in EIS Measurements**

*Dr. W. Strunz*

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**

*Prof. Dr. R. Kaus & M.Eng. E. Schmidt*

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, April 18<sup>th</sup>

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### Practical Courses (rotating through the courses in groups)

- Course 7: **Photo Current Spectroscopy (CIMPS-pcs) Applied on Monolithic-, Organic-, and Dye Sensitized Solar Cells**  
*Dr. M. Multerer*
- Course 8: **Optical Impedance Spectroscopy: Dynamic Electrochromic Transmittance/Reflectance (CIMPS-dtr)**  
*Dr. C. A. Schiller*
- Course 9: **Remote Scripting & Battery Cycling by Multiplexer Application**  
*Dr. B. Röseler*
- Course 10: **Handling changing states during EIS measurements**  
*Dr. W. Strunz*
- Course 11: **Coating & Laminate Testing by Means of Combined AC- & DC- Methods**  
*Dr. J. Hollaender*
- Course 12: **Parallel measurements on single cells of battery and fuel cell stacks.**  
*S. Fröba*

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**

# Kronach Impedance Days 2018

**PRELIMINARY Program**

Changes to program may occur on purpose

April 16<sup>th</sup> – 18<sup>th</sup>, 2018

### Management

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### Seminar Location

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