

# Online Seminar and Training Course on Broadband Dielectric and Electrochemical Impedance Spectroscopy

October 5-7, 2021

**Novocontrol Technologies**

## Including

- Basics of Ion and Electron Transport in Solids
- Ion Transport in Nanostructured Materials: Bulk and Interfacial Processes
- Dynamics in Geometrically Confined Systems
- Electrode Polarisation and Electrochemical Double Layer Formation
- Characterisation of Processes in Modern Electrochemical Cells (Batteries, Supercapacitors, Fuel Cells)
- Latest Developments in Instrumentation
- Discussion of individual measurement results and problems encountered during experiments

## Preliminary Schedule

Time	Lecturer	Topic
<b>Tuesday, October 5, 2021</b>		
13.30 – 13.45	B. Roling, F. Kremer	Introduction, Welcome, Organisational Issues
13.45 – 15.30	B. Roling	Basic Introduction to Broadband Dielectric and Impedance Spectroscopy (for participants with little or no experience)
13.45 – 15.30	F. Kremer	Introduction to Broadband Dielectric Spectroscopy (for participants with more experience)
15.30 – 16.00		Coffee Break
16.00 – 17.30		Hands-on Experience and Discussions: Participants present their measurement tasks, samples, available results, problems encountered, suggested solutions and open questions
<b>Wednesday, October 6, 2021</b>		
8.30 – 10.00		Hands-on Experience and Discussions
10.00 – 11.00	F. Kremer	Glassy Dynamics in Low-Molecular Weight and Polymeric Systems
11.00 – 12.30		Hands-on experience and Discussions
12.30 – 13.30		Lunch break
13.30 – 14.30	B. Roling	Materials Characterisation: Analysis of Charge Transport and Electrochemical Processes
14:30 – 15.30		Hands-on Experience and Discussions
15.30 – 16.00		Coffee Break
16.00 – 17.30		Hands-on Experience and Discussions
<b>Thursday, October 7, 2021</b>		
8.30 – 10.00		Hands-on Experience and Discussions
10.00 – 11.00	D. Wilmer	New Developments in Instrumentation
11.00 – 12.30		Hands-on Experience and Discussions
12.30 – 12.45	B. Roling, F. Kremer	Closing Remarks and Farewell

## Organization

### Participation

- Presentation and discussions meetings will take place online.
- Participants will need a computer with complete audio/video equipment (headphones recommended) and a decent internet connection.

### Preparing the training

Based on our experience with previous trainings, we consider the opportunity for discussing and solving individual issues occurring in the field of broadband dielectric spectroscopy (BDS) and electrochemical impedance spectroscopy (EIS) the most valuable aspect. We, therefore, encourage all participants to prepare their problems and results for presentation, collect questions, and supply, if possible, this information to the organizers well before the training.

### Venue

This time, the course will take place online exclusively, with all participants connected by their computers.

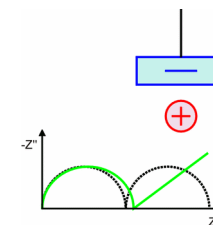
### Fees

1.200,00 € for industrial attendants

550,00 € for academic attendants

### Registration (deadline: September 13, 2021)

Please register using the [registration form](#). We also kindly ask you to fill our [questionnaire for attendees](#) and submit the filled form to the address given.



**novocontrol** Technologies

Novocontrol Technologies GmbH & Co. KG  
 Aubachstr. 1  
 56410 Montabaur  
 Germany  
 Phone: +49 2602 9196690  
 Fax: +49 2602 91966933  
 e-mail: novo@novocontrol.de  
 web: <http://www.novocontrol.de>