



GESELLSCHAFT DEUTSCHER CHEMIKER



# Polymers: from Structure to Function

Biennial Meeting of the GDCh-Division  
of Macromolecular Chemistry

September 11 – 13, 2016 · Halle (Saale)



MARTIN-LUTHER  
UNIVERSITÄT  
HALLE-WITTENBERG

[www.gdch.de/makro2016](http://www.gdch.de/makro2016)



This year's conference focus is **"Molecular organization in polymers: functional self assembly"**.

New materials require a profound control of molecular order caused by interactions between polymer chains and their environment. As the use of polymers as functional materials often requires the implementation of additional properties not present within the initial monomer, designed molecular interactions are an asset to control structure formation of polymers and polymeric nanocomposites.

This meeting will address the self-assembly of functional polymers in bulk, in solution and at interfaces. The introduction of dynamic ordering principles within supramolecular polymers, biomimetic polymers and interfaces will be discussed, together with a special focus dedicated to graphene/nanocomposites, their interfacial ordering within polymers, as well as their final function.

The conference aims at bringing together experts from both academia and industry to present and discuss novel ideas, applications, latest breakthroughs, developments, opportunities, and challenges of self-assembly principles in polymers.

The scope of the conference covers all aspects of **Polymer-Self-Assembly** with a special focus on the synthesis of polymers, the assembly and ordering of supramolecular polymers, the molecular organization within (graphene)-nanocomposites, as well as the resulting functional aspects with applications in materials and devices.

### ORGANISING COMMITTEE

<b>C. Barner-Kowollik</b>	Karlsruhe/DE
<b>W. H. Binder</b>	Halle (Saale)/DE, Chairman
<b>D. Hinderberger</b>	Halle (Saale)/DE
<b>J. Kressler</b>	Halle (Saale)/DE
<b>G. Langstein</b>	Leverkusen/DE
<b>R. Schönfeld</b>	Düsseldorf/DE
<b>U. S. Schubert</b>	Jena/DE

**Sunday, September 11, 2016**

Stadthaus, Marktplatz 2

- 15:00 **Registration**
- 16:00 **WELCOME  
OPENING REMARKS**
- 16:30 **HERRMANN-STAUDINGER-PREIS**  
**A Polymer Chemistry of Graphene and Graphene Nanoribbons**  
K. Müllen, Mainz/DE
- 17:30 **RAIMUND-STADLER-PREIS**  
**Conjugated polymers made simple: new syntheses, defect analyses and high performance materials for organic electronics**  
M. Sommer, Freiburg/DE
- 18:00 **RAIMUND-STADLER-PREIS**  
**Polyphosphoesters and -amides: degradable alternatives to classic polymers with precise structural control**  
F. R. Wurm, Mainz/DE
- 18:30 **Cages + Springs: Merging Nanoscale Metallosupramolecular Assemblies with Polymers**  
J. A. Johnson, Cambridge/US
- 19:15 **Get together**

### INFORMATION FOR AUTHORS

For your presentation we provide a PC and a data beamer. Indicated lecture times (30 minutes; 25 minutes; 15 minutes) include 5 minutes discussion – chairmen are strictly asked to keep presentation on time.

### POSTER

The poster list confirmed by the Scientific Committee is available on the internet in mid August at

[www.gdch.de/makro2016](http://www.gdch.de/makro2016).

The poster session will take place in the foyer in front of the lecture hall. The best posters will be awarded.

Poster format: Portrait A0

Monday, September 12, 2016

Melanchthonianum, Universitätsplatz 8-9

- 8:30 **Isoporous Block Copolymer Membranes and their Formation**  
V. Abetz, Hamburg/DE
- 8:55 **Catalysis: from Structure to Function in Polyurethane Chemistry**  
F. Richter, Leverkusen/DE, K. Jurkschat, Dortmund/DE
- 9:10 **Stimuli-responsive polymers and their application in fiber reinforced plastics**  
K. Koschek, Bremen/DE
- 9:25 **Supramolecular architectures for functional materials**  
H.-W. Schmidt, Bayreuth/DE
- 9:50 **Processing of Cellulose, Chitin and Chitosane from Ionic Liquids: Access to „Green“ High-Performance Carbon Fibers and Materials for Medical Applications**  
M. R. Buchmeiser, Stuttgart/DE, F. Hermanutz, J. Spörl, A. Ota, Denkendorf/DE
- 10:15 Coffee break
- 10:45 **Synthetic Two-Dimensional Soft Materials**  
X. Feng, Dresden/DE
- 11:10 **Novel 2D carbon materials via electron beam induced conversion of conjugated monolayers**  
A. Turchanin, Jena/DE
- 11:35 **Graphene as a promising material for fuel cell catalysis**  
M. Bron, Halle (Saale)/DE
- 12:00 **Functionalized Graphene and Molecular Carbon Composites**  
R. Mülhaupt, Freiburg/DE, F. Beckert, M. Stürzel, I. Lazar, Freiburg/DE
- 12:25 Lunch break
- 13:30 **Utilizing concepts of mechanics, transport, and assembly in Nature – towards responsive materials**  
L. Korley, Cleveland/US, S. Alexander, L. Matolyak, S. Monemian, Cleveland/US
- 14:00 **Self-healing nanocomposites based on catalysts immobilized carbon nanomaterials**  
D. Döhler, Halle (Saale)/DE, S. Rana, A. Shaygan Nia, W. H. Binder, Halle (Saale)/DE
- 14:15 **Mechanofunctional polymers: Luminescent probes & catalytic triggers**  
R. P. Sijbesma, Eindhoven/NL, J. M. Clough, T. L. J. van Daal, Eindhoven/NL

Monday, September 12, 2016

Melanchthonianum, Universitätsplatz 8-9

- 14:45 **Self-healing metallo-supramolecular polymers**  
U. S. Schubert, Jena/DE, S. Bode, M. Enke, M. D. Hager, Jena/DE
- 15:10 **Light-Responsive Aqueous Microgels**  
A. Pich, Aachen/DE, D. Phua, Aachen/DE
- 15:25 Coffee break
- 16:00 **A polymer/colloid approach for controlling plasmonic coupling**  
A. Fery, Dresden/DE, R. Alvarez-Puebla, Tarragona/ES, C. Hanske, San Sebastian/ES, R. Höller, Dresden/DE, M. Karg, Düsseldorf/DE, T. König, C. Kuttner, Dresden/DE, L. Liz-Marzan, San Sebastian/ES, M. Mayer, Dresden/DE, N. Pazos-Perez, Tarragona/ES, A. Steiner, Dresden/DE, M. Tebbe, Toronto/CA
- 16:25 **Prefreezing at the epitaxial polymer-graphite interface**  
A.-K. Flieger, Halle (Saale)/DE, M. Schulz, E. Urinov, Halle/DE, T. Henze, Berlin/DE, T. Thurn-Albrecht, Halle/DE
- 16:40 **Entanglements and intra-crystalline chain dynamics as constraints for polymer crystallization**  
K. Saalwächter, Halle (Saale)/DE, A. Seidlitz, R. Kurz, T. Thurn-Albrecht, Halle (Saale)/DE
- 17:05 **Interface-Enforced Complexation between Copolymer Blocks**  
F. Plamper, Aachen/DE, A. Steinschulte, Aachen/DE
- 17:20 **Poster Session**
- Lecture Hall A
- 18:00 **MITGLIEDERVERSAMMLUNG (General Meeting)**  
**Tagesordnung**
- Begrüßung und Annahme der Tagesordnung
  - Bericht des Vorstands
  - Mitgliederentwicklung und Finanzlage der Fachgruppe
  - Hochschullehrer-Nachwuchs-Workshop 2015
  - Beteiligung der Fachgruppe am GDCh-Wissenschaftsforum 2015/2017
  - K-Messe
  - Neue Homepage
  - Hochschullehrerführer
  - Entlastung des Vorstands
  - Ergänzungswahlen zum Vorstand
  - Verschiedenes
- 19:30 **SOCIAL EVENING – DINNER**  
Guided tour through the museum  
(Landesmuseum für Vorgeschichte)

Tuesday, September 13, 2016

Melanchthonianum, Universitätsplatz 8-9

- 8:30 **Biocompatible nanoparticles with a polypeptide shell by emulsion polymerisation**  
M. Klapper, Mainz/DE, F. Karagöz, Mainz/DE, S. Parekh, Mainz/DE, R. Dorresteijn, Mainz/DE, K. Müllen, Mainz/DE
- 8:45 **Collective Functions of Biopolymers in Mineralizing Systems**  
I. M. Weiss, Saarbruecken/DE
- 9:10 **Polymers and Crystals A happy marriage towards hierarchical self assembled materials**  
H. Cölfen, Konstanz/DE
- 9:35 **From primary structures to precise functions: Learning how to solve problems**  
H. G. Börner, Berlin/DE
- 10:00 Coffee break
- 10:30 **New Poly(sulfobetaine)s as Versatile Stimuli-Responsive Building Blocks**  
A. Laschewsky, Potsdam/DE, V. Hildebrand, N. M. Nizardo, E. Schönemann, E. Wischerhoff, Potsdam/DE, P. Müller-Buschbaum, C. M. Papadakis, N. Vishnevskaya, Garching/DE
- 10:55 **Phase Transition and Aggregation Behavior of Poly(Acrylamide-co-Acrylonitrile) Copolymer**  
A. Bertin, Berlin/DE, A. Asadujjaman, Berlin/DE
- 11:10 **Dynamic Bio(in)organic Supramolecular Polymers in Water**  
P. Besenius, Mainz/DE
- 11:35 **Facile Strategies for Self-Assembling Polymer Architectures: One-Pot Synthesis of Block- and Multiblock Structures**  
H. Frey, Mainz/DE, A. H. E. Müller, D. Leibig, E. Grune, Mainz/DE
- 12:00 Lunch break
- 13:00 **Smart ampholytic block copolypeptides**  
H. Schlaad, Potsdam/DE, J. Sun, Qingdao/CN, P. Cernoch, Prague/CZ, A. Völkel, Potsdam/DE, Y. Wei, Qingdao/CN, J. Ruokolainen, Aalto/FI
- 13:25 **Polyampholytic Homo- and Block Copolymers: Synthesis and Solution Self-Assembly**  
F. H. Schacher, Jena/DE

Tuesday, September 13, 2016

Melanchthonianum, Universitätsplatz 8-9

- 13:40 **Synthesis of functional smart block copolymer structures**  
D. Kuckling, Paderborn/DE, A. Döring, W. Birnbaum, A. Wycisk, S. Schmücker, X. Yu, Paderborn/DE
- 13:55 **Inducing  $\beta$  phase crystallinity in poly(vinylidene fluoride) via synthetic strategies or nanoparticle formation**  
S. Beuermann, Clausthal-Zellerfeld/DE, N. Golzari, Clausthal-Zellerfeld/DE, S. Wolff, M. Türk, Karlsruhe/DE
- 14:10 Coffee break
- 14:30 **Directing Macromolecular Material Design with Light**  
C. Barner-Kowollik, Karlsruhe/DE
- 14:55 **Polymer Self-assembly on Surfaces: When Surface Patterning Meets Dewetting**  
K. Lienkamp, Freiburg/DE, V. T. Widyaya, W. Hartleb, Freiburg/DE
- 15:10 **Directing Polymer Growth by DNA Origami Towards Polymer Origami**  
T. Weil, Mainz/DE, Y. Wu, Y. Tokura, Mainz/DE
- 15:35 **Self-Assembled Bioinspired Nanocomposite Materials**  
A. Walther, Aachen/DE
- 16:00 **POSTER PRIZES AND CLOSING**

## SOCIAL PROGRAMME

Sunday, September 11, 2016

19:15

## Get-together

Stadthaus Halle  
 Marktplatz 2  
 06108 Halle (Saale), Germany  
 (free of charge, booking required)

Monday, September 12, 2016

19:30

## Conference Dinner

Landesmuseum für Vorgeschichte Halle  
 Richard-Wagner-Str. 9  
 06114 Halle (Saale), Germany  
 € 30,- for participants,  
 € 15,- for students  
 Buffet, three drinks included (booking required)

Monday, September 12, 2016

20:00

## Guided tour through the museum

(available in English and German)

Landesmuseum für  
 Vorgeschichte Halle  
 Richard-Wagner-Str. 9  
 06114 Halle (Saale), Germany

Price € 7,- per person  
 (booking required)



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## CONFERENCE VENUE

## Sunday

## Stadthaus

Marktplatz 2, 06120 Halle (Saale), Germany

## Monday and Tuesday

## Martin Luther University Halle-Wittenberg

Melanchthonianum  
 Universitätsplatz  
 06120 Halle (Saale), Germany

## TRAVEL INFORMATION

## By car

Coming from Berlin: Freeway A9 until exit Halle/Saale. Via the B100 the city center can be reached. Only valet parking is available (parking zone in whole center)!.

Coming from Leipzig: Freeway A14 until exit Halle/Peißen. Via the B100 the city center can be reached. Only valet parking is available (parking zone).

Coming from Munich: Freeway A9 until junction Schkeuditzer Kreuz and then via freeway A14 until exit Peißen. Via the B100 the city center can be reached.

Coming from Magdeburg: Freeway A14 until exit Tornau or exit Peißen. Via the B100 the city center can be reached.

Coming from Göttingen: Freeway A38 until junction Halle-Süd and then via A143 until exit Teutschenthal or Halle-Neustadt. Via the B80 the city center can be reached.

**Please note the limited parking places downtown. During the conference, the use of public transport is recommended.**

## By plane

The airport Leipzig/Halle is situated near the freeway junction Schkeuditzer Kreuz (A9/A14) between Leipzig and Halle.

The train station airport Leipzig/Halle is situated directly under the Check-In-Terminal. Every hour intercity trains and regional trains (RE) come to Halle (Saale) main station. Running time approx. 12 min.

The ticket you need is a two zone ticket of the MDV (Mitteldeutscher Verkehrsverbund).

## By train

Halle (Saale) main station can be reached directly through several intercity train lines, e.g. from Bremen, Berlin, Leipzig, Cologne and the Ruhr area. The main station is southeast of the city center.

**DB BAHN** „Deutsche Bahn“ offers attractive conditions for traveling to GDCh-events. Further information can be found on following link [en.gdch.de/railway](http://en.gdch.de/railway)

## Public Transportation

By tram: From Halle (Saale) main station different tram lines lead to the center of Halle (Saale). (Marketplace, running time approx. 8-10 min). You reach the Melanchthonianum at best by tram line 7 with direction Halle-Kröllwitz (tram station “Neues Theater”). It starts from the train station, track A.

Further information can be found at [www.havag.com](http://www.havag.com)

## REGISTRATION

Please register online no later than **August 15, 2016**.

[www.gdch.de/makro2016](http://www.gdch.de/makro2016)

GESELLSCHAFT DEUTSCHER CHEMIKER e.V.

**Claudia Birkner – Congress Team**

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Internet: [www.gdch.de](http://www.gdch.de)

All tickets and congress papers (incl. book of abstracts) will be handed to the participants upon check-in at the registration desk. Participants are requested to wear their congress badges at all times for identification and admittance to the conference rooms.

Upon online registration, payment by credit card or direct debit (only with German bank account) or bank transfer (free of bank commission) is possible. The invoice will be sent to you automatically.

**Gesellschaft Deutscher Chemiker e.V.**

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**Code 520052 / Makro 2016**

## CANCELLATION

Requests for cancellation made prior to **August 15, 2016** will be subject to a € 25,- administration fee. After that date the full amount of the invoice has to be paid. Requests for refund will not be accepted; however, registration may be transferred to another member of your organisation. In this case please send a note to GDCh, congress team.

**If the conference is cancelled for whatever reason, fees paid will be refunded. Further recourse is excluded.**

## REGISTRATION FEES\*)

GDCh-member and member of EuCheMS-member societies	250,- €
Member, unemployed or retired	125,- €
Non-member	300,- €
Student **) (GDCh-member and member of EuCheMS-member societies)	30,- €
Student **) (Non-member)	75,- €
Gold member (from 50 years GDCh membership)	free of charge

## Social Programme\*\*\*)

## Get-together

Sunday, September 11, 2016

free of charge

## Social Evening

Monday, September 12, 2016

for participants

30,- €

for students

15,- €

## Guided tour museum

Monday, September 12, 2016

7,- €

\*) The registration fees are not liable to value added tax (tax exemption additional § 4 Nr. 22a UStG.)

\*\*) Valid Student ID required

\*\*\*) These positions included 19% VAT.

If fees are paid in advance, but after **August 28, 2016**, we kindly ask participants to show proof of payment when claiming their tickets and congress papers at the registration desk. Payments in advance only.

**▶ BEVERAGES**

Coffee, tea and soft drinks will be provided for free during the breaks.

**▶ LUNCH**

Lunch can be taken at the University Mensa or in the city center (Individual payment).

**▶ ACCOMMODATION**

Rooms are reserved in various hotels throughout the city. (see [www.gdch.de/makro2016](http://www.gdch.de/makro2016))

**The customers will be held accountable for non-occupancy of reserved rooms.**

**▶ COPYRIGHT PERMISSION**

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**▶ DEADLINES**

July 31, 2016	Cancellation of participation
August 15, 2016	Personal registration (extended)



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**INFORMATION BEFORE AND AFTER  
▶ THE CONFERENCE**

Gesellschaft Deutscher Chemiker e.V.  
(German Chemical Society)

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Executive director: Professor Dr. Wolfram Koch

Registered Charity No.: VR 4453 · Registergericht Frankfurt am Main

**INFORMATION AND REGISTRATION DURING  
▶ THE CONFERENCE**

On Sunday the registration desk will be in the foyer of the Stadthaus

Marktplatz 2

06108 Halle (Saale)

On Monday and Tuesday the registration desk will be located in the “Medienraum 1” of the

Melanchthonianum

Universitätsplatz 9

06099 Halle (Saale)

**Opening hours:**

Sunday, September 11, 2014	15:00 - 18:00
Monday, September 12, 2014	8:00 – 16:00
Tuesday, September 13, 2014	8:00 – 14:00

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