

## Invitation and Program

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# 13<sup>th</sup> IPF Colloquium Smart Polymer Systems

**November 22, 2018**

Development of smart systems is a major challenge in many fields of technology. Materials research is indispensable in this respect providing fundamentals and opening up new promising paths to future systems.

In the colloquium, both scientists from the IPF and renowned colleagues from outside give an overview of their activities in the field and report on latest approaches and findings – ranging from multifunctional and responsive materials, self-assembly and bioinspired systems, towards theoretical investigations and the development of systems for specific applications e.g. in electronics, microsystems and medicine/bioengineering.

The lectures as well a number of posters shall inspire discussions and give impetus to future research in this interdisciplinary field.

IPF Colloquia have been held since 1994 to highlight fields the institute is engaged in. They are a platform to verify the institute's position in the field, and to intensify scientific exchange and stimulate new collaborations.

The colloquia are supported by the Association of Supporters of the IPF.

## Program

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**9:15**    **Opening and Chair: Andreas Fery**

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**9:20**    **Andreas Walter (Universität Freiburg)**

Autonomous, out-of-equilibrium self-assemblies and material systems with programmable lifetimes

**9:50**    **Brigitte Voit (IPF Dresden)**

Multifunctional and responsive hydrogels as selective compartments and actuators in microfluidic applications

**10:15**   **Igor Kulić (CNRS, ICS, Strasbourg)**

Animated soft matter- Nanomotor driven materials and the wheel within

**10:45**   **Julian Thiele (IPF Dresden)**

Design of microscopic polymer materials by droplet microfluidics and additive manufacturing for cell-free biotechnology

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<b>11:10</b>	<b>Coffee break</b>
	<b>Chair: Jens-Uwe Sommer</b>
<b>11:30</b>	<b>Mike Hamsch (TU Dresden, cfaed)</b> Engineering solution processes for high-performance organic devices
<b>12:00</b>	<b>Sven Wießner (IPF Dresden/ TU Dresden)</b> Functional elastomeric composites as smart materials
<b>12:25</b>	<b>Marina Grenzer (IPF Dresden)</b> Versatile photomechanical response of azobenzene polymers
<b>12:50</b>	<b>Break / Lunch buffet</b>
	<b>Chair: Carsten Werner</b>
<b>13:45</b>	<b>Martin Kaltenbrunner (Universität Linz)</b> Bioinspired soft electronics and machines
<b>14:15</b>	<b>Yixin Zhang (TU Dresden, B CUBE)</b> Electronic conductive hydrogel
<b>14:45</b>	<b>Volker Busskamp (TU Dresden, CRTD)</b> Engineering functional human neuronal circuits
<b>15:15</b>	<b>Franziska Lissel (IPF Dresden)</b> Metal centers as functional components in electronic materials
<b>15:40</b>	<b>Coffee break</b>
	<b>Chair: Brigitte Voit</b>
<b>16:10</b>	<b>Aránzazu Del Campo (Leibniz-NIM Saarbrücken)</b> Optoregulated cellular microenvironments
<b>16:40</b>	<b>Manfred Maitz (IPF Dresden)</b> Adaptive hydrogels to control blood coagulation and inflammation
<b>17:05</b>	<b>Elisha Krieg (IPF Dresden)</b> Stimuli-responsive DNA-acrylamide copolymers for selective catch and release of molecular targets
<b>17:30</b>	<b>Closing</b> Poster show and discussions

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# Information and Organization

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## Venue

Leibniz-Institut für Polymerforschung Dresden e. V.  
Hohe Straße 6, 01069 Dresden

## Registration

Participation is free of charge, however, registration is necessary.  
To register please send the enclosed form to [kubis@ipfdd.de](mailto:kubis@ipfdd.de)

## Posters

Please submit your applications for poster contributions  
by October 24, 2018 by sending a one-page abstract to [kubis@ipfdd.de](mailto:kubis@ipfdd.de)  
For guidelines concerning the abstract format please consult the website.

## Scientific Committee

Brigitte Voit, Andreas Fery, Carsten Werner  
(Leibniz Institute of Polymer Research Dresden and  
Technische Universität Dresden)

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