

# Contents

BCAS Vol.28 No.2 2014



**118-125** “Global science needs teamwork”, Presidents of the Chinese Academy of Sciences and the Max-Planck-Gesellschaft agree in a joint interview.

---



**128-129** “Having a diversity of backgrounds and approaches is one source of inspiration”, Axel Mosig, who spent five years at the CAS-MPG Partner Institute for Computational Biology in Shanghai, shares his experience in this merging of research cultures.

---



**133-137** Exploratory Round Table Conference: The initiation and growing path of a platform for new sciences.

---

## DIALOGUE

- 118 Global Science Needs Teamwork**  
The Presidents of both research organisations, Prof. Bai Chunli and Prof. Peter Gruss, look back on the development of earlier decades, highlight past success and future challenges - and underline the importance of cooperation.

## INTERVIEWS

- 126 Commuting between Two Worlds**  
**130 Crystalise in CAS-MPG Chemistry**

## PERSPECTIVES

- 133 Exploratory Round Table Conferences: In Search of Emerging New Sciences**

### PHYSICS & ASTRONOMY

- 138 The First Building Blocks of the Universe**

### BIOLOGY & MEDICINE

- 142 Age Touches a Nerve**  
**146 Deep Sleep in the Arctic**

### MATERIAL & TECHNOLOGY

- 150 Wafer-Thin Electronics**



**138-153**

What are CAS and MPG scientists doing in cooperation? Let's go to their labs and follow their explorations.



**154-197**

Leaders of CAS-MPG Partner Groups and CAS-Max Planck Research Groups report their discoveries.



**198-203**

How we got here: Cherished memories from the CAS-MPG cooperation.

## SPECTRUM

- 154 Intensification Mechanism and Processes
- 157 Carbon of Magical Structures
- 161 Seeing Faces and History through Human Genome Sequences
- 166 Tracking the Evolution of Galaxies
- 169 Interactions between Macromolecules and Membranes
- 173 Plant Nutrient Stealers
- 176 Exploring Novel Functional Compounds

- 181 Model Catalysts from Single Crystals to Nanocrystals/Nano-Composites
- 183 At Tip of Scanning Probe
- 185 Systems Biology Research of Photosynthesis for Greater Crop Yields
- 188 Population Genomics Research of Human Admixture History and Local Adaptation
- 192 More than Skin Deep – Understand Skin Biology by Means of Dermatogenomics
- 195 Living Matter in Crash Test: How Biomolecules Respond to Mechanical Forces

## CHERISHED MEMORIES

- 198 *"Per aspera ad astra"*
- 199 Witness the Growth
- 200 Friendship Tied with the Milky Way
- 201 *"Unforgettable Impressions"*
- 202 *"As You Sow, So Will You Reap"*
- 203 Cooperation Catalyses