



# PhD position



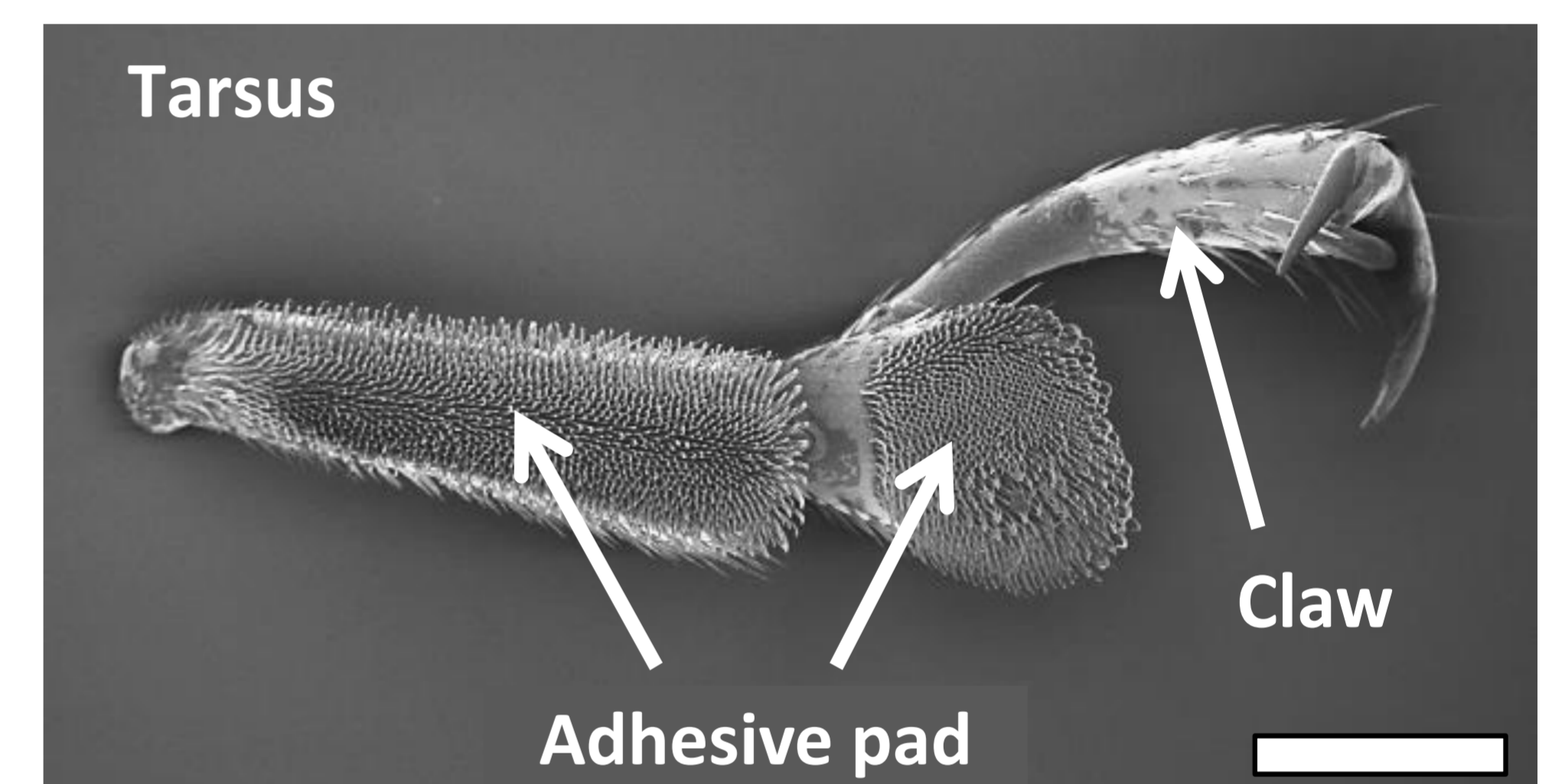
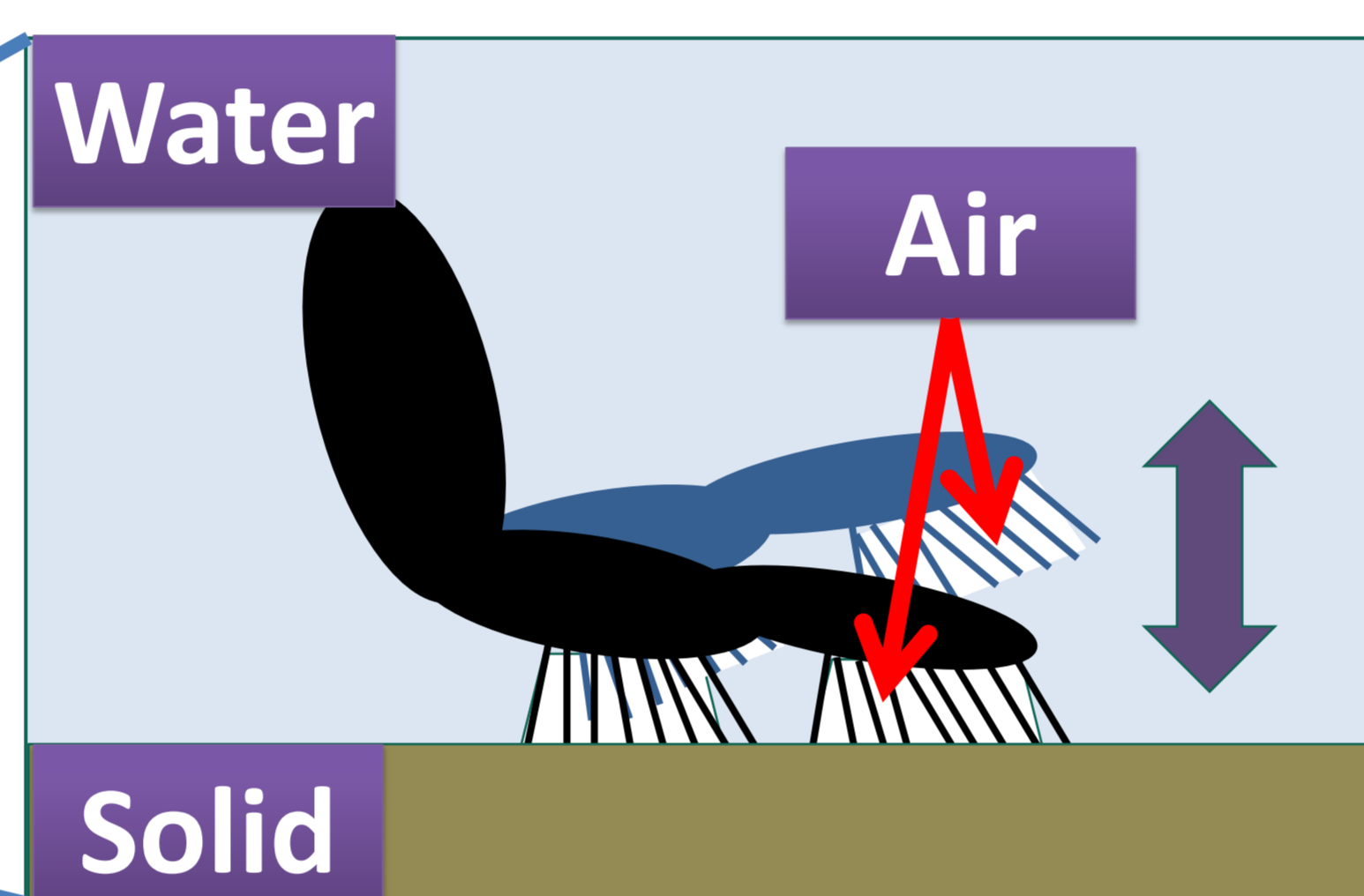
Max-Planck Institute for Polymer Research

## Air Mediated Reversible Underwater Adhesion: from Beetles to Bioinspired Materials

Many animals are able to climb smooth surfaces using adhesive pads on their feet. Some beetles, like the common ladybird beetle, can adhere to very wet surfaces and even walk underwater, despite being terrestrial. It is not well understood how these insects manage to use their adhesive pads in such wet conditions and in this project we will investigate the mechanisms involved in their underwater locomotion. Furthermore, we plan to use artificial mimics in order to test our findings in a more controlled way. The findings will be used for designing new materials suitable for strong reversible adhesion underwater.



Hosoda and Gorb. Proc.R.Soc.B 2012



We are looking for a highly motivated candidate with hands-on lab experience and background in chemistry/physics/biology or materials science. The work will include force measurements, advanced optical and confocal microscopy and synthesis of soft bioinspired materials.

We offer a multidisciplinary vibrant environment with cutting edge experimental facilities. We emphasize collaborative work, exchange of knowledge and development of new ideas. The project will be in collaboration with the Tel-Aviv University, Israel. Research exchange will be offered.

Prof. Hans-Jürgen Butt, Head of Physics at Interfaces Department

Dr. Michael Kappl, Group leader

Dr. Thomas Endlein, Project leader

Dr. Bat-El Pinchasik, Project co-leader

Contact us via email or visit us at the Max-Planck Institute for Polymer science:

Bat-El Pinchasik

Max Planck Institute for Polymer Research

Department of Physics at Interfaces

Ackermannweg 10

55128, Mainz

Phone: +49 (0) 6131-379-204

The Max Planck Society intends to increase its proportion of female scientists and expressly encourages women to apply. Applicants with disabilities are preferred if equally qualified