

Ladies and Gentlemen, dear Colleagues, dear Friends

It is a pleasure for me to hold this Laudation for this year's laureate of the Fritz Kohlrausch Preis: Dr. Daniel Kiener from the Department of Materials Physics at the Montanuniversität Leoben, which is also associated with the Erich Schmid Institute of Materials Science of the Austrian Academy of Sciences.

Daniel Kiener was born in 1977 in Gmunden, Upper Austria. I met him first as a student of Materials Science in Leoben, where he joined my group for a short time as a student worker. This was also the time we occasionally met for a climbing exercise at the Häuslberg in Leoben; Very soon I realized that he is not only an ambitious climber but also a brilliant student flying at higher games.

While I was away from Leoben between 2003-2009, Daniel Kiener made a remarkable scientific career. His Diploma work with Prof. Pippan was followed by his PhD thesis with Prof. Gerhard Dehm, who, by the way should actually give this Laudation. But unfortunately he could not come today.

Already in his diploma thesis, he started to study size effects when deforming metallic samples. As Physicists we are of course used to confinement effects from several fields, but usually we associate them with atomic dimensions. In metals now, the strength of materials depends on the size at the micrometer length scale. "Smaller is stronger" is meanwhile a well-known slogan in the micromechanics community to express one of the key-findings namely that the strength of a metallic sample increases as its size decreases. In his PhD thesis, Dr. Kiener contributed to a better understanding of crystal plasticity in small dimension by developing sophisticated in-situ mechanical tests within a scanning electron microscope.

After his PhD-thesis he continued research in this field, but moving from the micro- to the nanoscale. First, in 2008 he spent some time at the Ludwig-Maximilians-University of Munich with Prof. Tina Scheu where he got skilled in Transmission Electron Microscopy. In 2009 he was granted a Erwin Schrödinger Stipendium which he used to spend another year in Berkely in the group of Prof. Minor. During this stay he contributed significantly to the development of cutting-edge in-situ TEM for the study of size dependent plasticity down to sample sizes of few hundred micrometers only. Three papers, one in Acta Materialia, one in Nature Materials and one in Nano Letters are the outcome from this period in Berkely, and will be the topic of his price winner talk this afternoon.

In 2010 Daniel Kiener returned back to Leoben as an Assistant Professor with qualification agreement, where he since then continues his work on small scale plasticity.

A few more facts and figures:

- 43 publications with an H-index of 14 and more than 800 citations
- 2011 Top cited author in Materials Science and Engineering A
- 2010 Outstanding symposium paper, MRS Fall Meeting, Symposium P
- 2010 Best oral contribution, 12th YUCOMAT conference
- 2009 Acta Materialia Student Award
- 2009 Herbert-Depisch prize 2009 of the Austrian Society for Metallurgy and Materials ASMET
- 2009 Josef-Krainer promotion prize of the Country of Styria for the PhD thesis
- 2008 Erwin-Schrödinger foreign exchange scholarship of the Austrian Science fund FWF
- 2004 Awarded with the Rektor-Platzer ring from Montanuniversität Leoben

Ladies and Gentleman, I'm proud that the Fritz Kohlrausch Preis of the Austrian Physical Society goes to Leoben for the second time, after Heinz Krenn in 1986. Daniel Kiener is a very promising young scientist and a certainly condign awardee. I am sure we will hear about him also in the future. Daniel, I wish you all the best for your future life and a successful and satisfying scientific work.