

## Prof. Dr. Christine Selhuber-Unkel

University of Kiel  
Institute for Materials Science  
Kaiserstr. 2  
D-24143 Kiel  
Phone: +49 (0) 431-880-6198  
Fax: +49 (0) 431-880-6290  
E-Mail: [cse@tf.uni-kiel.de](mailto:cse@tf.uni-kiel.de)



Born 21/11/1980, Landshut, Germany

### SCIENTIFIC VITA

Since 2011 Professor (W2) for Biocompatible Nanomaterials, University of Kiel  
2010-2011 Assistant Professor (W1) for Biocompatible Nanomaterials, University of Kiel and Emmy Noether Group Leader  
2009-2010 Postdoc, Zoological Institute, University of Kiel (Prof. Leippe)  
2007-2009 Postdoc, Niels Bohr Institute, University of Copenhagen, Denmark (Prof. Oddershede)  
2007-2008 Adjunkt pædagogikum, i.e. Danish Higher Education Teaching Training  
2007 Postdoc, University of Heidelberg & MPI for Metals Research (Prof. J. Spatz)  
2003-2006 Dr. rer. nat. in Physics, Department Biophysical Chemistry, University of Heidelberg, Prof. J. Spatz, „summa cum laude“  
2002-2003 Master degree studies and Master thesis in Physics, Uppsala University, Sweden  
2001-2002 Research assistant, German Cancer Research Center (DKFZ), Heidelberg  
2000-2002 Master studies in Physics, University of Heidelberg

### AWARDS

**2014** Feodor-Lynen-fellowship for experienced scientists of the Alexander-von-Humboldt-Foundation for a research stay at Cornell University **2013** ERC Starting Grant **2008** Otto-Hahn-Medal of the Max-Planck-Society **2007** Dieter-Rampacher-Prize of the Max-Planck-Society **2006** Wilma-Moser-Prize from the University of Heidelberg **2001-2003** Scholarship from the German National Academic Foundation (Studienstiftung) **2000-2003** Scholarship from the Bavarian Education Program for Excellent Students

### FIELDS OF INTEREST

Nano- and microstructured biomaterials, adaptive cell-inspired materials, biophysics of cells (mechanotransduction, cell adhesion, intracellular dynamics).

### SUPERVISION

Supervision of 4 completed PhD theses, 10 completed Master theses, 13 completed Bachelor theses. Currently supervising: 2 Postdocs, 5 PhD students, 2 Master students, 1 Bachelor student. Several years of teaching experience: materials science, (bio)physics.

### CURRENTLY FUNDED PROJECTS

DFG, SFB 1261, project “3D-Imaging of Magnetically Labeled Cells” (2016-2020)  
DAAD, PhD stipend (2014-2017)  
ERC Starting Grant (2013-2018)

## PUBLICATIONS (5 selected)

C. Lamprecht, M. Taale, I. Paulowicz, H. Westerhaus, C. Grabosch, A. Schuchardt, M. Mecklenburg, M. Böttner, R. Lucius, K. Schulte, R. Adelung, C. Selhuber-Unkel (2016): A tunable scaffold of microtubular graphite for 3D cell growth. ***ACS Applied Materials & Interfaces***, 8: 14980-14985.

L. F. Kadem, M. Holz, K. G. Suana, Q. Li, C. Lamprecht, R. Herges, C. Selhuber-Unkel (2016): Rapid Reversible Photoswitching of Integrin-mediated Adhesion at the Single-Cell Level. ***Advanced Materials***, 28: 1799-1802.

J. F. Reverey, J.-H. Jeon, H. Bao, M. Leippe, R. Metzler, C. Selhuber-Unkel (2015) Superdiffusion dominates intracellular particle motion in the supercrowded cytoplasm of pathogenic *Acanthamoeba castellanii*. ***Scientific Reports***, 5: 11690.

Selhuber-Unkel, C., Erdmann, T., López-García, M., Kessler, H., Schwarz, U. S. and Spatz, J. P. (2010) Cell adhesion strength is controlled by intermolecular spacing of adhesion receptors. ***Biophysical Journal***, 98:543-551.

Selhuber-Unkel, C., Zins, I., Schubert, O., Sönnichsen, C. and Oddershede, L. B. (2008). Quantitative optical trapping of single gold nanorods. ***Nano Letters***, 8(9):2998-3003.