Christian Bleiholder

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DEGREES, HONORS, AND EDITORSHIPS

7/2007 D.Sc. in Chemistry, *summa cum laude*. University of Heidelberg, Heidelberg, Germany and German Cancer Research Center, Heidelberg, Germany. (Supervisor: Rolf Gleiter & Sandor Suhai).
6/2004 M. Sc. in Chemistry, *summa cum laude*. University of Heidelberg, Heidelberg.

Young Scientist Virtual Special Issue, Journal of Physical Chemistry B (2019).
Emerging Investigator, American Society for Mass Spectrometry (2017).
NSF CAREER Award, National Science Foundation (2017).
Young Scientist Feature, International Journal of Mass Spectrometry (2x in 2016).
Citation for Highly Cited Research, International Journal of Mass Spectrometry (2016).
Emerging Investigator, Royal Society of Chemistry/Analyst (2016).
First Year Assistant Professor Award, Florida State University (2014).
Postdoctoral Research Award, American Chemical Society, Physical Chemistry Division (2011).
Feodor-Lynen Research Fellowship, Alexander-von-Humboldt Foundation (2008–2011).
Dissertation Fellowship, Helmholtz Association of German Research Centres (2004–2007).
Procter & Gamble Award, Department of Chemistry, University of Heidelberg (2000).
Editorial Board member, Analytical Science Advances (2020–present).

ACADEMIC APPOINTMENTS

2004-2007	Graduate Student, University of Heidelberg (Rolf Gleiter)&German Cancer Research Center (Sandor Suhai)
2008-2013	Postdoctoral Researcher, University of California at Santa Barbara (Michael T. Bowers)
2013-2019	Assistant Professor, Florida State University
2019-	Associate Professor, Florida State University

CURRENT EXTRAMURAL GRANTS

National Science Foundation, 4/1/2017 – 3/31/2022, $564,592.00
National Institutes of Health, 8/1/2019 – 7/31/2023, $1,321,840

CURRENT RESEARCH INTERESTS

- Glycan shield of viral spike proteins & structural heterogeneity of glycoprotein complexes
- Tandem-trapped ion mobility spectrometry / mass spectrometry
- Elucidation of protein structures with ion mobility spectrometry

SELECTED RESEARCH PUBLICATIONS (49 TOTAL)

Liu, C., Ridgeway, M. E., Winfred, J. S. R. V., Polfer, N. C., Lee, J., Theisen, A., Wootton, C. A., Park, M. A. & Bleiholder, C. (2021). Tandem-trapped ion mobility spectrometry/mass spectrometry coupled with ultraviolet photodissociation. *Rapid Communications in Mass Spectrometry* 35, e9192.

Park, M. A., Ridgeway, M. E., Bleiholder, C., & Liu, F. C. (2020). Tandem Ion Mobility Spectrometer. *US Patent 10,794,861*, Bruker Daltonics & Florida State University.

Liu, F. C., Cropley, T. C., Ridgeway, M. E., Park, M. A., & Bleiholder, C. (2020). Structural Analysis of the Glycoprotein Complex Avidin by Tandem-Trapped Ion Mobility Spectrometry–Mass Spectrometry (Tandem-TIMS/MS). *Analytical Chemistry* 92, 4459-4467.

Bleiholder, C., Liu, F. C. & Chai, M. (2020). Comment on Effective Temperature and Structural Rearrangement in Trapped Ion Mobility Spectrometry. *Analytical Chemistry* 92, 16329-16333.

Bleiholder, C., & Liu, F. C. (2019). Structure Relaxation Approximation (SRA) for Elucidation of Protein Structures from Ion Mobility Measurements. *Journal of Physical Chemistry B* 123, 2756-2769.

Kirk, S. R., Liu, F. C., Cropley, T., Carlock, H., & Bleiholder, C. (2019). On the preservation of non-covalent peptide assemblies in a tandem-trapped ion mobility spectrometer-mass spectrometer (TIMS-TIMS-MS). *Journal of The American Society for Mass Spectrometry* 30, 1204-1212.

Chai, M., Young, M. N., Liu, F. C., & Bleiholder, C. (2018). A transferable, sample-independent calibration procedure for trapped ion mobility spectrometry (TIMS). *Analytical Chemistry* 90, 9040-9047.

Liu, F. C., Ridgeway, M. E., Park, M. A., & Bleiholder, C. (2018). Tandem trapped ion mobility spectrometry. *Analyst*, *143*, 2249-2258.

Liu, F. C., Kirk, S. R., & Bleiholder, C. (2016). On the Structural Denaturation of Biological Analytes in Trapped Ion Mobility Spectrometry - Mass Spectrometry. *Analyst*, *141*, 3722-3730.