Sven H. Behrens

Senior Academic Professional in the School of Physics

sbehrens@gatech.edu, 404.432.0156

Campus location: Howey Physics Building, Room W-207

https://physics.gatech.edu/user/sven-behrens

Google Scholar



EARNED DEGREES:

Ph.D. in Environmental Sciences Swiss Federal Institute of Technology (ETH)	1999 Zürich, Switzerland
Diploma (M.S.) in Physics University of Göttingen	1995 Göttingen, Germany
Vordiplom (B.S.) in Physics University of Tübingen, Germany	1991 Tübingen, Germany

EMPLOYMENT/AFFILIATION:

Georgia Tech, School of Physics Senior Academic Professional	01/2024 – present
Exponent, Inc. (Scientific and engineering consulting) Managing Scientist	12/2020 – 08/2023
Georgia Tech, School of Chemical & Biomolecular Engineering Associate Professor	07/2007 – 08/2020 (tenured in 2013)
BASF, Germany Industrial Research Associate in the division of polymer research	10/2001 – 10/2006
University of Chicago Postdoctoral Researcher at the James Franck Institute	12/1999 – 09/2001

TEACHING INTERESTS:

Dr. Behrens's teaching portfolio includes fundamental physics classes and seminars on professional development, scientific communication, and responsible conduct of research. During his previous appointment in Chemical and Biomolecular Engineering, Dr. Behrens also taught a variety of engineering courses covering chemical process principles, chemical engineering thermodynamics, and transport phenomena.

RESEARCH INTERESTS:

Dr. Behrens's research interests focus on soft condensed matter systems, and specifically on interfacial phenomena in colloidal suspensions, emulsions, and foams.

RECENT PUBLICATIONS:

1. S. Wang, X. Zong, X. Du, S.H. Behrens, J.C. Meredith: *Oil-Coated Bubble Flotation for Separating Hydrophilic Particles from Water*. Recycling 11, 12-1 – 12-15 (2026).
2. O. Okesanjo, G. Aubry, S.H. Behrens, H. Lu, J.C. Meredith: *Bubble-particle dynamics in multiphase flow of capillary foams in a porous micromodel*. Lab on a Chip 23, 4434-4444 (2023).
3. O. Okesanjo, J.C. Meredith, S.H. Behrens: *Effect of Shear on Pumped Capillary Foams Foams.* Industrial & Engineering Chemistry Research 62, 7031-7039 (2023).
4. M. Mujica, A. Mohabir, P.P. Shetty, W.R. Cline, D. Aziz, M.T. McDowell, V. Breedveld, S.H. Behrens, M.A. Filler: *Programming Semiconductor Nanowire Composition with Sub-100 nm Resolution via the Geode Process*. Nano Letters 22, 554-560 (2022).
5. O. Okesanjo, J.C. Meredith, S.H. Behrens: *Structure-Property Relationship in Capillary Foams.* Langmuir 37, 10510-10520 (2021).
6. A. Sharma, M.A. McDonald, H.B. Rose, Y.O. Chernoff, S.H. Behrens, A.S. Bommarius: *Modeling Amyloid Aggregation Kinetics: A Case Study with Sup35NM*. Journal of Physical Chemistry B 125:4955-4963 (2021).
7. S.H. Behrens: *Oil-Coated Bubbles in Particle Suspensions, Capillary Foams, and Related Opportunities in Colloidal Multiphase Systems,* invited review article in Current Opinion in Colloid and Interface Science 50, 101384-1 – 101384-16 (2020).
8. O. Okesanjo, M. Tennenbaum, A. Fernandez-Nieves, J.C. Meredith, S.H. Behrens: *Rheology of Capillary Foams*, Soft Matter 16, 6725-6732 (2020).
9. M. Mujica, G. Tutuncuoglu, P.P. Shetty, A.T. Mohabir, E.V. Woods, V. Breedveld, S.H. Behrens, M.A. Filler: *The Geode Process: Hollow Silica Microcapsules as a High Surface Area Substrate for Semiconductor Nanowire Growth, A*CS Applied Nano Materials 3, 905-913 (2020).
10. J. Lee, Z.-L. Zhou, S.H. Behrens: *Interfaces Charged by a Nonionic Surfactant*, Journal of Physical Chemistry B 122, 6101-6106 (2018).
11. A. Sharma, S.H. Behrens, Y.O. Chernoff, A.S. Bommarius: *Modulation of the Formation of Aβ- and Sup35NM-Based Amyloids by Complex Interplay of Specific and Nonspecific Ion Effects*, Journal of Physical Chemistry B 122, 4972-4981 (2018).
12. S.C. Wang, Y. Zhang, J.C. Meredith, S.H. Behrens, M.K. Tripathi, K.C. Sahu: *The Dynamics of Rising Oil-Coated Bubbles: Experiments and Simulations*, Soft Matter 14, 2724-2734 (2018).