

Curriculum vitae

Martin F. Haase, PhD

Assistant Professor

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Date of birth: August 26th, 1981

Nationality: German



Education\Professional Experience

- 2016-now **Assistant Professor**, Rowan University, Department of Chemical Engineering, *Founder of Nanoscale Interfacial Engineering Laboratory*
- 2014-2016 **DFG-Fellow**, University of Pennsylvania (UPenn), Department of Chemical and Biomolecular Engineering, [Prof. Kate Stebe](#), [Prof. Daeyeon Lee](#), *Bicontinuous Pickering emulsions by Solvent Transfer Induced Phase Separation (STRIPS)*
- 2012-2014 **Postdoc**, New York University (NYU), Center of Soft Matter Research, [Prof. J. Brujic](#), *Coupling phase separation with surface active materials to form complex emulsions*
- 2008-2011 **PhD (Dr. rer. nat.) in Physical Chemistry**, Max Planck Institute of Colloids and Interfaces, Germany, [Prof. Helmuth Möhwald](#), [Prof. Dmitry Shchukin](#), *Modification of Nanoparticle-Surfaces for Emulsion Stabilization and Encapsulation of Active Molecules for Anti-Corrosive Coatings*, grade: Magna cum laude
- 2004-2008 **Diploma (Dipl. Ing. (FH), Bachelor equivalent) in Process Engineering**, Beuth University, Berlin, Germany, Supervisors: [Prof. E. Löwe](#), [Prof. S. Enders](#), Thesis: *Experimental Analysis of the Solubility of Nonpolar Drugs in water*, carried out at TU-Berlin, Department of Thermodynamics and Thermal Process Engineering, grade 1.5
- 2002-2004 Basic studies environmental engineering, University of Applied Sciences Bingen, Germany
- 2001-2002 Civiliane service (social year), BHW Wetterau, Germany, home for handycapped people
- 1999-2001 Diploma from secondary school for university admission, KBS Bad Nauheim, Germany

Industry Internships

- 2007 Lurgi GmbH (Air Liquid), Frankfurt/Main, Germany, Harald Koempel, 3 months, *Basic engineering for a large scale "Methanol to Propylene" Plant*, [link](#)
- 2006 Uhde Inventa Fischer (ThyssenKrupp), Berlin, Germany, Udo Mühlbauer, 2 months, *Basic engineering large scale polyester plant and operation of a polylactide pilot plant*, [link](#)
- 2005 Silica Verfahrenstechnik, Berlin, Germany, 2 months, *Construction of gas adsorption plants*, [link](#)

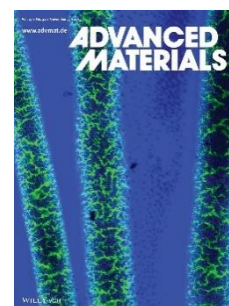
- 2004 HME-Regelungstechnik, Bad Kreuznach, Germany, 2 months, *Fine metal processing*
 2002 Umweltamt (Environmental agency), Department of water surveillance, Frankfurt/Main, Germany, 2 months, *sample drawing, analytical contaminant determination*, [link](#)

Teaching

- 2017 *Course* (1 semester) entitled “Principles of Chemical Processes II”, Rowan University
 2015 *Summer program seminar speaker* for high school students, [Marylin Huff](#), [UPenn](#)
 2014-2015 *Personal Youtube.com channel*: 17 self-made teaching videos about colloid and interface science with more than 20,000 views and 42,000 watched minutes, [link](#)
 2014 *Supervision and project assignment* for a 4 month internship of a high school student, [NYU](#)
 2013-2014 *Mini course lecturer* (3 seminars) for high school teachers, Math for America, [Noah Heller](#), New York, [link](#)
 2014 *Seminar speaker* for art students, [Prof. Pablo Garcia](#), [School of Visual Arts](#), New York
 2012-2014 *Teaching volunteer* for K-12 students, [Ben Dubin Thaler](#), [Biobus.org](#), New York, [link](#)
 2009-2009 *Teaching assistant* Physical Chemistry, [Prof. Bechmann](#), [University of Potsdam](#), Germany
 2007-2008 *Teaching assistant* Thermodynamics, 4 semesters, [Prof. Seifert](#), [Beuth University Berlin](#), Germany
 2007 *Teaching assistant* in Engineering Mechanics, 1 semester, [Prof. Kleinschrodt](#), [Beuth University Berlin](#), Germany

Publications

- 2017 M.F. Haase, K. J. Stebe, D. Lee, *Bijel Membranes for Separation Processes*, **in preparation**
 2016 [M.F. Haase](#), N.S. Mood, K. J. Stebe, D. Lee, *In Situ Mechanical Testing of Nanostructured Bijel Fibers*, **ACS Nano**, [10, 6, 6338](#)
 2015 [M.F. Haase](#), K. J. Stebe, D. Lee, *Continuous Fabrication of Hierarchical and Asymmetric Bijel Microparticles, Fibers and Membranes by Solvent Transfer-induced Phase Separation (STRIPS)*, **Advanced Materials**, [27, 44, 7065](#)
 Article was featured on the **front cover** of *Advanced Materials*, [link](#)
 2014 [M.F. Haase](#), J. Brujic, *Tailoring of High-Order Multiple Emulsions by the Liquid–Liquid Phase Separation of Ternary Mixtures*, **Angewandte Chemie International Edition**, [126, 44, 11987](#)
 Article was highlighted in **Science**, [346, 6205, 51](#)
 2013 L.L. Pontani, [M.F. Haase](#), I. Raczkowska, J. Brujic, *Immiscible lipids control the morphology of patchy emulsions*, **Soft Matter**, [9, 7150-7157](#)
 2012 [M.F. Haase](#), D. Grigoriev, H. Moehwald, D.G. Shchukin, *Development of Nanoparticle Stabilized Polymer Nanocontainers with High Content of the Encapsulated Active Agent and Their Application in Water Borne Anti Corrosive Coatings*, **Advanced Materials**, [24, 18, 2429-2435](#)
 2012 D.O. Grigoriev, [M.F. Haase](#), N. Fandrich, A. Latnikova, D.G. Shchukin, *Emulsion Route in Fabrication of Micro- and Nanocontainers for Biomimetic Self Healing and Self Protecting Functional Coatings*, **Bioinspired, Biomimetic and Nanobiomaterials**, [1, 101-116](#)



- 2012 O. Zech, M.F. Haase, T. Zemb, H. Moehwald, *Froth Flotation via Microparticle Stabilized Foams*, **Colloid Surface A**, [413, 2–6](#)
- 2011 M.F. Haase, *Modification of Nanoparticle Surfaces for Emulsion Stabilization and Encapsulation of Active Molecules for Anti-Corrosive Coatings*, **University of Potsdam**, [link to thesis](#)
- 2011 M.F. Haase, D. Grigoriev, H. Moehwald, B. Tiersch, D.G. Shchukin, *Nanoparticle Modification by Weak Polyelectrolytes for pH Responsive Pickering Emulsions*, **Langmuir**, [27\(1\), 74–82](#)
- 2010 M.F. Haase, D. Grigoriev, H. Moehwald, B. Tiersch, D.G. Shchukin, *Encapsulation of Amphoteric Substances in a pH Responsive Pickering Emulsion*, **Journal of Physical Chemistry C**, [114, 17304–17310](#)

Patents

- 2016 D. Lee, J. Doh, M. Kim, M.F. Haase, G. Duan Polyelectrolyte microcapsules and methods of making the same, Filed 2016, **US Provisional Patent: US 15/097,874**
- 2016 M.F. Haase, K.J. Stebe, D. Lee, *Tailoring of Bijel Materials by Mass Transfer-Induced Liquid-Liquid Phase Separation of Ternary Mixtures*, Filed 2015, **US Provisional Patent: 62/169,295**, nonprovisional patent filing in April 2016
- 2015 J. Brujic, M. F. Haase, Higher Order Multiple Emulsions - **US Patent 20,160,051,954**

Awards

- 2015 University of Pennsylvania Nano Day, **Animation award**, [link](#)
- 2015 5th International Colloids Conference **Poster price**, Amsterdam, Netherlands, [link](#), [link to poster](#)
- 2014 Research Fellowship from **DFG (German Research Foundation)**, 16 months, [link to award](#)

Peer reviewing

ACS Nano, Nature Nanotechnology, Nature Communications, Angewandte Chemie Int. Ed., Langmuir, ACS Applied Materials & Interfaces, Journal of Materials Science

Invited Presentations and conference presentations

- 2016 M.F. Haase, K. Stebe, D. Lee, *In Situ Mechanical Testing of Bijel Fibers*, AIChE Annual Meeting, San Francisco, USA, presentation
- 2016 M.F. Haase, K. Stebe, D. Lee, *Bijel derived, fouling resistant and catalytic ultra-/micro- filtration membranes for advanced water treatment applications*, AIChE Annual Meeting, San Francisco, USA, presentation
- 2015 **Invited:** M.F. Haase, *Mass transfer induced phase separation of ternary mixtures: From onion emulsions to asymmetric bijel structures and the analysis of their mechanical properties*, **Dr. Paul Clegg, University of Edinburgh**, Scotland

- 2015 M.F. Haase, K. Stebe, D. Lee, *Tailoring of Bijel fibers and membranes by mass transfer-induced liquid-liquid phase separation of ternary mixtures*, **ECIS Conference**, Bordeaux, France, presentation, [link](#)
- 2015 M.F. Haase, J. Brujic, *Tailoring of High-Order Multiple Emulsions by the Liquid-Liquid Phase Separation of Ternary Mixtures*, **ECIS Conference**, Bordeaux, France, poster
- 2015 M.F. Haase, K. Stebe, D. Lee, *Tailoring of Bijel fibers and membranes by mass transfer-induced liquid-liquid phase separation of ternary mixtures*, **5th International Colloids Conference**, Amsterdam, Netherlands, presentation
- 2015 M.F. Haase, J. Brujic, *Tailoring of High-Order Multiple Emulsions by the Liquid-Liquid Phase Separation of Ternary Mixtures*, **5th International Colloids Conference**, Amsterdam, Netherlands, poster, [link](#)
- 2015 M.F. Haase, K. Stebe, D. Lee, *Tailoring of Bijel fibers and membranes by mass transfer-induced liquid-liquid phase separation of ternary mixtures*, **ACS Colloids Conference**, Pittsburgh, USA, presentation
- 2014 M.F. Haase, J Brujic, *General principles of ternary phase separation into multilayered emulsions facilitate wide applications*, **ACS Colloid and Surface Science Symposium**, Philadelphia, USA, presentation, [link](#)
- 2014 M.F. Haase, J Brujic, *Ternary liquid mixtures control the multiplicity, shape and internal structure of emulsion droplets*, **APS March Meeting**, Denver, USA, presentation
- 2014 L.L. Pontani, D Bargteil, M.F. Haase, J Brujic, *Liquid domains of lipid monolayers on the surface of oil-in-water emulsions*, **APS March Meeting**, Denver, USA, presentation
- 2014 Y. Zhang, LL Pontani, M.F. Haase, L Feng, R Sha, N Seeman, J Brujic, P Chaikin, *Programmable Sequential Assembly in a DNA Functionalized Emulsion System*, **APS March Meeting**, Denver, USA, presentation
- 2013 M.F. Haase, J. Brujic, *Controlling the architecture of emulsion droplets: phase separation of immiscible liquids and interfacial rigidification*, **Evolution of Colloidal Matter**, New York, USA, poster, [link](#)
- 2011 M.F. Haase, *Modification of Nanoparticle Surfaces*, **Helmuth Möhwald Festival**, Potsdam, presentation, [link](#)
- 2011 M.F. Haase, *Encapsulation of Active Molecules for Anti-Corrosive Coatings*, **ECIS**, Berlin, presentation, [link](#)
- 2011 O. Zech, M.F. Haase, D. Shchukin, T. Zemb, H. Moehwald, *Partial hydrophobization of rare earth oxide microparticles and their recovery via foam flotation*, **ECIS**, Berlin, poster, [link](#)
- 2010 M.F. Haase, *Particle Stabilized Emulsions: New Strategies for Particle Hydrophobization*, **ECIS**, Prague, poster, [link](#)
- 2009 M.F. Haase, *Application of Inhibitor loaded Mesoporous TiO₂ Particles in Active Anti-Corrosive Coatings* **Zsigmondy Kolloquium**, Bayreuth, poster