Curriculum Vitae

PERSONAL INFORMATION

Family name, First name:	Haase, Martin
ORCID:	0000-0002-1355-151X
Date of birth:	August 26th, 1981
Nationality:	German
URL for web site:	www.martinhaase.com

• EDUCATION

2008 - 2011 PhD in Physical Chemistry (magna cum laude), PhD thesis defended on October 25th, 2011
Max Planck Institute of Colloids and Interfaces, Potsdam, Germany
PhD supervisor: Prof. Dr. Dr. h.c. Helmuth Möhwald

2004 - 2008 Dipl. Ing. (FH) in Process Engineering, Beuth University, Berlin, Germany

• CURRENT POSITION

2022 – present Associate Professor
Department of Chemistry, Van't Hoff Laboratory of Physical and Colloid Chemistry, Debye Institute for Nanomaterials Science, Utrecht University, The Netherlands

• PREVIOUS POSITIONS

2019 – 2022 Assistant Professor (tenure track)
Department of Chemistry, Utrecht University

2016 – 2019 Assistant Professor (tenure track)
Department of Chemical Engineering, Rowan University, Glassboro NJ, USA

2014 – 2016 DFG-postdoctoral fellow
Depart. of Chemical and Biomolecular Engineering, University of Pennsylvania, USA

2012 – 2014 Postdoctoral scholar
Department of Physics, Center of Soft Matter Research, New York University, USA

• FELLOWSHIPS AND AWARDS

2021 – 2026 NWO-Vidi Grant, Bijel templated membranes for molecular separations, € 800,000

2019 – 2024 ERC-Starting Grant, 3D Flow Analysis in Bijels Reconfigured for Interfacial Catalysis (3D-FABRIC), € 1,900,000.

2019 – 2020 ACS-PRF award, American Chemical Society, Liquid fibers for continuously operated liquid-liquid extraction, $ 110,000.

2018 – 2020 NSF-CAREER award, National Science Foundation USA, Nanostructured Particle Stabilized Bicontinuous Emulsions: Formation Principles, Structure-Function Relationships and Biphasic Transport, $ 500,000 (*ended after 2 years due to my move to the Netherlands*)

2018 – 2019 Rowan University Seed Fund, University internal competitive proposal, $10,000.

2015 University of Pennsylvania Nano Day, Animation award

2015 5th International Colloids Conference, Best poster prize, Amsterdam, Netherlands

2014 – 2016 DFG-Postdoctoral fellowship, Formation of monodisperse, non-spherical emulsion droplets by particle stabilizers and membrane-forming molecules, 16 months, € 43,000

• TEACHING ACTIVITIES

2021 – present BSc course (140 students) – Thermodynamics, Utrecht University, Netherlands

2020 – present MSc course (20 students) – Transport phenomena, Utrecht University

2020 – 2021 BSc course (30 students) – Introduction to chemistry, Utrecht University College

2017 – 2018 BSc course (25 students) – Fluid dynamics, Rowan University, USA

2017 – 2019 BSc course (30 students) – Material and energy balances, Rowan University, USA

- **ORGANISATION OF SCIENTIFIC MEETINGS**

2022 Main organizer (co-organizers Daniela Kraft and Roel Dullens), symposium: "From Colloids to Viruses: Soft Matter Comes Alive", 150 participants, https://sites.google.com/view/colloids-to-viruses/home / Utrecht, The Netherlands

- **INSTITUTIONAL RESPONSIBILITIES**

2019 – now Faculty member, Utrecht University/ Chemistry/ Netherlands

2016 – now Postdoc, PhD & MSc Student Advisor, Utrecht University/ Chemistry/ Netherlands
*My first PhD student at Utrecht University will defend his thesis in March 2023 after publishing 4 publications[51,53,54,63] already, one in **Advanced Materials**. One of his papers made the front cover of the Soft Matter journal. He received the award for the best poster on the 51st General Assembly of the German Colloid Society. Currently, I am supervising 7 PhD and 7 MSc students. 4 MSc students have completed their thesis. I supervised 2 postdocs, who now work for Philips or are on maternity leave.*

2016 – 2019 Faculty member, Rowan University/ Chemical Engineering/ USA

2016 – 2019 PhD Student Advisor, Rowan University/ Chemical Engineering / USA
*At Rowan University 2 of my PhD students defended their PhD thesis.[90,91] Each of them published 3 publications based on their research in journals such as **Advanced Functional Materials** and **Small** [50,51,54-57]. My first PhD graduate received the outstanding graduate student award and now works as a researcher for DuPont. My second PhD graduate received the award for excellent PhD studies and is a postdoc at Auburn University.*

2022 – now Organizer of weekly seminar "Nanoseminar" (Presentations of PhD students/external speakers invited from SCMB, FCC, Nanophotonics groups at Utrecht University)

2022 Committee member "Vision of the Future of the Chemistry Department" / Utrecht University / Sub discussion group leader "Teaching, Training, and Supervision"

2021 – now Chair of the Physical and Colloid Group's tech-staff meeting / Utrecht University

2021 Member of search committee for tenure-track Assistant Professor position at the Physical and Colloid Chemistry Group / Utrecht University (Committee head Willem Kegel)

2017 – 2019 Chair of the Chemical Engineering (ChE) Seminar series at Rowan University. Organization of schedules and seminar for external speakers.

2017 – 2019 Organizer of the ChE graduate student research seminar at Rowan University. Organization of weekly presentations by graduate students to the department.

- **REVIEWING ACTIVITIES**

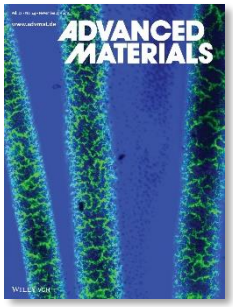
2020 Proposal reviewer Deutsche Forschungsgemeinschaft (DFG) (German Research Foundation)

2019 Dutch Research Council (NWO) Reviewer: Physics@Veldhoven subcommittee Statistical Physics and soft condensed matter

2019 National Science Foundation (NSF) Reviewer and Panelist, Program: Particulate and Multiphase Processes, Panel: FY19 UNS Interfacial transport panel (PMP Panel 1)

2010 – now Journal reviewer: Nature Nanotechnology, ACS Nano, Nature Communications, Angewandte Chemie Int. Ed., Langmuir, ACS Applied Materials & Interfaces, Journal of Materials Science, Soft Matter, Journal of Chemical Engineering, Journal of Physical Chemistry C, Current Opinion in Colloid and Interface Science

Top 10 publications (without PhD adviser)



[1] **Haase, M. F.**, Stebe, K. J., & Lee, D. (**2015**). Continuous fabrication of hierarchical and asymmetric bijel microparticles, fibers, and membranes by solvent transfer-induced phase separation(STRIPS). ***Advanced Materials***, *27*(44),7065. (link to article, front cover, press releases 1, 2, 3, 4, 5, 6)

[2] **Haase, M. F.**, & Brujic, J. (**2014**). Tailoring of high-order multiple emulsions by the liquid–liquid phase separation of ternary mixtures. ***Angewandte Chemie***, *126*(44), 11987-11991. (link to article, Editor's choice in *Science*)

[3] **Haase, M. F.**, Jeon, H., Hough, N., Kim, J. H., Stebe, K. J., & Lee, D. (**2017**). Multifunctional nanocomposite hollow fiber membranes by solvent transfer induced phase separation. ***Nature communications***, *8*(1), 1-7. (link to article, press releases 1, 2, 3, 4, 5, 6, 7)

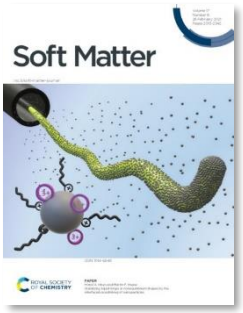
[4] Khan, M. A., Sprockel, A. J., Macmillan, K. A., Alting, M. T., Kharal, S. P., Boakye-Ansah, S., & **Haase, M. F.** (**2022**). Nanostructured, Fluid-Bicontinuous Gels for Continuous-Flow Liquid–Liquid Extraction. ***Advanced Materials***, 2109547. (link to article, press releases 1, 2, 3, 4, 5, 6)

[5] Kharal, S. P., Hesketh, R. P., & **Haase, M. F.** (**2020**). High-Tensile Strength, Composite Bijels through Microfluidic Twisting. ***Advanced Functional Materials***, *30*(35), 2003555. (link to article)

[6] Kharal, S. P., & **Haase, M. F.** (**2022**). Centrifugal assembly of helical bijel fibers for pH responsive composite hydrogels. ***Small***, *18*(11), 2106826. (link to article)

[7] Tran, L., Kim, H. N., Li, N., Yang, S., Stebe, K. J., Kamien, R. D., & **Haase, M. F.** (**2018**). Shaping nanoparticle fingerprints at the interface of cholesteric droplets. ***Science advances***, *4*(10), (link to article)

[8] Siegel, H., Sprockel, A. J., Schwenger, M. S., Steenhoff, J. M., Achterhuis, I., de Vos, W. M., & **Haase, M. F.** (**2022**). Synthesis and Polyelectrolyte Functionalization of Hollow Fiber Membranes Formed by Solvent Transfer Induced Phase Separation. ***ACS applied materials & interfaces***, *14*(38).(link to article)



[9] Khan, M. A., & **Haase, M. F**. (**2021**). Stabilizing liquid drops in nonequilibrium shapes by the interfacial crosslinking of nanoparticles. ***Soft Matter***, *17*(8), 2034. (link to article, front cover)

[10] Boakye-Ansah, S., Khan, M. A., & **Haase, M. F.** (**2020**). Controlling surfactant adsorption on highly charged nanoparticles to stabilize bijels. ***The Journal of Physical Chemistry C***, *124*(23), 12417-12423. (link to article)

Other Peer Reviewed Journal Publications

2022 A.J. Sprockel, M.A. Khan, M. de Ruiter, M.T. Alting, K.A. Macmillan, M.F. Haase, Bijels with Uniform, Sub-Micron Features Formed Via a Single Channel Extrusion Technique that Enables Rapid Parameter Screening, preprint

2020 M.F. Haase, S. Boakye Ansah, G. Di Vitantonio, K.J. Stebe, and D. Lee, Bijels Formed by Solvent Transfer-induced Phase Separation, RSC book "Bijels: Bicontinuous Particle-stabilized Emulsions"

2019 Sanghak Cha, Hyun Gyu Lim, M.F. Haase, Kathleen J. Stebe, Gyoo Yeol Jung, Daeyeon Lee, *Enhancing Enzymatic Conversion of a Highly Water Insoluble Substrate Using Bicontinuous Interfacially Jammed Emulsion Gels (Bijels)*, **Scientific Reports**, link to article

2019 S. Boakye-Ansah, M. Schwenger, and M.F. Haase, *Designing Bijels formed by Solvent Transfer Induced Phase Separation with Functional Nanoparticles*, **Soft Matter**, *15*(16), 3379-3388, link to article

2019 L. Tran, M.F. Haase, *Templating interfacial nanoparticle assemblies via in-situ techniques*, **Langmuir**, 35 (26), 8584-8602, link to article

2018 G. Di Vitantonio, T. Wang, M.F. Haase, K. J. Stebe, D. Lee, *Robust Bijels for Reactive Separation via Silica-Reinforced Nanoparticle Layers*, **ACS Nano**, 13, 1, link to article

2017 G. Duan, M.F. Haase, K. Stebe, D. Lee, *One-Step Generation Salt-Responsive Polyelectrolyte Microcapsules via Surfactant Organized Interfacial Complexation in Emulsions*, **Langmuir,** DOI: 10.1021/acs.langmuir.7b01526

2017 L. Tran, M.O. Lavrentovich, G. Durey, A. Darmon, M.F. Haase, D. Lee, K.J. Stebe, R.D. Kamien, T.L.-Leon, *A change in stripes for cholesteric shells via anchoring in moderation*, **PRX**, 7, 041029

2016 M.F. Haase, N. Sharifi-Mood, D. Lee, K. J. Stebe In Situ Mechanical Testing of Nanostructured Bijel Fibers, **ACS Nano**, 10, 6, 6338–6344.

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 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

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

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

- **BOOK CHAPTER & PhD-THESIS**

2019 M.F. Haase, S. Boakye-Ansah, G.D. Vitantonio, K.J. Stebe and D. Lee, *Solvent Transfer Induced Phase Separation for Bicontinuous Pickering Emulsions*, Book Chapter in Bijels: *Bicontinuous particle-stabilized emulsions*, edited by Paul Clegg. **Royal Society of Chemistry**, link

2011 Modification of Nanoparticle Surfaces for Emulsion Stabilization and Encapsulation of Active Molecules for Anti-Corrosive Coatings, Max Planck Institute of Colloids and Interfaces, link

- **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, *Bijels and methods of making the same*, 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