

Dr. Olaf Nachtigall

Assistant Professor of Chemistry
The University of Alabama in Huntsville

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Professional Experience

08/2022 – Present Assistant Professor of Chemistry
The University of Alabama in Huntsville (USA)

01/2021 – 07/2022 Postdoctoral Research Fellow
University of California, Irvine (USA), Advisor: William J. Evans

05/2018 – 12/2020 Postdoctoral Research Fellow
University of Rochester (USA), Advisor: William D. Jones

Education

09/2013 – 01/2018 Doctoral Studies (Degree: Dr. rer. nat.)
Freie Universität Berlin (Germany), Advisors: Johann Spandl and Ulrich Abram

03/2016 – 07/2016 Visiting Researcher
Sorbonne Université, Paris (France), Advisor: Bernold Hasenknopf

10/2010 – 07/2013 Master's Studies (Degree: M. Sc.)
Freie Universität Berlin (Germany), Advisor: Rainer Haag

07/2011 – 06/2012 Visiting Student
Uppsala Universitet (Sweden), Advisor: Helena Grennberg

10/2007 – 08/2010 Bachelor's Studies (Degree: B. Sc.)
Freie Universität Berlin (Germany), Advisor: Rainer Haag

Grants, Awards & Honors

09/2023 New Faculty Research Award, The University of Alabama in Huntsville

01/2021 – 07/2022 Postdoctoral Fellowship of the Eddleman Quantum Institute

01/2019 – 12/2021 Feodor Lynen Fellowship of the Alexander von Humboldt-Stiftung

01/2018 Dissertation with Highest Honors (Summa Cum Laude), Freie Universität Berlin

03/2016 – 07/2016 Erasmus+ Grant of the European Union

02/2014 – 09/2016 Doctoral Scholarship of the Stiftung der Deutschen Wirtschaft

07/2013 Award for Outstanding Master Thesis, Freie Universität Berlin

04/2013 – 03/2016 Scholarship of the Ernst-Reuter-Gesellschaft

07/2011 – 06/2012 Erasmus Grant of the European Union

04/2009 – 06/2013 Scholarship of the Friedrich-Ebert-Stiftung

Teaching

F 2022 CH 331 – Organic Chemistry I (Student Instructor Evaluation Score: 4.67/5.00)

F 2022 CH 332 – Organic Chemistry II (Student Instructor Evaluation Score: 4.32/5.00)

F 2023 CH 401 – Inorganic Chemistry (Student Instructor Evaluation Score: 4.43/5.00)

SP 2024 CH 602 – Chemistry of Coordination Compounds (ongoing)

SP 2024 CH 705 – Chemistry of the Rare-Earth Elements (ongoing)

Outreach

- 10/2022 – Present ACS Science Coach for East Limestone High School
03/2023 – Present Judge at North Alabama Regional Science and Engineering Fairs
06/2023 – Present Mentor for Research and Creative Experience for Undergraduates Program

Mentored Students

- SP 2024 – Present Kristen M. Zuzga, Bachelor Student in Biology
SP 2024 – Present Shelley A. Phillips, Bachelor Student in Chemistry
F 2023 – Present Kenneth D. Figueroa-Baez, Bachelor Student in Chemistry
S 2023 – Present Samuel G. Arnold, Bachelor Student in Chemistry
SP 2024 – S 2023 Sydney J. Calhoun, Bachelor Student in Chemical Engineering
SP 2023 Noel C. Alexander, Bachelor Student in Chemistry
F 2022 – Present Yogesh LNU, Master Student in Chemistry
F 2022 – SP 2023 Natalie M. Farmer, Bachelor Student in Chemistry
F 2022 Lauren E. Grumbles, Bachelor Student in Chemistry

Affiliations

- 2023 – Present Member of the American Crystallographic Association (ACA)
2023 – Present Member of the Deutsche Gesellschaft für Kristallographie (DGK)
2020 – Present Member of the American Chemical Society (ACS)
2012 – Present Member of the Gesellschaft Deutscher Chemiker (GDCh)

Professional Service

- 2024 Chair of the ACS North Alabama
2024 Associate to the ACS Committee on Nomenclature, Terminology and Symbols
2023 Chair-Elect of the ACS North Alabama
2019 – Present Reviewer for the Journal of the American Chemical Society
2017 – Present Reviewer for ChemistrySelect
2014 – Present Translator for Angewandte Chemie

Publications

- 2023 15. “Phenylsilyl-Substituted Tetramethylcyclopentadienide Uranium Chemistry: Magnsocenenes vs Grignard Reagents”
J. Q. Nguyen,[†] **O. Nachtigall**,[†] Brynn N. Turpin, J. W. Ziller, W. J. Evans*
Organometallics **2023**, *42*, 3474–3482. DOI: 10.1021/acs.organomet.3c00420.
- 2021 14. “Iron-Based Dehydration Catalyst for Selective Formation of Styrene”
O. Nachtigall,* A. I. VanderWeide, W. W. Brennessel, W. D. Jones*
ACS Catal. **2021**, *11*, 10885–10891. DOI: 10.1021/acscatal.1c03037
- Featured as ACS Editors’ Choice**
13. “First-Row Transition Metals Complexes with Fused Oxazolidine (FOX) Ligands”
O. Nachtigall,* A. I. VanderWeide, W. W. Brennessel, W. D. Jones*
Z. anorg. allg. Chem. **2021**, *647*, 1442–1448. DOI: 10.1002/zaac.202100056

- 2021 12. “Development of sterically hindered siloxide-functionalized polyoxotungstates for the complexation of 5d-metals”
T. Auvray, **O. Nachtigall**, W. W. Brennessel, W. D. Jones, E. M. Matson*
Dalton Trans. **2021**, 50, 4300–4310. DOI: 10.1039/D1DT00256B
- 2019 11. “Consequences of ligand derivatization on the electronic properties of polyoxovanadate-alkoxide clusters”
B. E. Schurr, **O. Nachtigall**, L. E. VanGelder, J. Drappeau, W. W. Brennessel, E. M. Matson*
J. Coord. Chem. **2019**, 72,1267–1286. DOI: 10.1080/00958972.2019.1595605
10. “Transport and Electron Transfer Kinetics of Polyoxovanadate-Alkoxide Clusters”
A. M. Kosswattaarachchi, L. E. VanGelder, **O. Nachtigall**, J. P. Hazelnis, W. W. Brennessel, E. M. Matson,* T. R. Cook*
J. Electrochem. Soc. **2019**, 166, A464–A472. DOI: 10.1149/2.1351902jes
- 2018 9. “Organic Functionalization of Polyoxovanadate–Alkoxide Clusters: Improving the Solubility of Multimetallic Charge Carriers for Nonaqueous Redox Flow Batteries”
L. E. VanGelder, B. P. Petel, **O. Nachtigall**, G. Martinez, W. W. Brennessel, E. M. Matson*
ChemSusChem **2018**, 11, 4139–4149. DOI: 10.1002/cssc.201802029
8. “Versatile Organic Chemistry on Vanadium-based Multi-Electron Reservoirs”
O. Nachtigall,* J. Spandl
Chem. Eur. J. **2018**, 24, 2785–2789. DOI: 10.1002/chem.201800041
7. “Alcoholysis of Al₂(O^tBu)₆ - Synthesis and Crystal Structure of Al₉O₃(OEt)₂₁”
O. Nachtigall, T. Hirsch, J. Spandl*
Z. anorg. allg. Chem. **2018**, 644, 2–5. DOI: 10.1002/zaac.201700327
- 2017 6. “Functional Polyoxometalates from Solvothermal Reactions of VOSO₄ with Tripodal Alkoxides – A Study on the Reactivity of Different ‘Tris’ Derivatives”
O. Nachtigall, A. Hagenbach, J. Wiecko, D. Lentz, U. Abram, J. Spandl*
Dalton Trans. **2017**, 46, 509–516. DOI: 10.1039/C6DT03638D
- 2015 5. “[Fe₁₉] ‘Super-Lindqvist’ Aggregate and Large 3D Interpenetrating Coordination Polymer from Solvothermal Reactions of [Fe₂(O^tBu)₆] with Ethanol”
O. Nachtigall, M. Kusserow, R. Clérac, W. Wernsdorfer, M. Menzel, F. Renz, J. Mrozinski, J. Spandl*
Angew. Chem. Int Ed. **2015**, 54, 10361–10364. DOI: 10.1002/anie.201503647
4. “Solvates of Manganese Trichloride Revisited – Synthesis, Isolation, and Crystal Structure of MnCl₃(THF)₃”
O. Nachtigall, A. Pataki, M. Molski, D. Lentz, J. Spandl*
Z. anorg. allg. Chem. **2015**, 641, 1164–1168. DOI: 10.1002/zaac.201500106

- 2015 3. “Online monitoring the isomerization of an azobenzene-based dendritic bolaamphiphile using ion mobility-mass spectrometry”
L. H. Urner, B. N. S. Thota, **O. Nachtigall**, S. Warnke, G. von Helden, R. Haag,*
K. Pagel*
Chem. Commun. **2015**, 51, 8801–8804. DOI: 10.1039/C5CC01488C
- 2014 2. “Photoresponsive Switches at Surfaces Based on Supramolecular Functionalization with Azobenzene–Oligoglycerol Conjugates”
O. Nachtigall, C. Kördel, L. H. Urner, R. Haag*
Angew. Chem. Int. Ed. **2014**, 53, 9669–9673. DOI: 10.1002/anie.201403331
1. “Pyrene–Azobenzene Dyads and Their Photochemistry”
O. Nachtigall, R. Lomoth, C. Dahlstrand, A. Lundstedt, A. Gogoll, M. J. Webb,*
H. Grennberg*
Eur. J. Org. Chem. **2014**, 966–972. DOI: 10.1002/ejoc.201301301