

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

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

Undergraduate Teaching

CH 331 – Organic Chemistry I, SIE Scores: 4.67/5 (F '22)
CH 332 – Organic Chemistry II, SIE Scores: 4.32/5 (F '22)
CH 401 – Inorganic Chemistry, SIE Scores: 4.43/5 (F '23), 4.39/5 (F '24)

Graduate Teaching

CH 602 – Chemistry of Coordination Compounds
CH 632 – Physical Organic Chemistry
CH 705 – Chemistry of the Rare-Earth Elements

Research Funding

09/2025 – 08/2027 Atomic Oxygen Radical Anion Transfer in the Liquid Phase via Cerium-based Photocatalysts with Redox-active Metalloligands (PI)
ACS Petroleum Research Fund, Doctoral New Investigator Grant, \$110,000

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 Graduate Students

F 2024 – Present Samridhi Surial, Ph.D. Student in Chemistry
F 2024 – Present Lagan Arya, Ph.D. Student in Chemistry
F 2024 – Present W. Caleb Matthews, Ph.D. Student in Chemistry
F 2022 – S 2024 Yogesh Shandilya, M.Sc. in Chemistry, now at Texas A&M University

Mentored Undergraduate Students

F 2024 – Present Grant A. Quartuccio, Bachelor Student in Chemistry
SP 2024 – S 2024 Kristen M. Zuzga, Bachelor Student in Biology
SP 2024 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 – 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

2024/25 Reviewer for the National Science Foundation
2024/25 Reviewer for the ACS Petroleum Research Fund
2024 Reviewer for Chemistry – A European Journal
2024, 2025 Chair of the ACS North Alabama
2024, 2025 Associate to the ACS Committee on Nomenclature, Terminology and Symbols
2023, 2024 Chair-Elect of the ACS North Alabama
2019 Reviewer for the Journal of the American Chemical Society
2017, 2021 Reviewer for ChemistrySelect
2014, 2015 Translator for Angewandte Chemie

Publications

- 2024 16. “Synthesis and Structure of Heteroleptic $[C_5Me_4(SiMe_2^tBu)]^{1-}$ Uranium(III) Complexes”
J. Q. Nguyen,[†] **O. Nachtigall**,[†] A. J. Ryan, B. N. Turpin, J. W. Ziller, W. J. Evans*
Organometallics **2024**, 43, 2767–2776. DOI: 10.1021/acs.organomet.4c00325
- 2023 15. “Phenylsilyl-Substituted Tetramethylcyclopentadienide Uranium Chemistry: Magnesocenes 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
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 $\text{Al}_2(\text{O}^t\text{Bu})_6$ - Synthesis and Crystal Structure of $\text{Al}_9\text{O}_3(\text{OEt})_{21}$ ”
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 VOSO_4 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. “[Fe_{19}] ‘Super-Lindqvist’ Aggregate and Large 3D Interpenetrating Coordination Polymer from Solvothermal Reactions of $[\text{Fe}_2(\text{O}^t\text{Bu})_6]$ 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 $\text{MnCl}_3(\text{THF})_3$ ”
O. Nachtigall, A. Pataki, M. Molski, D. Lentz, J. Spandl*
Z. anorg. allg. Chem. **2015**, 641, 1164–1168. DOI: 10.1002/zaac.201500106
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