



Dr. Peter Coburger

Junior Research Group Leader

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Education, Research Experience & Academic Career

Associate Researcher at the “Catalysis Research Center”

TU Munich

since 2026

Emmy-Noether Research Group Leader

Carbene- and phosphonium substituted heterocycles for sustainable catalysis” (CarPhoSCat)

TU Munich

since 05/2024

Liebig Junior Research Group Leader

Carbene-substituted heterocycles for sustainable catalysis

TU Munich

01/2023 - 2024

Postdoctoral researcher

with Prof. Hansjörg Grützmacher, Research on main-group biradicaloids

ETH Zurich

06/2020 – 12/2022

Postdoctoral researcher

with Prof. Robert Wolf, Computational and experimental investigations on first-row transition-metal complexes

University of

Regensburg

04/2019 – 05/2020

Research stay at the group of Prof. Robert Wolf

collaboration as part of the PhD project

University of

Regensburg

08/2016 – 10/2016

Doctoral project

A carborane-substituted 1,2-Diphosphetane as Building Block for the Development of new Ligands with Potential Application in Homogeneous Catalysis, grade: summa cum laude) under the supervision of Prof. Dr. Dr. h.c. mult. E. Hey-Hawkins, associated member of the Leipzig Graduate School of Natural Sciences – Building with Molecules and Nano-objects (BuildMoNa)

University of

Leipzig

10/2015 – 4/2019

Research stays as part of the M.Sc. chemistry studies

Advanced laboratory course and experimental for the M.Sc. thesis in the group of Dr. Petr Kilian

University of St.

Andrews

07/2014 – 09/2014;

5/2015 – 7/2015

M.Sc. Chemistry

overall grade: 1.3, Masters’s Thesis: Reactivity of rigid Backbone-supported Diphosphanes, grade: 1.0

University of

Leipzig

10/2013 – 9/2015

B.Sc. Chemistry

overall grade: 1.4, B.Sc. Thesis: Synthese *P*-chiraler Phosphansulfide als Vorläufer von Phosphanliganden für die Homogene Katalyse, grade: 1.0

University of

Leipzig

10/2010 – 9/2013

High school degree

(Abitur, grade: 1.0)

Gymnasium Greiz

05/2010

Scientific Output

Research works: 54, **h-index:** 17, **i10-index:** 25, **Number of citations:** 660 (determined from Google Scholar, 03.08.2026)

Teaching Experience

Master's Lecture "Organometallische Verbindungen: Prinzipien und Anwendungen" , Co-lecturer, (40% teaching contribution within a three-instructor format)	<i>TU Munich</i> Summer semester 2026
Substitute Lecturer for Prof. Tom Nilges "Allgemeine und Anorganische Chemie für Chemieingenieure"	<i>TU Munich</i> Winter semester 2025
Substitute Lecturer for Prof. Thomas Fässler "Grundlagen der Chemie für Maschinenwesen"	<i>TU Munich</i> Winter semester 2023 & 2024
Supervision of a Highschool Research Project	<i>ETH Zurich</i> 02/2021
Supervision of a Laboratory Course in Analytical Chemistry (for first semester students in biology)	<i>University of Regensburg</i> 06/2019
Seminar in General Chemistry (for first semester students in medicine)	<i>University of Leipzig</i> 10/2018 – 03/2019
Supervision of Advanced Laboratory Courses (for master's students, organometallic and inorganic chemistry)	<i>University of Leipzig</i> 10/2015 – 03/2019
Tutorials and Seminars Physical Chemistry, Inorganic Chemistry and Organic Chemistry for undergraduate chemistry students (2 nd to 4 th semester)	<i>University of Leipzig</i> 04/2012 – 12/2014

Scholarships & Awards

Emmy-Noether Fellowship	2024
Liebig Fellowship	2023
Research Fellowship (Postdoc, funded by DFG)	2020
BuildMoNa Award (3rd place) for "Outstanding Scientific Results"	2020
PhD Fellowship (Studienstiftung des Deutschen Volkes)	2016
Fellowship of the Studienstiftung des Deutschen Volkes (Chemistry Studies)	2014
Deutschlandstipendium	2014

Outreach

Organisation of a “Workshop on Publishing” for PhD students at TUM (together with Wiley Editor Axel Staube)	<i>2025</i>
Scientific Board Member for the TUM Global Postdoc Fellowship	<i>Since 2024</i>
Member of the organising Team/local committee “GDCh Conference on Inorganic Chemistry of the Divisions of Solid-state Chemistry & Materials Research and Wöhler Association for Inorganic Chemistry”	<i>2023 - 2024</i>
Guest Editor joint special collection Non-Innocent Ligands in Sustainable Catalysis (European Journal of Inorganic Chemistry, ChemCatChem, Chemistry Open)	<i>2023 - 2024</i>
Author for the “Nachrichten aus der Chemie” Joint author of the “Blickpunkt Anorganik” for the “Nachrichten aus der Chemie” (monthly issued magazine of the German Chemical Society).	<i>2022 - 2023</i>
Organisation and supervision of the “Vierländerwettbewerb” Chemical Olympiad for senior high school students from Berlin, Brandenburg, Sachsen and Sachsen-Anhalt	<i>2013 - 2015</i>
Member of the “Friends of the Chemical Olympiad” (Förderverein Chemieolympiade, FChO).	<i>since 2013</i>
Member of the German Chemical Society (Gesellschaft Deutscher Chemiker, GDCh)	<i>since 2010</i>

Invited talks, Conferences and Summer Schools

46th International Conference on Coordination Chemistry (ICCC) „Onium-Substituted Diphosphacyclobutadienyl complexes: Modular access and unique reactivity” (oral presentation)	<i>Odense</i> 07/2026
22th European Workshop on Pnictogen Chemistry (EWPC) „Phosphonium-substituted Diphosphacyclobutadienyl complexes of Mn(I): From Activation to Unique Reactivity” (poster presentation by PhD student Stefan Frei)	<i>Dresden</i> 03/2026
Chemiedozententagung „Phosphonium-substituted Diphosphaindenylide: Versatile coordination chemistry of a five-membered biradicaloid ” (oral presentation)	<i>Essen</i> 03/2026
GdCh Colloquium at University of Rostock „P-cyclic Biradicaloids: From Laboratory Curiosities to valuable π -Ligands” (invited lecture)	<i>Rostock</i> 11/2025
Main-Group Elements Reactivity Conference „Utilizing a cyclic biradicaloid to stabilize unusual main-group cations” (oral presentation)	<i>Namur</i> 09/2025
Chemiedozententagung	<i>Braunschweig</i>

„A Modular approach towards sterically non-protected biradicaloids” (oral presentation)	03/2025
Spring Meeting GdCh Working Group Phosphorus Chemistry	<i>Braunschweig</i>
„Phosphonium-substituted Diphosphaindenylide: A versatile ligand for first-row transition metals” (invited keynote lecture)	03/2025
21th European Workshop on Pnictogen Chemistry (EWPC)	<i>Innsbruck</i>
„A Modular approach towards sterically non-protected biradicaloids” (oral presentation by PhD student Stefan Frei)	02/2025
Inorganic Colloquium at FU Berlin	<i>Berlin</i>
„Phosphorus-centered Biradicaloids: From Lab Curiosities to Applications” (invited lecture)	11/2024
GDCh Conference on Inorganic Chemistry of the Divisions of Solid-state Chemistry & Materials Research and Wöhler Association for Inorganic Chemistry	<i>München</i>
„Lewis-acidid Pyramidanes based on a P-centered biradicaloid ligand” (poster presentation by PhD student David Zuber)	09/2024
4th Spanish Workshop on Phosphorus Chemistry (SWPC)	<i>Online conference</i>
“Phosphorus-centered Biradicaloids: From Lab Curiosities to Applications” (invited keynote lecture)	07/2024
Chemiedozententagung	<i>Aachen</i>
	03/2024
20th European Workshop on Phosphorus Chemistry (EWPC)	<i>Würzburg</i>
„Phosphonium-Substituted Diphospha-indenylide (PPI): electronic structure and ligand properties ” (poster presentation by PhD student David Zuber)	03/2024
6th EuChemS Inorganic Chemistry Conference	<i>Vienna</i>
„Phosphonium-Substituted Diphospha-indenylide (PPI): electronic structure and ligand properties” (Poster presentation)	09/2023
6th International Conference on Phosphorus, Boron, Silicon (PBSi),	<i>Berlin</i>
„From Polycycles with a $[C_3P_3]^{2-}$ core to a Triphosphinine in Single-Electron Redox Steps” (oral presentation)	03/2023
Chemiedozententagung	<i>Dresden</i>
	03/2023
44th Internation Conference on Coordination Chemistry (ICCC)	<i>Rimini</i>
„From Wade-Mingos clusters to Huckel-Aromatics in single-electron transfer steps” (oral presentation)	08/2022
18th European Workshop on Phosphorus Chemistry (EWPC)	<i>Rostock</i>
„Redox-chemistry of a carbene-stabilised Triphosphinine Dianion” (poster presentation)	09/2022
Inorganic Colloquium	<i>Hirschegg</i>
„Oxidative P-P Bindungsaddition an 3d-Übergangsmetalle“ (oral presentation)	08/2019
16th Mitteldeutsches Anorganiker-Nachwuchssymposium (MANS),	<i>Jena</i>
„Neue Zugänge zu Phosphanliganden mit nido-Carboranrückgrat“ (oral presentation)	09/2018
15th European Workshop on Phosphorus Chemistry (EWPC)	<i>Uppsala</i>
„Oxidative P-P Bond Addition to Cobalt(-I) “ (oral presentation)	03/2018

6th Annual Conference of the Graduate School BuildMoNa (ABC)

„Oxidative P–P Bond Addition to Cobalt(–I)“ (oral presentation)

Leipzig

03/2018

Summer School “Electronic Structure and Spectroscopy of Transition Metal Complexes”

Gelsenkirchen

09/2017

Inorganic Colloquium

„Oxidative Additionsreaktion von carboran-substituierten Diphosphetanen mit Bis(1,5-cyclooctadien)cobaltat(–I)“ (oral presentation)

Hirschegg

08/2017

22nd European Conference on Organometallic Chemistry (EuCOMC)

“Synthesis and Characterisation of a Homoleptic Cobalt(III)-phosphanido Complex“ (poster presentation)

Amsterdam

07/2017

5th Annual Conference of the Graduate School BuildMoNa (ABC)

„Ortho-Carborane as backbone for the development of hemilabile ligands“ (oral presentation)

Leipzig

03/2017

42nd International Conference on Coordination Chemistry (ICCC)

„Synthesis of Tetradentate Ligands starting from Carborane-substituted 1,2-Diphosphetanes“ (poster presentation)

Brest

07/2016

13th European Workshop on Phosphorus Chemistry (EWPC)

„Synthesis of new Bisphosphanes starting from carborane-substituted 1,2-Diphosphetanes “ (poster presentation)

Berlin

03/2016