



# Dr. Peter Coburger

Junior Research Group Leader

peter.coburger@tum.de | Department of Chemistry, TU München, Germany | @CoburgerPeter  
+49 (0)89 289 13132 | <https://www.coburger-lab.de/>



## Education, Research Experience & Academic Career

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### 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

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**Research works:** 49, **h-index:** 15, **i10-index:** 24, **Number of citations:** 615 (determined from Google Scholar, 24.03.2026)

## Teaching Experience

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<b>Substitute Lecturer for Prof. Tom Nilges</b>	<i>TU Munich</i>
“Allgemeine und Anorganische Chemie für Chemieingenieure”	Winter semester 2025
<b>Substitute Lecturer for Prof. Thomas Fässler</b>	<i>TU Munich</i>
“Grundlagen der Chemie für Maschinenwesen”	Winter semester 2023 & 2024
<b>Supervision of a Highschool Research Project</b>	<i>ETH Zurich</i> 02/2021
<b>Supervision of a Laboratory Course in Analytical Chemistry</b> (for first semester students in biology)	<i>University of Regensburg</i> 06/2019
<b>Seminar in General Chemistry</b> (for first semester students in medicine)	<i>University of Leipzig</i> 10/2018 – 03/2019
<b>Supervision of Advanced Laboratory Courses</b> (for master’s students, organometallic and inorganic chemistry)	<i>University of Leipzig</i> 10/2015 – 03/2019
<b>Tutorials and Seminars</b> Physical Chemistry, Inorganic Chemistry and Organic Chemistry for undergraduate chemistry students (2 <sup>nd</sup> to 4 <sup>th</sup> semester)	<i>University of Leipzig</i> 04/2012 – 12/2014

## Scholarships & Awards

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

## Outreach

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

## Invited talks, Conferences and Summer Schools

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<b>22<sup>th</sup> European Workshop on Pnictogen Chemistry (EWPC)</b>	<i>Dresden</i>
„Phosponium-substituted Diphosphacyclobutadienyl complexes of Mn(I): From Activation to Unique Reactivity” (poster presentation by PhD student Stefan Frei)	03/2026
<b>Chemiedozententagung</b>	<i>Essen</i>
„Phosponium-substituted Diphosphaindenylide: Versatile coordination chemistry of a five-membered biradicaloid” (oral presentation)	03/2026
<b>GdCh Colloquium at University of Rostock</b>	<i>Rostock</i>
„P-cyclic Biradicaloids: From Laboratory Curiosities to valuable $\pi$ -Ligands” (invited lecture)	11/2025
<b>Main-Group Elements Reactivity Conference</b>	<i>Namur</i>
„Utilizing a cyclic biradicaloid to stabilize unusual main-group cations” (oral presentation)	09/2025
<b>Chemiedozententagung</b>	<i>Braunschweig</i>
„A Modular approach towards sterically non-protected biradicaloids” (oral presentation)	03/2025
<b>Spring Meeting GdCh Working Group Phosphorus Chemistry</b>	<i>Braunschweig</i>
	03/2025

„Phosphonium-substituted Diphosphaindenylide: A versatile ligand for first-row transition metals” (invited keynote lecture)

### **21<sup>th</sup> European Workshop on Pnictogen Chemistry (EWPC)**

*Innsbruck*

„A Modular approach towards sterically non-protected biradicaloids” (oral presentation by PhD student Stefan Frei)

02/2025

### **Inorganic Colloquium at FU Berlin**

*Berlin*

„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**

*München*

„Lewis-acidic Pyrimidanes based on a P-centered biradicaloid ligand” (poster presentation by PhD student David Zuber)

09/2024

### **4<sup>th</sup> Spanish Workshop on Phosphorus Chemistry (SWPC)**

*Online conference*

„Phosphorus-centered Biradicaloids: From Lab Curiosities to Applications” (invited keynote lecture)

07/2024

### **Chemiedozententagung**

*Aachen*

03/2024

### **20<sup>th</sup> European Workshop on Phosphorus Chemistry (EWPC)**

*Würzburg*

„Phosphonium-Substituted Diphospha-indenylide (PPI): electronic structure and ligand properties” (poster presentation by PhD student David Zuber)

03/2024

### **6<sup>th</sup> EuChemS Inorganic Chemistry Conference**

*Vienna*

„Phosphonium-Substituted Diphospha-indenylide (PPI): electronic structure and ligand properties” (Poster presentation)

09/2023

### **6<sup>th</sup> International Conference on Phosphorus, Boron, Silicon (PBSi),**

*Berlin*

„From Polycycles with a  $[C_3P_3]^{2-}$  core to a Triphosphinine in Single-Electron Redox Steps” (oral presentation)

03/2023

### **Chemiedozententagung**

*Dresden*

03/2023

### **44<sup>th</sup> International Conference on Coordination Chemistry (ICCC)**

*Rimini*

„From Wade-Mingos clusters to Huckel-Aromatics in single-electron transfer steps” (oral presentation)

08/2022

### **18<sup>th</sup> European Workshop on Phosphorus Chemistry (EWPC)**

*Rostock*

„Redox-chemistry of a carbene-stabilised Triphosphinine Dianion” (poster presentation)

09/2022

### **Inorganic Colloquium**

*Hirschegg*

„Oxidative P-P Bindungsaddition an 3d-Übergangsmetalle“ (oral presentation)

08/2019

### **16<sup>th</sup> Mitteldeutsches Anorganiker-Nachwuchssymposium (MANS),**

*Jena*

„Neue Zugänge zu Phosphanliganden mit nido-Carboranrückgrat“ (oral presentation)

09/2018

### **15<sup>th</sup> European Workshop on Phosphorus Chemistry (EWPC)**

*Uppsala*

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

03/2018

### **6<sup>th</sup> Annual Conference of the Graduate School BuildMoNa (ABC)**

*Leipzig*

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

03/2018

<b>Summer School “Electronic Structure and Spectroscopy of Transition Metal Complexes”</b>	<i>Gelsenkirchen</i>
	09/2017
<b>Inorganic Colloquium</b>	<i>Hirschegg</i>
„Oxidative Additionsreaktion von carboran-substituierten Diphosphetanen mit Bis(1,5-cyclooctadien)cobaltat(-I)“ (oral presentation)	08/2017
<b>22<sup>nd</sup> European Conference on Organometallic Chemistry (EuCOMC)</b>	<i>Amsterdam</i>
“Synthesis and Characterisation of a Homoleptic Cobalt(III)-phosphanido Complex“ (poster presentation)	07/2017
<b>5<sup>th</sup> Annual Conference of the Graduate School BuildMoNa (ABC)</b>	<i>Leipzig</i>
„Ortho-Carborane as backbone for the development of hemilabile ligands“ (oral presentation)	03/2017
<b>42<sup>nd</sup> International Conference on Coordination Chemistry (ICCC)</b>	<i>Brest</i>
„Synthesis of Tetradentate Ligands starting from Carborane-substituted 1,2-Diphosphetanes“ (poster presentation)	07/2016
<b>13<sup>th</sup> European Workshop on Phosphorus Chemistry (EWPC)</b>	<i>Berlin</i>
„Synthesis of new Bisphosphanes starting from carborane-substituted 1,2-Diphosphetanes “ (poster presentation)	03/2016