

## Jun.-Prof. Dr. Patrycja Kielb

### Personal Data

Title	Jun.-Prof. Dr.
First name	Patrycja
Name	Kielb
Current position	Jun.-Prof. (W1 TT W2)
Current institution(s)/site(s), country	Clausius-Institute of Physical and Theoretical Chemistry, Rheinische Friedrich-Wilhelms-University Bonn, Wegelerstr. 12, 53115 Bonn, Germany and Transdisciplinary Research Area, Building Blocks and Fundamental Interactions of Matter', University of Bonn
Identifiers/ORCID	<a href="https://orcid.org/0000-0003-2809-0813">orcid.org/0000-0003-2809-0813</a>

### Qualifications and Career

<u>Stages</u>	<u>Periods and Details</u>
Degree programme	Master Degree in Biophysics (5-year program with integrated Bachelor Degree), 2007 – 2012, Jagiellonian University in Krakow, Poland
Doctorate	2013 – 2017 Mentors: I. Weidinger & P. Hildebrandt, Biophysical Chemistry, Technical University of Berlin, Germany
Stages of academic/professional career	Since 2021 Argelander Jun.-Prof., Physical Chemistry, Clausius-Institute of Physical and Theoretical Chemistry, University of Bonn 2020 – 2021 Postdoc (H. Müller-Werkmeister), Physical Chemistry, University of Potsdam, Germany 2017 – 2019 Postdoc (H.B. Gray), California Institute of Technology, Pasadena, USA

### Activities in the Research System

#### **Committee involvement & activities in the field of academic self-governance:**

Since 2023	Elected member of the steering committee, Transdisciplinary Research Area "Building Blocks of Matter and Fundamental Interaction" of the University of Bonn
Since 2022	Member of the selection committee for the Peyerimhoff Research Prize, University of Bonn
Since 2022	Member of the examination board, Bachelor and Master in Chemistry, University of Bonn
Since 2022	Member of the recruitment committees at the University of Bonn
Since 2022	Chair of Physical Chemistry Institute Seminar Series, University of Bonn
2017 – 2019	Mentor in Women Mentoring Women Club, Caltech, USA

**Academic Distinctions:** Innovation Grant, TRA Matter, University of Bonn (2023); Postdoc Bridge Fellowship, University of Potsdam (2020); Best Poster Presentation Award, European Conference on Spectroscopy of Biological Molecules, Bochum, Germany (2015); PhD Fellowship, Berlin International Graduate School of Natural Sciences and Engineering, TU Berlin (2013 – 2016); PhD Fellowship, Integrated Graduate School SFB 1078, FU Berlin (2013); Erasmus Fellowship, University Nova de Lisboa, Lisbon, Portugal (2012).

### Scientific Results

Citations: 192, h-index: 8, i10-index: 5 ([Google Scholar](#), 21.03.2024)

#### **Category A** (\* corresponding author)

1. L.M. Denkler, M.A. Shekar, T.S.J. Ngan, L. Wylie, D. Abdullin, T. Hett, M. Engeser, G. Schnakenburg, F.H. Pilz, B. Kirchner\*, O. Schiemann\*, **P. Kielb**\*, A. Bunescu\* "A general iron-catalyzed decarboxylative oxygenation of aliphatic carboxylic acids" *Angew. Chem. Int. Ed.* **2024**, accepted online. DOI: [10.1002/anie.202403292](https://doi.org/10.1002/anie.202403292).
2. B.D. Gonzalez, E. Forbrig, G. Yao, **P. Kielb**, M.A. Mroginski, P. Hildebrandt, J. Kozuch\* "Cation dependence of Enniatin B/Membrane-Interactions assessed using surface-enhanced infrared absorption (SEIRA) spectroscopy" *ChemPlusChem* **2024**, e202400159. DOI: [10.1002/cplu.202400159](https://doi.org/10.1002/cplu.202400159).
3. F.H. Pilz, **P. Kielb**\* "Cyclic voltammetry, square wave voltammetry or electrochemical impedance spectroscopy? Interrogating electrochemical approaches for the determination of electron transfer rates of immobilized redox proteins." *BBA Advances* **2023**, 4, 100095. DOI: [10.1016/j.bbadv.2023.100095](https://doi.org/10.1016/j.bbadv.2023.100095).
4. J. Blasius, K. Drysch, F.H. Pilz, T. Frömbgen, **P. Kielb**\*, B. Kirchner\* "Efficient prediction of mole fraction related vibrational frequency shifts" *J. Phys. Chem. Lett.* **2023**, 14, 10531–10536. DOI: [10.1021/acs.jpcllett.3c02761](https://doi.org/10.1021/acs.jpcllett.3c02761).
5. **P.J. Kielb**\*, C. Teutloff, R. Bittl, H.B. Gray\*, J.R. Winkler\* "Does tyrosine protect *S. coelicolor* laccase from oxidative degradation or act as an extended catalytic site?" *J. Phys. Chem. B* **2022**, 126, 7943–7949. DOI: [10.1021/acs.jpccb.2c04835](https://doi.org/10.1021/acs.jpccb.2c04835).
6. A.M. Bapolisi, **P. Kielb**, M. Bekir, A-C. Lehnen, C. Radon, S. Laroque, P. Wendler, H.M. Müller-Werkmeister, M. Hartlieb\* "Antimicrobial polymers of linear and bottlebrush architecture: probing the membrane interaction and physicochemical properties" *Macromol. Rapid Commun.* **2022**, 43, 2200288. DOI: [10.1002/marc.202200288](https://doi.org/10.1002/marc.202200288).
7. **P. Kielb**, M. Horch, P. Wrzolek, R. Goetz, K.H. Ly, J. Kozuch, M. Schwalbe\*, I.M. Weidinger\* "Hydrogen Evolution by Cobalt Hangman Porphyrins under operating conditions studied by vibrational spectro-electrochemistry" *Catal. Sci. Technol.* **2018**, 8, 1849–1857. DOI: [10.1039/C7CY02253K](https://doi.org/10.1039/C7CY02253K).
8. **P. Kielb**, T. Utesch, J. Kozuch, J.-H. Jeoung, H. Dobbek, M.A. Mroginski, P. Hildebrandt, I. Weidinger\* "Switchable Redox Chemistry of Hexameric Tyrosine-Coordinated Heme Protein" *J. Phys. Chem. B* **2017**, 121, 3955–3964. DOI: [10.1021/acs.jpccb.7b01286](https://doi.org/10.1021/acs.jpccb.7b01286).
9. B. Neumann, **P. Kielb**, L. Rustam, A. Fischer, I. Weidinger, U. Wollenberger\* "Bioelectrocatalytic reduction of hydrogen peroxide by microperoxidase-11 immobilized on mesoporous antimony-doped tin oxide" *ChemElectroChem* **2017**, 4, 913–919. DOI: [10.1002/celec.201600776](https://doi.org/10.1002/celec.201600776).

10. **P. Kielb**, M. Sezer, S. Katz, F. Lopez, C. Schulz, L. Gorton, R. Ludwig, U. Wollenberger, I. Zebger, I.M. Weidinger\* "Spectroscopic Observation of Calcium-Induced Reorientation of Cellobiose Dehydrogenase Immobilized on Electrodes and Its Effect on Electrocatalytic Activity" *ChemPhysChem* **2015**, 16, 1960–1968. DOI: [10.1002/cphc.201500112](https://doi.org/10.1002/cphc.201500112).

## Category B

### Publications

1. **P. Kielb**, I.M. Weidinger "Surface-Enhanced Spectro-Electrochemistry of Biological and Molecular Catalysts on Plasmonic Electrodes" *Plasmonics in Chemistry and Biology*, CRC Press, **2019**, 109–138. DOI: [10.1201/9780429458750-5](https://doi.org/10.1201/9780429458750-5).
2. **P. Kielb**, H.K. Ly, R. Götz, I.M. Weidinger "Surface Enhanced Spectro-Electrochemistry in Electrocatalysis" *Wiley Analytical Science* **2016**,  
<https://analyticalscience.wiley.com/content/article-do/surface-enhanced-spectro-electrochemistry-electrocatalysis>.