

CV

Personal data

Name	Nikolas Franke
Date of birth	19.01.1999
Place of birth	Germany
Nationality	German

University

2017 to 2021	Karlsruhe Institute of Technology (KIT) Mechanical Engineering (Bachelor)
2021 to 2023	Karlsruhe Institute of Technology (KIT) Material Science and Engineering (Master) Focus: Structural and functional materials
02/2023 to 08/2023	Erasmus semester University of Bologna, department of Physics
Since 11/2023	University of Bologna, department of Physics PhD student working on the development and implementation of novel AFM characterization techniques in cooperation with Park Europe GmbH
09/2024 to 04/2025	Visiting researcher to the department of chemical engineering at University College London – Electrochemical Innovation Lab

Research activities

Bachelor thesis	The determination of the ductile-brittle transition temperature of a eutectic Mo-Si-Ti alloy
Master thesis	Influence of Binder's Type on the Electrochemical Performance of a Graphite/Aluminum Dual Battery
Erasmus Semester	Determination of DOS band tail in amorphous semiconductors with CV measurements
PhD	Development and implementation of novel AFM characterization techniques in cooperation with Park Europe GmbH
Period abroad	AFM and alternating current measurements on Li Ion battery materials

Academic publications

doi.org/10.1111/jmi.13417	Modulated electrochemical force microscopy: Investigation of sodium-ion transport at hard carbon composite anodes
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Economy experience

11/2020 to 04/2021	Internship in the field of failure analysis and materials testing of metals at STIHL
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Language knowledge

German	Mother tongue
English	Fluent (C1)
Italian	Good (B2)

Bologna, July 6, 2025