



Ali Elkholey

Date of birth: 14/01/2004 **Place of birth:** Cairo, Egypt

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WORK EXPERIENCE

FAU Erlangen Nürnberg Chair of General Material Properties – Erlangen, Germany

City: Erlangen | **Country:** Germany

Working Student in the topic Hydrogen Corrosion

[01/01/2022 – 31/07/2023]

- Metallurgical processing of metallic samples
- Operating of various types of microscopes
- 3D-Design of sample holders and other components

Semikron-Danfoss – Nürnberg, Germany

City: Nürnberg | **Country:** Germany

Working Student in the production department

[01/01/2024 – 31/10/2024]

- Optimisation of production processes
- Data Analysis
- Dealing with Silicone gels and Packaging for Semiconductor devices

Fraunhofer IISB – Erlangen, Germany

City: Erlangen | **Country:** Germany

Working Student in the topic Nanomaterials

[01/06/2025 – Current]

- Working in cleanroom
- Operating atomic field microscope
- Nano imprint lithography, CMP, wafer bonding

EDUCATION AND TRAINING

BSc. Nanotechnology

FAU Erlangen-Nürnberg [01/10/2021 – 30/09/2024]

City: Erlangen | **Country:** Germany | **Final grade:** 1.1 | **Thesis:** „Characterization of residual stress in glass coatings obtained by dynamic gas spray“

- Cold Spray
- Raman and Brillouin spectroscopy

MSc. Materials Science and Engineering

FAU Erlangen-Nürnberg [01/10/2024 – Current]

City: Erlangen | **Country:** Germany | **Final grade:** (current) 1.2

- Focus on Semiconductors, glass, and Electron microscopy
- Thesis on solution processed metal free perovskites

LANGUAGE SKILLS

Mother tongue(s): Arabic

Other language(s): English (C1) | German (C1)

SKILLS

Microsoft Office / Origin Lab / AutoDesk Fusion 360 / MATLAB / MS Excel + VBA

PUBLICATIONS

[2024]

[**A Micro-Spectroscopic Approach to Characterizing Residual Stresses during Cold Spray Deposition of Metals on Glass Substrates**](#)

Ali K. Elkholey, Dominique De Ligny et al. ITSC 2024

[2024]

Cold spray metallisation of glass substrates: characterisation of residual stresses and substrate modifications using micro-spectroscopy. Poster in the DGG 2024 97th Glass Conference in Aachen

[2025]

Utilising glass transition properties for form-controlled metallisation of glass surfaces Poster in the DGG 2025 98th glass conference in Goslar

HONOURS AND AWARDS

[07/2023] Semikron Danfoss

Semikron-Danfoss Studienpreis Student prize for high achievement during the Bachelor's degree

[10/2023] FAU Erlangen-Nürnberg

Deutschlandstipendium Scholarship awarded by the University for highly achieving students. Partially funded by the German government and partially by an industry sponsor: ProMik Programmiersysteme für die Mikroelektronik GmbH

[07/2025] FAU Erlangen-Nürnberg

Studienpreis des Departments Werkstoffwissenschaften Prize for best Bachelor thesis and exceptional performance in Bachelor studies by the department of materials science.