TECHNISCHE UNIVERSITÄT DRESDEN

HZDR

Fakultät Maschinenwesen Inst. Verfahrenstechnik u. Umwelttechnik, Prof. Transportprozesse an Grenzflächen

Prof. Dr. rer. nat. et Ing. habil.
Kerstin Eckert

Contact: M.Sc. Patrick Micheler Dr. Xuegeng Yang

Telephone:

E-Mail: p.micheler@hzdr.de xuegeng.yang@tu-dresden.de

x.yang@hzdr.de

Building of an automated electrodeposition setup and performing and evaluation of measurement of electrodes for alkaline electrolysis.

The measurement of many electrodes is annoying and tedious. Thus, we want to build a setup where the manufacturing and measuring are automated. Hereby, we are looking for motivated students who have an engineering or natural science background. You would learn about using Python to control multiple devices, create measurement protocols for electrolysis, and construct parts of the setup.

Work:

- Literature research on the bubble evolution, impedance spectroscopy, various electrode manufacturing techniques, plastic properties
- Help to build a setup and carry out the experiments
- Code development in Python
- Automatization of a setup with Raspberry Pi (nice to have but not needed)
- Construction of parts with Solid Works and 3D printing (no prior knowledge needed)

Requirements:

- Study in natural sciences or engineering (or comparative field of study)
- Interest in experimental work

Conditions:

- Duration: min. 5 months
- Possible start: 01.11.2025 (but flexible in 2-3 month)
- Workplace: TU Dresden

Postadresse (Briefe)
TU Dresden, 01062 Dresden
Postadresse (Pakete u.ä.)
TU Dresden
Helmholtzstraße 10
01069 Dresden

Besucheradresse
Sekretariat:
Helmholtzstr. 14
Merkelr-Bau
EG, Zi. 6

Internet
https://tu-dresden.de/ing/maschinenwesen/ifvu/tpg

DRESDEN concept
Exzellenz aus Wissenschaft und Kultur