TECHNISCHE UNIVERSITÄT DRESDEN

HZDR

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

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

Kontakt: Milad Eftekhari
Telefon: 0351 260-3873
E-Mail: m.eftekhari@hzdr.de

Kontakt: Karin Schwarzenberger
Telefon: 0351 463-36627
E-Mail: karin.schwarzenberger@ tu-dresden.de

Dynamics of bubble-particle attachment in a model stirred cell

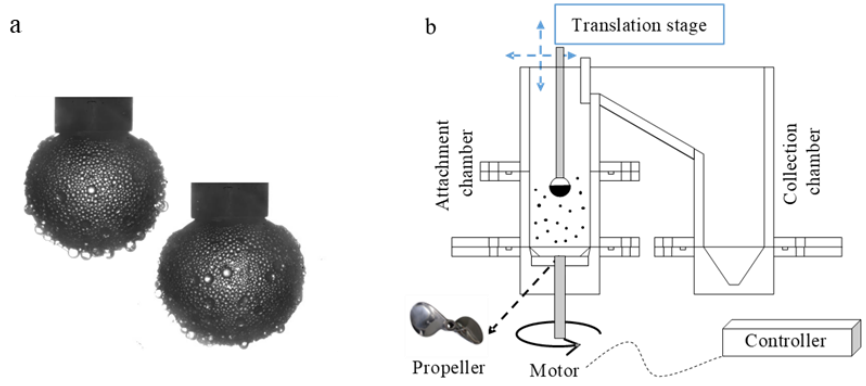
Master theses / Diploma theses / Compulsory Internship

A process called flotation is widely used throughout the world to separate valuable minerals from non-valuable ones. Successful flotation relies on several sub-processes, such as promoting the attachment of certain sizes of particles to bubbles while preventing the attachment of others. Therefore, it is important to advance our knowledge about the particle attachment process, particularly, when different particle sizes are considered. Here we use our in-house setup to study:

- The effect of ultrafine particles on the attachment rate of fine particles.
- The effect of various parameters e.g., particles hydrophobicity on the packing density of the particles.

Experimental methods/techniques:

- Image analysis
- Particle size analysis techniques such as laser diffraction and dynamic light scattering



These experimental methods and the topic of particles at interfaces can prepare you for a variety of jobs after graduation, as these concepts are widely applicable in various fields such as mineral processing, recycling, pharmaceuticals, cosmetics, painting, and so on.

Requirements:

- Study in process engineering, chemical engineering (or comparative field of study)
- Motivation, interest in this field of research, experimental experience
- Optimally: basic knowledge of particle measurement techniques

Conditions:

- duration min. 6 month, start: from Feb/Jan 2024, workplace: HZDR

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

Besucheradresse
Sekretariat:
Helmholtzstr. 14
Merkel-Bau
EG, Zi. 17

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