Contactless manipulation of samples against the direction of gravity

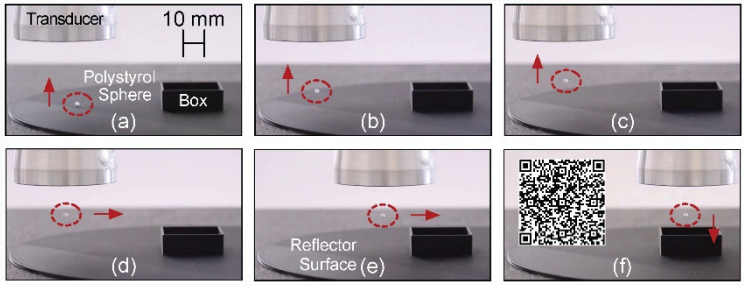
REVOLUTIONARY HANDLING OF BIOLOGICAL MATERIAL: CONTACTLESS PRECISION IN PHARMACY AND MEDICINE

STATUS QUO

The current status quo in sample handling shows that even under controlled conditions there is a certain level of contamination. This highlights the challenges of maintaining absolute purity and emphasizes the need for precise methods to minimize contamination in sensitive environments.

OUR TECHNOLOGY

Our technology enables non-contact handling of objects, especially biological materials, in an ultrasonic field. The decisive advantage lies in the avoidance of contamination during handling. The non-contact movement ensures that sensitive substances commonly used in the pharmaceutical, medical and other industries are not affected or contaminated. This innovative approach revolutionizes the way sensitive substances are handled and opens up new horizons for contamination-free processes, especially in applications such as DNA sequencing.



BENEFITS

- ▶ Non-contact handling
- ▶ Material-independent handling
- ▶ Precise and efficient handling

APPLICATION POSSIBILITIES

Our technology offers a wide range of applications, from pharmaceutical research to the food industry. Here are some examples:

- Electronics production: Handling of SMD Components
- Pharmaceutical & Materials Science Research: DNA Sequencing

COMMERCIALIZATION OPPORTUNITIES

There are various possibilities for cooperation between the industrial partner and TU Darmstadt: from an exchange with the know-how carriers of the technology up to a close cooperation in case of further development needs. The technology is protected by intellectual property rights and can be used by the industry partner after a sale or licensing agreement.

CURRENT STAGE OF DEVELOPMENT TECHNOLOGY READINESS LEVEL (TRL)

9	Product ready to launch
8	
7	Prototype
6	
5	
4	
3	Proof of Concept
2	
1	Idea

Development is currently at level 4: We can already move solids without any problems and are currently optimizing the method for moving liquids.

YOUR CONTACT PARTNERS AT TU DARMSTADT

HIGHEST

IP- and Innovation Management
+49 6151 16-57203
innovation@tu-darmstadt.de

Prof. Mario Kupnik
Sensor and Measurement Technology Gro
+49 6151 16-23860
sekretariat@must.tu-darmstadt.de