

Press release: Start-up droptical and measuring device manufacturer DataPhysics Instruments launch new dosing system

Innovative 'FlexDrop' liquid dosing system for contact angle meter brought to market

DataPhysics Instruments and the start-up droptical from Nuremberg are bringing the FlexDrop dosing system to market. The FlexDrop dosing system is compatible with all contact angle meters of the OCA series and can dose tiny drops in the picolitre and nanolitre range. The two companies are thus setting new standards for contact angle and 1-click surface energy measurements, especially on very small surface areas.

Filderstadt, 08 April 2024. The start-up [droptical](#), which develops drop dispensers and camera technology in miniature format, and the measuring device manufacturer [DataPhysics Instruments](#) are jointly setting new standards in liquid dispensing for surface science applications. With the FlexDrop, an innovative dosing system has been developed for the [contact angle meters of the OCA series](#) from DataPhysics Instruments, which can dispense particularly tiny drops on smallest surface areas.

The contact angle measuring devices in the OCA series are high-precision systems for characterising interfaces and surfaces. They combine high-quality optics, pinpoint dosing, and precise sample positioning to create high-performance, reliable measuring systems. The FlexDrop dosing system expands the possibilities of liquid dosing for contact angle and surface energy measurements.

Measurement on the smallest surface areas possible

The innovative piezo dosing technology of the FlexDrop dosing system and its precise drop control make it possible to position drops on smallest surface areas. The FlexDrop dosing system can reproducibly dispense drops with minimal volumes, in the picolitre and nanolitre range, and with pinpoint accuracy. For the first time, users can carry out measurements on two drops which have a distance of just two millimetres, without having to reposition the dosing unit. Such close positioning of droplets was not possible with previous dosing systems as a one-click measurement. This way, the smallest surface areas can be analysed quickly and precisely – on electronic components as well as on curved or structured surfaces.

The simultaneous dosing of two drops with minimal spacing is particularly advantageous for determining the surface energy of solid surfaces, for which at least two test liquids are required. With contact angle meters from the OCA series, equipped with a FlexDrop dosing system, it is possible to measure the surface energy with just one click.

Outstanding user-friendliness: easy cleaning and quick cartridge change

The small droplet size makes cleaning the sample particularly easy, as the droplets evaporate from the surface. This is a particular advantage if the measurement is part of the quality control of components, which are subsequently used further.

The FlexDrop dosing system is equipped with interchangeable cartridges for the test liquids. Users can change the cartridges in a few simple steps; cleaning is not necessary. The use of individual cartridges for different liquids also eliminates the risk of cross-contamination.

Successful collaboration between droptical and DataPhysics Instruments

With FlexDrop, droptical and DataPhysics Instruments have realised the first joint product ready for series production. "During development, the focus was on ensuring that the dosed drop volumes can be generated reproducibly. This enables users to achieve extremely precise dosing, especially for particularly small droplets," says Matthias Leininger, co-founder of droptical, and continues: "In collaboration with DataPhysics Instruments, we were able to develop the prototype of our droplet generator into a market-ready product."

Dr Sebastian Schaubach, Managing Director of DataPhysics Instruments, adds: "We are delighted that, together with droptical, we have achieved this breakthrough in the development of dosing systems for contact angle measurements. We believe that we can offer our customers a tangible advantage over other systems with the FlexDrop dosing system. This concerns both the reduction of sample cleaning processes after the measurement and the 1-click measurement of the surface energy."

FlexDrop allows extremely accurate measurements on the smallest surface areas with reproducible drop volumes in the picolitre and nanolitre range. The superior technology makes FlexDrop a valuable tool for laboratories, research institutes and development departments.

If this press release is printed, we would be pleased to receive a copy.

About DataPhysics Instruments GmbH

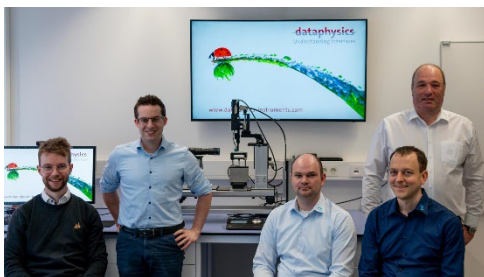
DataPhysics Instruments GmbH is a German company from the Stuttgart region. The company has been producing laboratory measuring devices used to analyse surfaces for over 25 years. The devices from DataPhysics Instruments can be used to determine important physical and chemical parameters such as surface tension and energy, adhesion force, static and dynamic contact angles, roughness profiles, zeta potential, and destabilisation mechanisms. In short, the devices from DataPhysics Instruments are used wherever a liquid meets another liquid or a solid surface. In addition to contact angle measuring devices, the product portfolio includes tensiometers, spinning drop tensiometers, dispersion stability analysis systems, zeta potential analyzers, and humidity generators. The company also offers contract measurements in all these areas.

About droptical GmbH

droptical GmbH is a start-up from Nuremberg that specialises in the development of drop generators (dispensers) and camera technology (drop watcher) for optical dosing monitoring. The company's products are unique by their high degree of miniaturisation and ease of integration and handling. Particularly noteworthy in the product portfolio are the "NanoStrobeX" drop watcher, which enables continuous jetting monitoring of dispensing processes for the first time and carries out 3D drop measurement in real time, and the "ClickJet" miniature jet dispenser for high-precision dosing of low-viscosity liquids in the smallest of spaces.

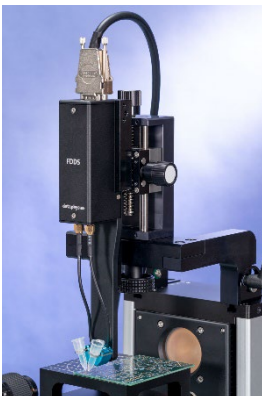
Contact

Sanja Döttling
Marketing-Manager
DataPhysics Instruments GmbH
Raiffeisenstraße 34
70794 Filderstadt, Germany
+49 (0) 711 770556-59
s.doettling@dataphysics-instruments.com
www.dataphysics-instruments.com



Picture 1: Dr Sebastian Schaubach and Nils Langer (standing, from the left), Managing Directors of DataPhysics Instruments, are delighted with the successful collaboration with Daniel Föste, Jonas Heelein and Matthias Leininger, the founders of droptical (seated, from the left).

Copyright: DataPhysics Instruments



Picture 2: The FlexDrop dosing system allows extremely accurate measurements on the smallest surface areas with drops in the picolitre and nanolitre range.

Copyright: DataPhysics Instruments