

# Industrial Inkjet Printing Services

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## Potentials of inkjet printing

Inkjet printing is one of the most popular processes in digital printing technology and is found in many color printers at home or in the office. In addition to graphic or decorative applications, inkjet printing can also be profitably used as an industrial production process. The application areas of this individual and tool-free process are versatile and range from printing curved surfaces and conductive structures to multi-material 3D printing.

## Why is it important to characterize the material in advance?

To achieve consistent and reproducible printing results, it is essential that the ink, substrate and printhead are perfectly matched to each other. With our state-of-the-art measurement equipment, we help you acquire comprehensive knowledge about the properties of the material to be printed and how it interacts with the substrate. We also help you implement new material systems in your digital printing operations – from identifying potential application fields and selecting printheads to

developing processes, including various pre- and post-processing steps.

## Collaboration

Are you interested in a collaboration or looking for a service that is not on our product sheet? Feel free to contact us to discuss suitable solutions.

### Application examples

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- **Printed electronics**
- **Surface functionalization**
- **3D multi-material and color printing**
- **Substitution of screen printing processes**
- **Biomedical engineering**

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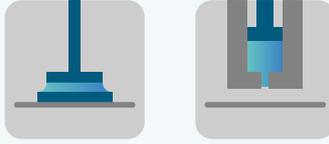
# Services

## Material compatibility



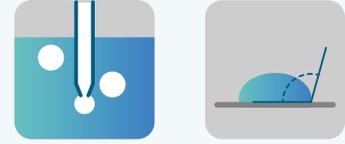
Studies to determine the compatibility of inkjet inks with certain solvents/ cleaning agents and printheads

## Viscosity and viscoelasticity



Measurement of an ink's flow behavior (viscosity) and viscoelastic properties

## Surface tension



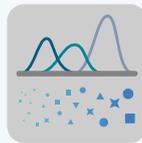
Determination of static and dynamic surface tension

## Curing characteristics



Analysis of curing behavior depending on various influencing variables, e.g. time, temperature and UV radiation

## Particle size distribution



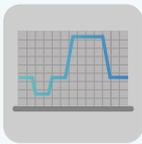
Determination of the size, number and shape of dispersed particles in an ink

## Drop watching and analysis



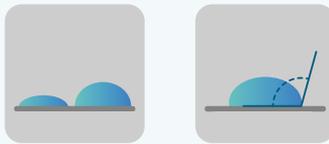
Analysis of droplet formation and droplet flight behavior, also with regard to stability over a longer period of time

## Waveform development and optimization



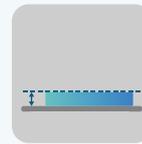
Determination of the waveform and optimization of parameters for piezo inkjet printheads

## Wetting behavior



Measurement of the free surface energy of substrates and the surface tension of liquids via the contact angle

## Layer thickness



Determination of the applied thicknesses of wet and dry layers

## Identification of fields of application



Identification of application areas suitable for the material and process

## Printhead selection



Help in selecting the correct printhead for the application and material

## Process strategies



Process optimization or the development of new printing processes strategies