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## Transport processes and water based ink –paper interactions

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The inkjet technology fuels the rapidly evolving world of printing. This printing technology delivers good print quality using the flexibility of digital printing at a breakthrough cost price. The R&D department of Océ Technologies, a Canon company, is a major player in the development of inkjet technologies for many different applications.

Liquid spreading, evaporation and imbibition into porous material are physical processes that describe the interactions of aqueous ink with paper. Understanding them is vital to have prints of high quality; and this is the aim of this work. The influence of the liquid physical properties as well as of the paper characteristics will be considered. Experimental studies based on optical spectroscopy, microscopy, Scanning Electron Microscopy (SEM), Nuclear Magnetic Resonance (NMR) and Automatic Scanning Absorptometer (ASA) are presented within this work revealing the today level of understanding the transport of complex liquids into porous media. For each method of investigation we will present the main models, including their strengths and limitations.

### References

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