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Introduction to printed smart systems: photonics, electronics, microfluidics

The primary function of printing has been to deliver information for visual inspection and further interpretation by humans or in special cases machines. New printable materials and print production processes are now paving the way for expanding the role of printing toward printed smart systems that are commonly multi-technological in nature. The components forming the functional systems comprise electronics, photonics and microfluidics. The key is to combine materials and processing know-how with applications such as smart packaging, diagnostics, structured electronics or energy harvesting.