



CEO Dr. rer. nat. Norbert Münzel  
is a qualified physical chemist

# Top-notch nanotechnology

Light Controlled Molecular Orientation (LCMO) is an advanced nanotechnology for the spatial alignment of liquid crystals. A declared expert in this sector is Rolic Technologies Ltd. The high-tech Swiss firm uses LCMO to manage the orientation of liquid crystal molecules and thus provides the basis for the efficient production of high-performance LC displays, 3D films and optical security elements.

Rolic is specialised in Light Controlled Molecular Orientation (LCMO), a fascinating technology used in manufacturing LC displays and security components. "We are a nanotechnology company that modifies the surface of photosensitive materials by means of polarised light to achieve unique optical effects," CEO Dr. rer. nat. Norbert Münzel describes the business of Rolic. The technology is used for the fabrication of high-quality LCDs and for 3D applications as well as for innovative optical security elements that protect pharmaceuticals, bank notes or passports against forgery. Rolic's customers include world-leading liquid crystal panel manufacturers and companies in the security sector. The company's focus on LCDs on the one hand and security applications on the other means that it is operat-

ing in two very different markets. "The LCD sector is characterised by short innovation cycles and strong pricing pressure," explains Dr. Münzel. "The security market, in contrast, has a more long-term orientation with much more extended product cycles." Rolic's origins go back to the research laboratory of the Swiss healthcare company F. Hoffmann-La Roche, which laid the foundations for LCMO in the early 1990s. In 1994, Rolic was established as a spin-off and since 1996 has been owned by Karl Nicklaus, a dedicated entrepreneur and technology investor. Today, the company is a global market leader in liquid crystal technology with 65 highly qualified, multilingual employees, an export share of approximately 90% and a multitude of innovative developments in the product pipeline. In

2010, for instance, Rolic introduced LCMO-3D for the production of passive 3D TVs with cost-effective structured films on foil. "This year, we expect Rolic LCMO technology to be integrated into the production of one of the highest circulation currencies in the world," states Dr. Münzel. While continuing to design new, efficient methods and processes for LCD and security applications, Rolic is also developing novel, promising solutions based on LCMO technology, such as for photovoltaic cells and other green, sustainable technologies. "To maintain our technology leadership and push innovation, we invest an average of 15% of overall sales in research and development," says Dr. Münzel. The company's innovation strategy is shared by all employees, who form a highly motivated, loyal team, and comple-

mented by a highly efficient organisation with quick decision-making enabling very short time to market. ■

#### **Rolic Technologies Ltd.**

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