



# NEXT-LEVEL PAPER **FOR NEXT-LEVEL SOLUTIONS**

● next level paper

**p\_e:smart**  
powered by Felix Schoeller

● **NEXT-LEVEL PAPER**

● FEEL IT.

● TEST IT.

No sample there? Someone must have been curious and helped themselves. Just ring or email us and we will send you a new sample right away.



**THE INTELLIGENT VISION OF PAPER**  
**p\_e : smart. IT'S IN YOUR HANDS**

Markets develop very quickly. The future is now. There are so many technical specifications that call for entirely new solutions – particularly in the field of PRINTED ELECTRONICS. This is a market with infinite possibilities. But it also has highly demanding technical requirements. Here substrates quickly reach their limitations. The time is ripe for new methods and applications. Next-level paper. Next-level solutions.

**p\_e : smart. GIVING YOU ADDED VALUE**

Printing electronic components nowadays requires a substrate that has an extremely smooth surface and specific surface properties, particularly when organic inks are used. That is the only way to ensure that a properly functioning circuit with defined conducting paths and a high register accuracy can be produced. **p\_e : smart** sets new standards here. These papers are designed for specific applications in the futuristic field of printed electronics.

**p\_e : smart's SPECIAL PROPERTIES:**

- High dimensional stability, regardless of temperature
- Extremely smooth surfaces
- Specific surface properties
- Absolute chemical purity
- Free from contaminating heavy metals
- Consistent quality

**p\_e : smart's SPECIAL BENEFITS:**

- Consistent quality
- High register accuracy
- No problems using it in clean-room conditions
- No problems using it under vacuum
- Significantly less broke than conventional substrates



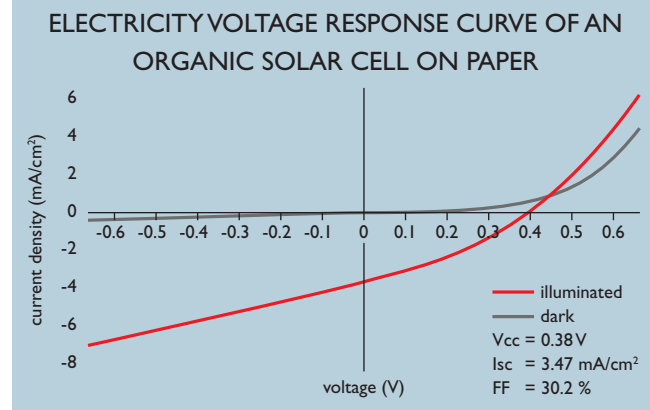
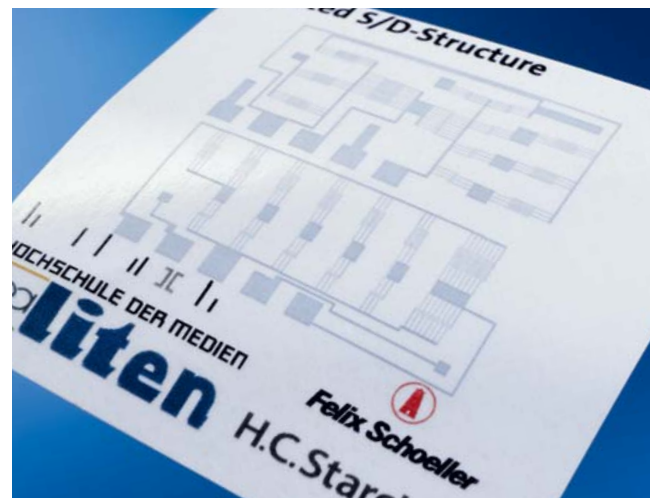
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## INNOVATION IS THE DRIVING FORCE HIGH-PRECISION COATING GIVES THE COMPETITIVE EDGE

Our wide range of innovations is based on extensive know-how acquired through developing and producing high-quality inkjet papers for photographic applications. High-precision coating involves using ultramodern technology to apply several thin layers of technologically complex film to webs of material.

### HIGHER DIMENSIONAL STABILITY ADDS VALUE TO THE PRODUCT

Printing organic circuits requires high register accuracy to achieve the desired result. PET films have only a limited degree of dimensional stability, which makes it difficult to build multilayer systems. The name of our innovative and groundbreaking solution is **p\_e : smart**. These are papers whose fibre structure produces high dimensional stability, which in turn means significantly less broke when constructing printed transistors.



### HIGHEST LEVEL SUBSTRATE PURITY

The competency on which **p\_e : smart** papers are based comes from the know-how we have acquired during over 110 years of producing base papers for traditional silver halide photography. The result: **p\_e : smart** papers have high chemical purity and are above all free of contaminating heavy metals of any kind. Carefully controlled production processes deliver papers of a consistently high quality: from one reel to the next, from one production run to the next.

### EFFICIENCY ADVANTAGE WITH GREAT POTENTIAL FOR THE FUTURE

In conjunction with the Fraunhofer Institute for Photonic Microsystems in Dresden, we investigated the technology's suitability for manufacturing solar cells using evaporation technology, concluding with a pilot product. It consists of a 7-layer structure with an overall depth of 600 nm on a paper substrate. This proves that **p\_e : smart** can be used

without any problems in clean-room conditions and under vacuum. At the same time, surface roughness is so minimal that the solar cell's structure, which is made up of very thin layers, is not damaged. Furthermore, the substrate paper retains its flexibility.

### SMART PACKAGING AND RFID TECHNOLOGY FOR GREATER SUSTAINABILITY

**p\_e : smart** can be used for a wide range of highly individual applications – in very different kinds of markets and business sectors. For all companies that use PRINTED ELECTRONICS and are looking for new solutions, **p\_e : smart** is the next-level paper for next-level solutions in the fields of RFID, smart packaging, photovoltaics and OLED. **p\_e : smart** is the right substrate for the job, but **p\_e : smart** is also about working together with clients to develop new printed electronics based systems, products and applications. Challenge us! Talk to us about your needs and what we might achieve together.



## THE PAST SHAPES THE FUTURE TRADITIONAL CORE COMPETENCIES POINT THE WAY FORWARD

Over 110 years of outstanding technological competence in producing, developing and marketing high-quality specialty papers and in high-end coating techniques for special applications in attractive growth markets. This is what the Felix Schoeller Group is about. We have eight production locations in Germany, the USA, Canada and Russia and a worldwide workforce of 2,400 employees. The Group combines the traditional values of a family-owned business with the innovative drive of a hi-tech industrial company.

### CONCENTRATING ON ESSENTIALS

Today, the Felix Schoeller Group is a world market leader in its main imaging and decor paper businesses. As well as existing markets, there is a clear focus on establishing and expanding new areas of business. **p\_e : smart** is part of this long-term strategy.



## HIGH DEMANDS MEAN TOUGH CHALLENGES

THE PEOPLE BEHIND **p\_e : smart**  
WHO TACKLE THOSE CHALLENGES

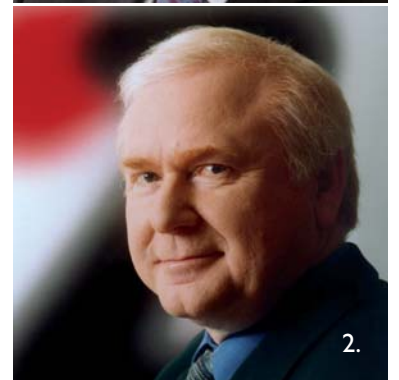
### 1. DR. WOLFGANG SCHMIDT, SENIOR SCIENTIST

„Any company that can master a complex technology such as producing very different specialty papers as competently as we do will repeatedly encounter new fields of application. And we respond to them with new solutions. But that means that when you are striving to find the best electronic solutions it is important that you remember to tap into the know-how of your substrate supplier to ensure you achieve the best possible results.“



### 2. DR. GERD PAPIER, VICE PRESIDENT R&D

„We have learnt that nothing changes as quickly as market demands. Niche markets can become mass markets overnight. We keep this in mind in all our routine considerations and actions.“



### 3. DR. BERNHARD KLOFAT, CEO

„Establishing new areas of business is a key part of our corporate strategy. It is vital that we go further than anyone else – always with the objective of meeting the current and future demands of our markets.“



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