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Electronic paper sees the light

Researchers grow organic photodiodes on used newsprint

ED GERSTNER

Researchers have developed a method of improving the surface of paper for use as a substrate for electronic devices. Electronic paper, embedded with flexible electronic circuitry that allows it to change its print dynamically in response to a reader's commands, is the archetypal dream made possible by the advent of organic electronics. But although the properties of paper are ideal for books, newsprint and the myriad of things for which paper is used, as a substrate on which to grow electronic circuits of any kind, it is awful. The main reason for this is the extreme roughness of paper in comparison with the micrometre-to-nanometre-thin layers from which both organic and inorganic electronic components are made. In spite of this, Bernhard Lamprecht and colleagues keep the dream of electronic paper alive by growing an array of organic light sensors on the most challenging paper substrate of all, newspaper[1]. Taking a cutting from the German weekly, *Die Zeit*, the authors coat their newspaper with two conditioning layers to protect it from moisture and to smooth out its surface, which allows successive electronic layers to be patterning into working devices.

References

1. Lamprecht B., Thünauer R., Ostermann M., Jakopic G. & Leising G. Organic photodiodes on newspaper. *Physica Status Solidi A* **202,** R50–R52 (2005) Article