

Phytonics: Deep Color Impression without Annoying Reflections

A Plant-inspired Anti-reflective Film for All Kinds of Surfaces

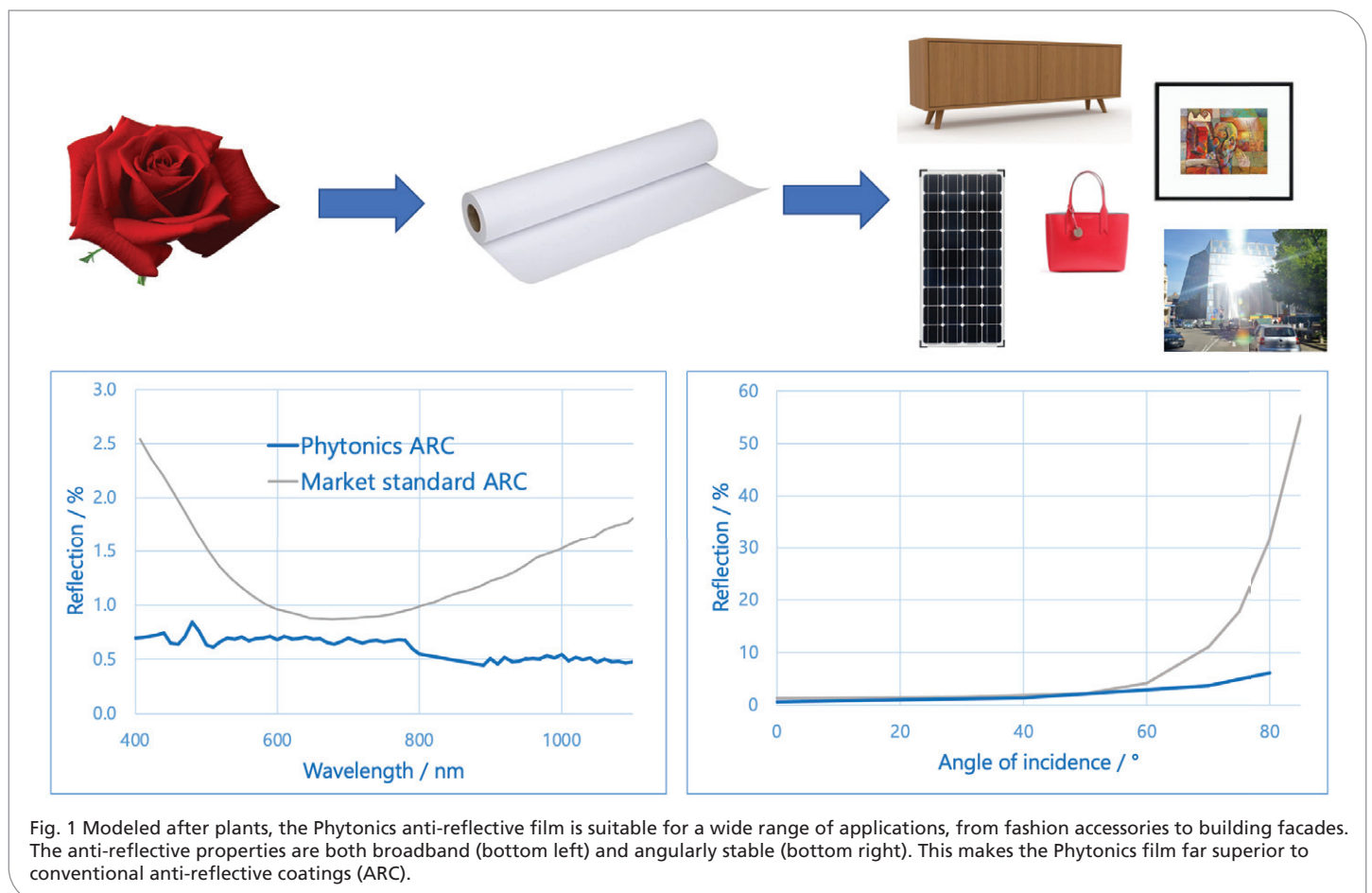
The anti-reflective film developed by Phytonics can be applied to various surfaces. With its combined micro- and nanostructure, it eliminates annoying surface reflections and ensures a unique deep, velvety-matt color impression.

Phytonics – a KIT Spinoff

Phytonics (a combination of the two words “phyto” and “photonics”) is a spinoff of Karlsruhe Institute of Technology (KIT). The high-tech startup based in Karlsruhe has chosen plants as inspiration for the development of its products. The anti-reflective film conveys the velvety-matt color impression of petals by eliminating reflections on surfaces in technical applications. The Phytonics solution is aimed primarily at product designers and print media producers. Pilot production of the Phytonics film is currently being set up.

Versatile in Its Application – Unique in Its Effect

Produced in a cost-effective roll-to-roll process, the Phytonics film is both mechanically flexible and highly resistant to environmental influences such as UV light, moisture, and temperature fluctuations. Whether used for photographs, display panels, furniture, solar modules, product packaging, or building facades, there are almost unlimited possibilities of application. In contrast to conventional anti-reflective coatings, the Phytonics film can almost completely suppress reflection for all wavelengths and angles of incidence of the light. This increases the yield of solar modules by up to ten percent. The residual reflection is 100 percent diffuse, so that glare effects are excluded. Surfaces coated with the Phytonics film have a completely new look, which attracts attention. The matt appearance is otherwise only known from velvety textiles and represents an absolute novelty for technical surfaces. The Phytonics film thus offers an elegant way to stand out from the crowd of competitors.



Low Costs - Great Design Freedom

The film can be applied to all types of materials using standard lamination processes. Unlike in the case of conventional anti-reflective coatings, this eliminates the need for expensive vacuum deposition processes, which are usually limited to solid substrates. The film is also suitable for curved surfaces. The unique Phytonics aesthetics hence allow maximum design freedom. The film will be available in sheet or roll form; the maximum roll width will be 1.20 meters.

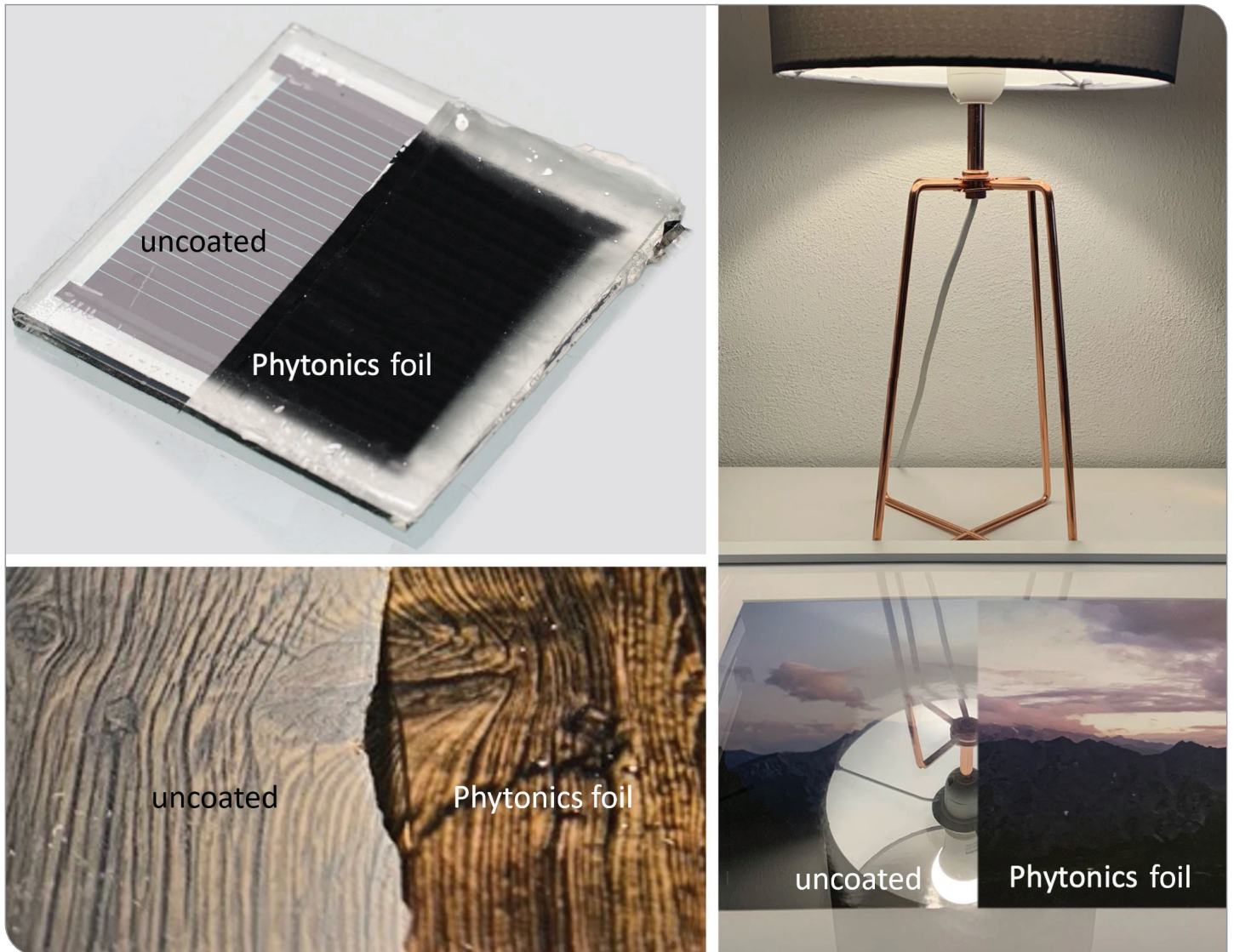


Fig. 2 Examples of the use of the Phytonics film. Top left: Solar module, right side coated with Phytonics film. Bottom left: Imitation wood, right side with Phytonics surface. Right: Phytonics effect on an art print (right half of the picture).

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