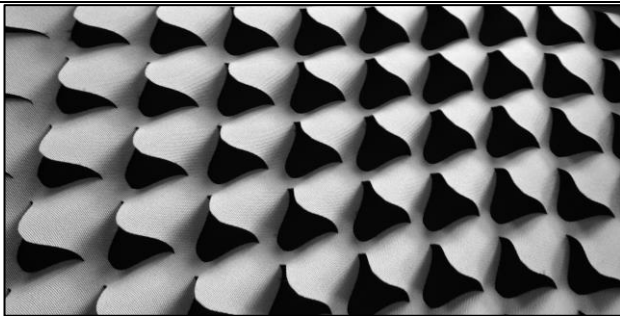


Variable sun protection made of perforated textiles

Innovative sun protection system provides variable light transmission by using textile joints



Status quo

Sun protection systems for buildings typically are available as louvre systems (venetian blinds) and as textile blinds (roll-down blinds). Venetian blinds do not illuminate the room optimally and require more maintenance effort especially in outdoor areas. Conventional textile roll-down blinds provide better illumination of rooms because of diffuse blinding effects, but cannot completely prevent glare effects and do not allow individual adjustment of light transmission. A sun protection solution that combines the advantages of louvre and roll-down blinds is currently not available.

Our technology: Adaptable textile sun protection for interior and exterior use

A special textile pattern allows a 3D-deformation of the material during longitudinal expansion: Parts of the textile work as textile joints. Deformation can be smoothly adjusted just by tensile forces. The textile is perforated by standard laser cutting.

Benefits

- Stageless adaptation to change lighting conditions individually
- Appealing design through a new appearance
- Advantages in cost due to easy production and maintenance

Current stage of development

Technology-Readiness-Level (TRL): Level 2

Small scaled prototype tests were successfully conducted. A system proof of concept in real scale is planned.

Application possibilities

The technology is suitable for sun protection systems of buildings, both indoor and outdoor and can be easily adapted to a wide range of requirements.

Intellectual property situation

The presented technology is protected by intellectual property rights.

Commercialization opportunities

We are looking for industry partners who are interested in using this technology. If there is any need for further development, a close cooperation between the industry partner and TU Darmstadt is possible.

Your contact partner

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