



# High-temperature sensor film

## for large-area sensing applications and thermal films

Plastic films can be used as electromechanical sensors and actuators for large-area sensing applications. VTT has developed a novel thermally stable plastic nanocomposite that enables the use in totally new application areas.

### The invention

VTT has developed a new porous film based on nanomodification of a thermoplastic material. The new material and film gives a high response level to pressure and thus enables sensor solutions for large areas. The film has an increased thermal stability, yet maintaining the electrostatic properties. With the new material and method, the use of the film can be expanded to a wide variety of applications that may include home printing, etc.

The film is produced by biaxial stretching. The film is flexible and approximately 30-70  $\mu\text{m}$  thick.

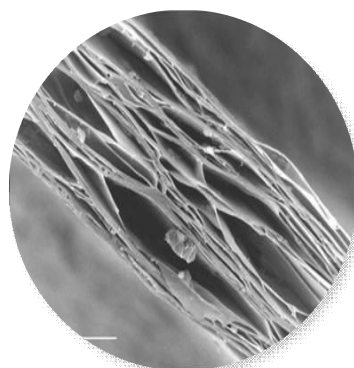
### The benefits

- Option to integrate with conventional mass production processes, such as injection molding
- Enables large-area sensing cost effectively
- Allows use on shaped structures of multiple forms

### Application and market areas

- High-volume manufacturing of electronic equipment
- Automotive parts
- Packaging
- Keyboards, displays etc.
- Healthcare

**Intellectual property**  
WO2005044902 A1



### Why partner with VTT?

1. Key factor in Finland's success story with a track record to prove it
2. Licensing and co-venturing opportunities
3. Portfolio of more than 1,000 patents and inventions
4. New business and product concepts based on strong IP and world class research
5. Combined experience of more than 2,000 motivated researchers in eight focused areas of technology

VTT is looking for a film manufacturer for piloting and industrial scale production.

VTT works closely with customers to tailor the IP for the customer end use to ensure successful technology transfer.

### Additional information

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