Method to Coat Fabrics with Wearable Sensors

Track Code: 2021-LEE-69500

Categories:
- Biomedical Engineering

Keywords:
- Biomedical Engineering
- Breathable
- Conformal Coating
- Conjugated polymers
- Disposable
- Fabric-based sensor
- Health monitoring system
- Oxidative chemical vapor deposition (oCVD)

Researchers at Purdue University have developed wearable sensors for monitoring health information such as pulse and respiration. Installing sensors on wearable fabrics allows the sensors to be easily integrated with the human body. However, using the current methods, wearability of devices installed on fabrics is low. The Purdue researchers' technology preserves wearability by directly coating conductive polymers onto fabrics using oxidative chemical vapor deposition (oCVD), leading to a direct fabrication of sensors. This method is an inexpensive and simple way to monitor health information without compromising the wearability of the devices on fabrics.

Advantages
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-”–æPxpensive manufacturing method
-•6–× ÆR Ö çV`acturing method
-”FöW2 æ÷B 6ö× &öÖ—6R vV & &–Æ—G’ ÷" '&V F† &–Æ—G’ öb `abrics
-”V 7’ Fò W6P

Applications
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Technology Validation: The researchers successfully fabricated a respiration-measuring sensor on a disposable facemask and a pulse-measuring sensor on a fabric glove.

People:
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Intellectual Property:

Application Date: June 17, 2022
Type: Utility Patent
Country of Filing: United States
Patent Number: (None)
Issue Date: (None)

Application Date: June 17, 2021
Type: Provisional-Patent
Country of Filing: United States
Patent Number: (None)
Issue Date: (None)

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