

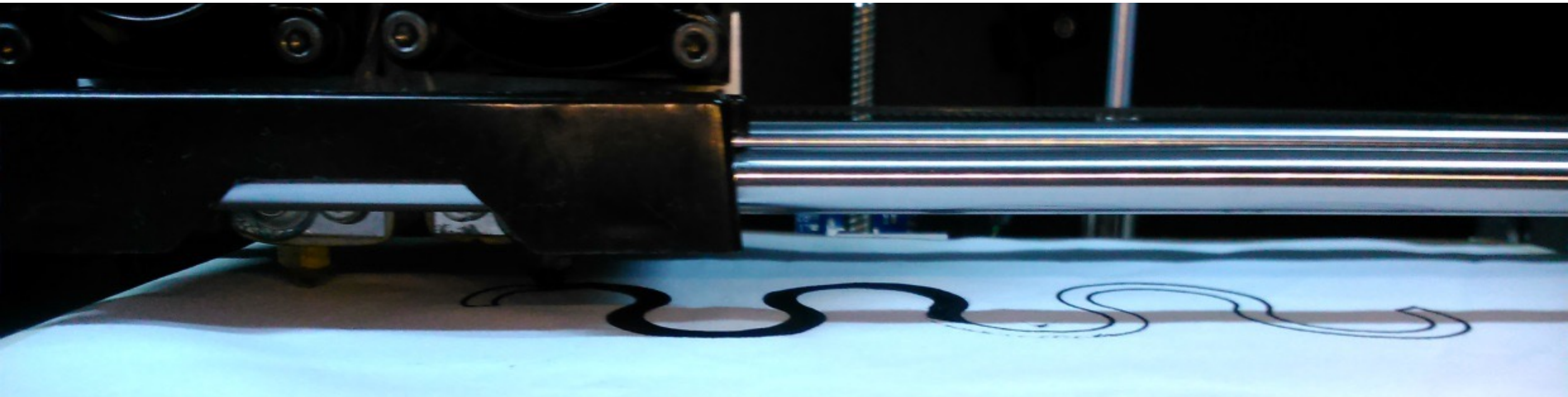
SUMMARY

3D printing on textiles: A novel process for functional and smart textiles

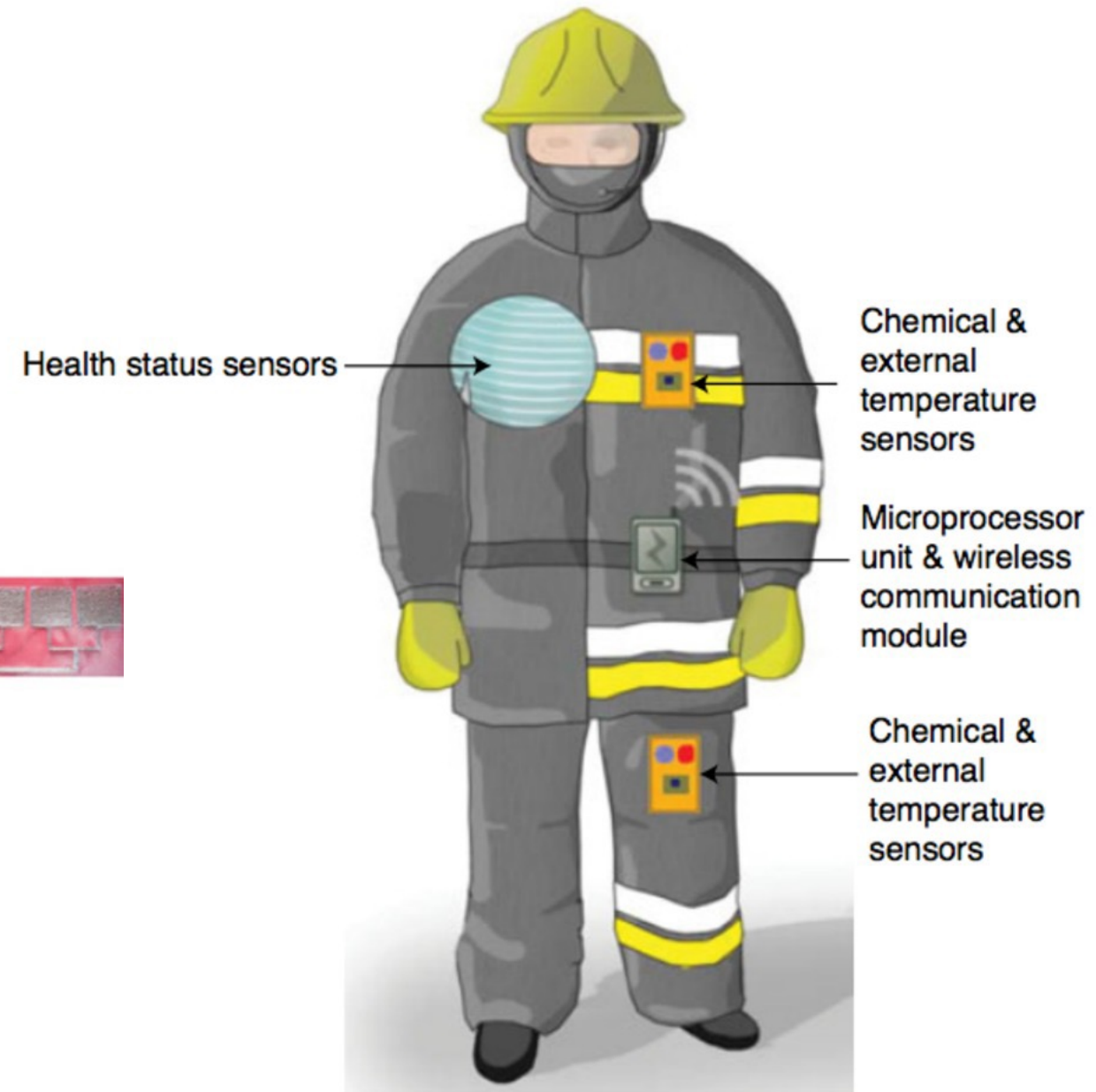
Developed by:



UNIVERSITY
OF BORÅS



Functional and Smart Textiles



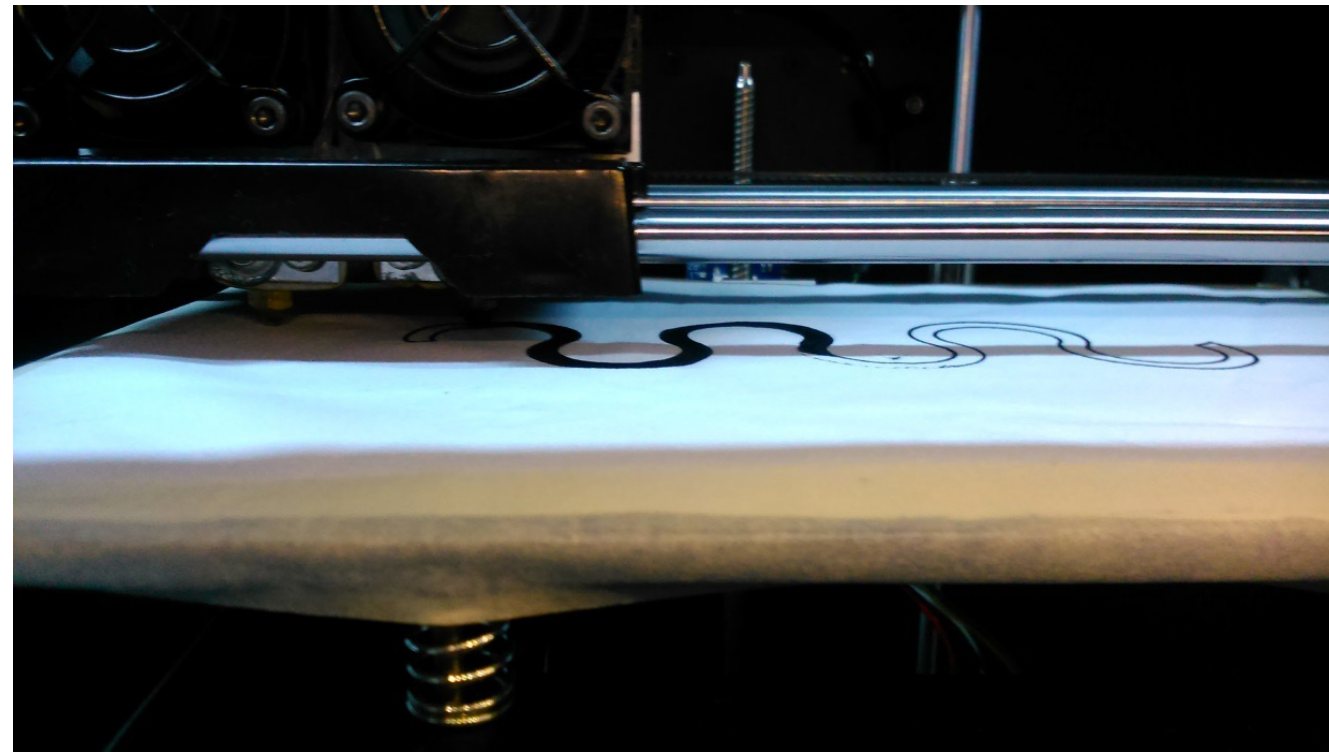
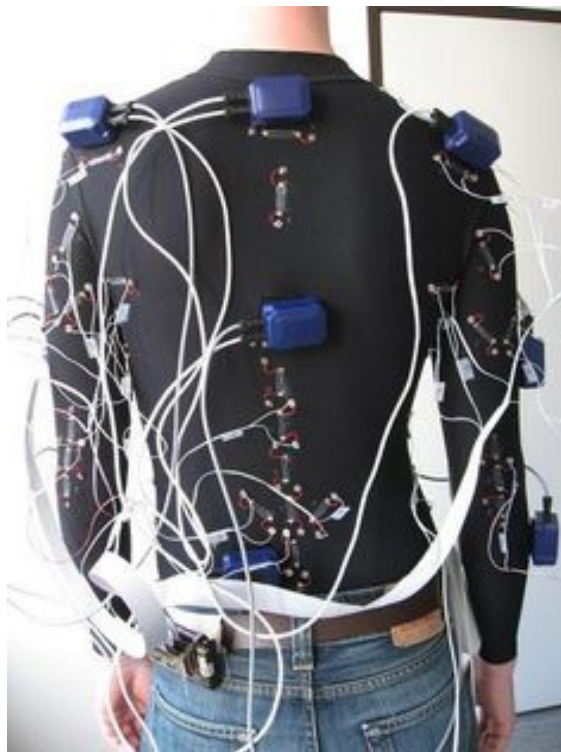
Left:
Heart-rate monitoring shirt

Middle:
Wearable RF electronic for high speed communication

Right:
Wearable technology for firefighters

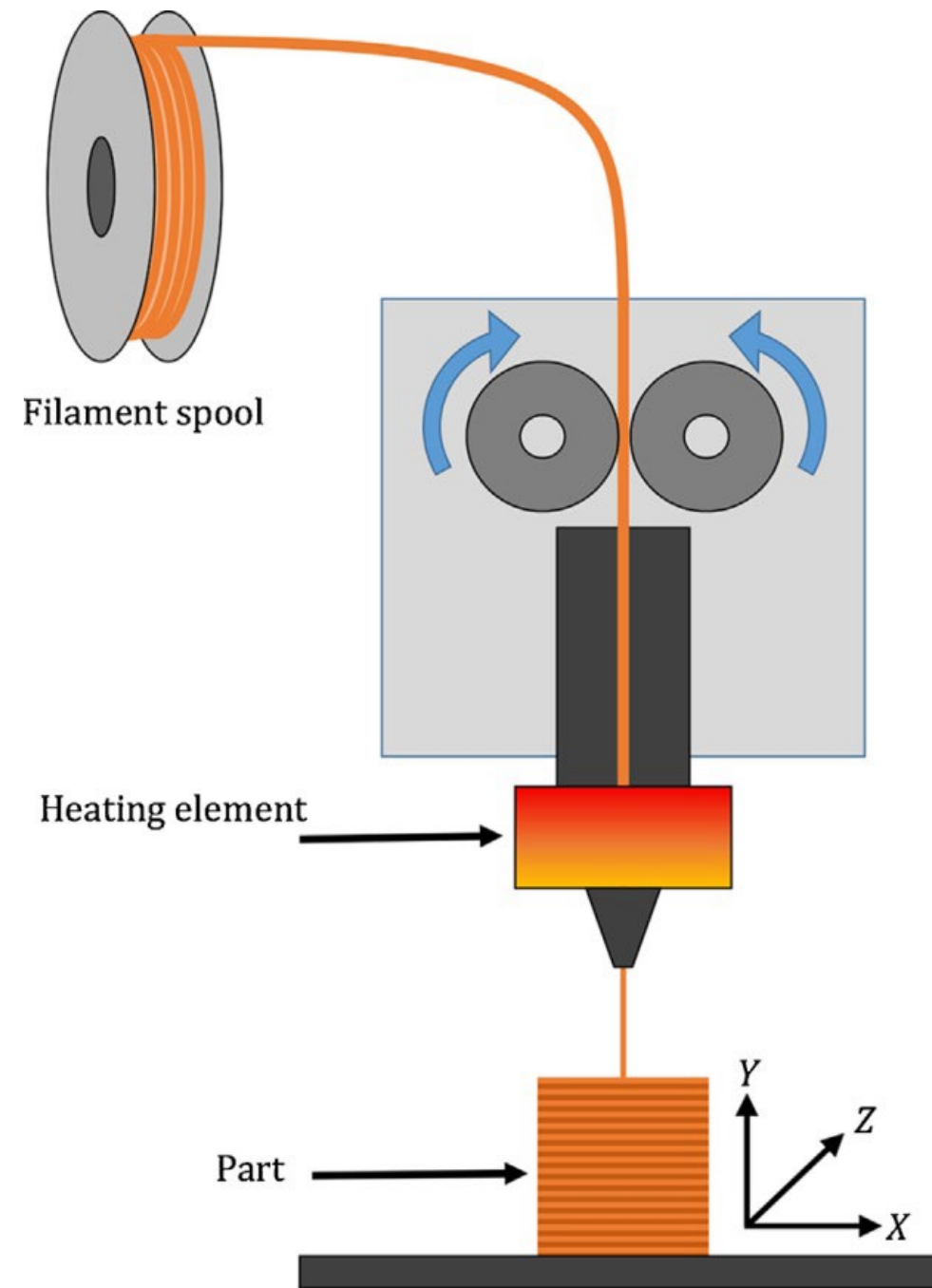
3D printing on Textiles: a more flexible method for development of functional and smart textiles

- Replacing sensors and interconnections by depositing 3D printed nanocomposites onto textiles

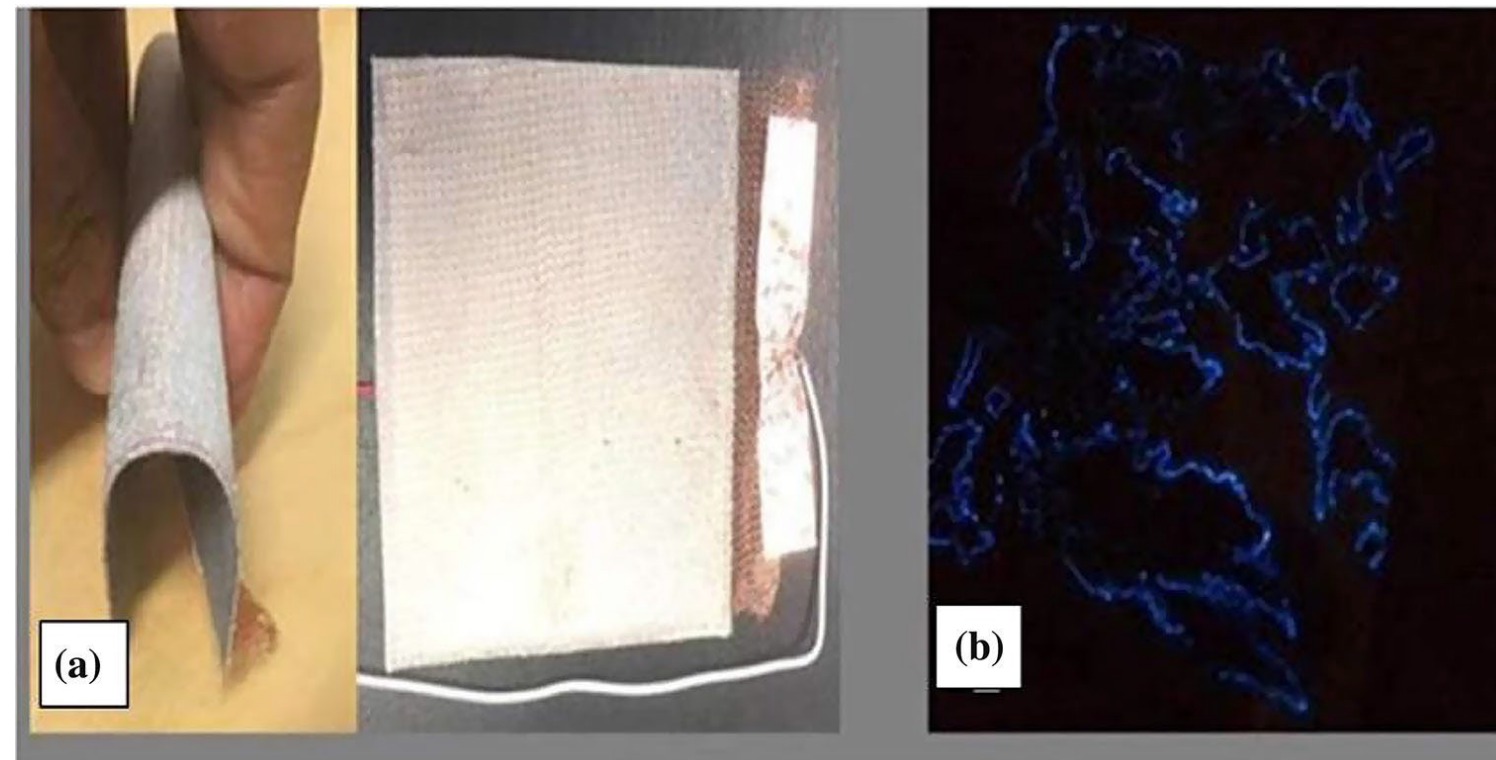
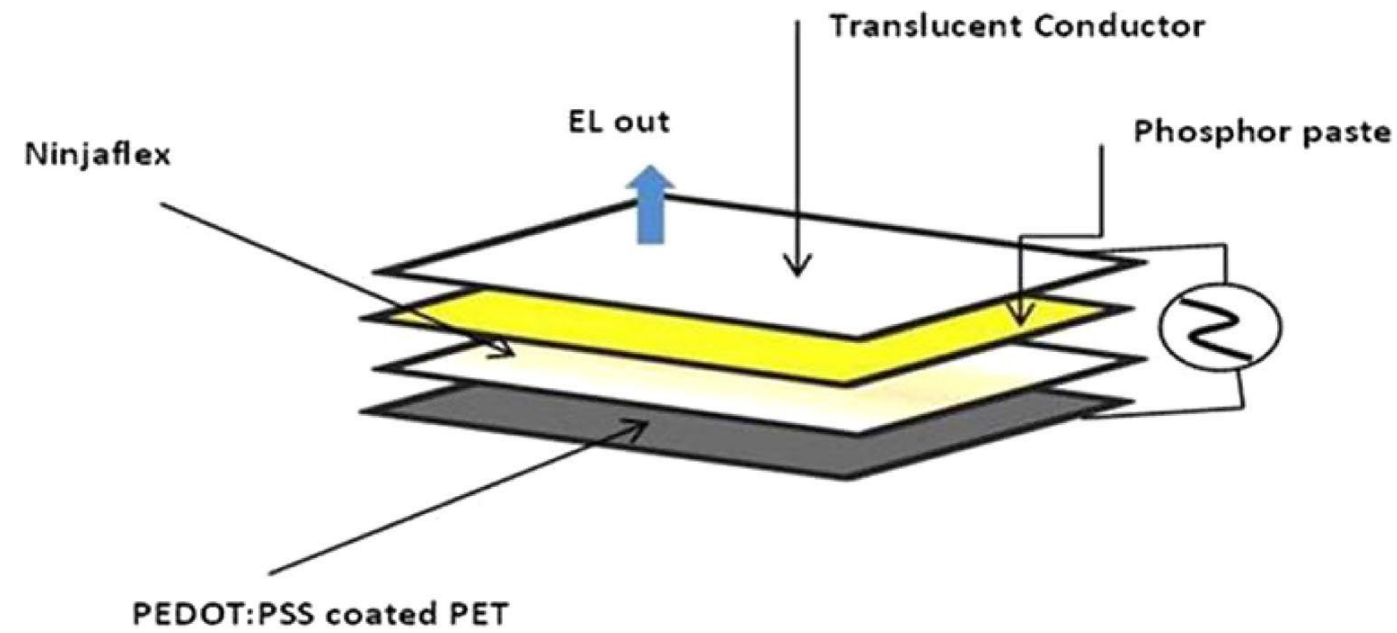


3D printing: Fused Deposition Modeling (FDM)

- Based on heating and extrusion
- Use thermoplastic materials in filament form



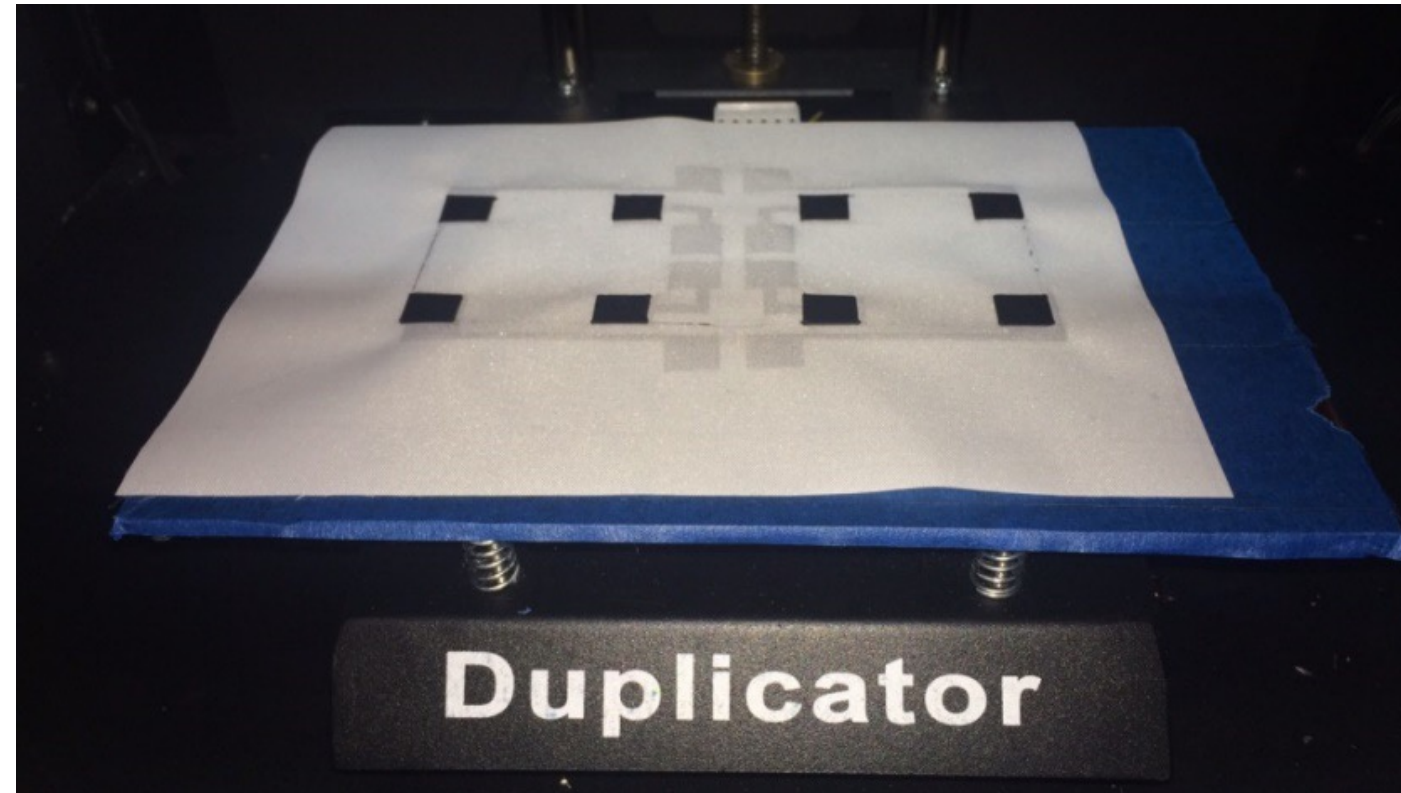
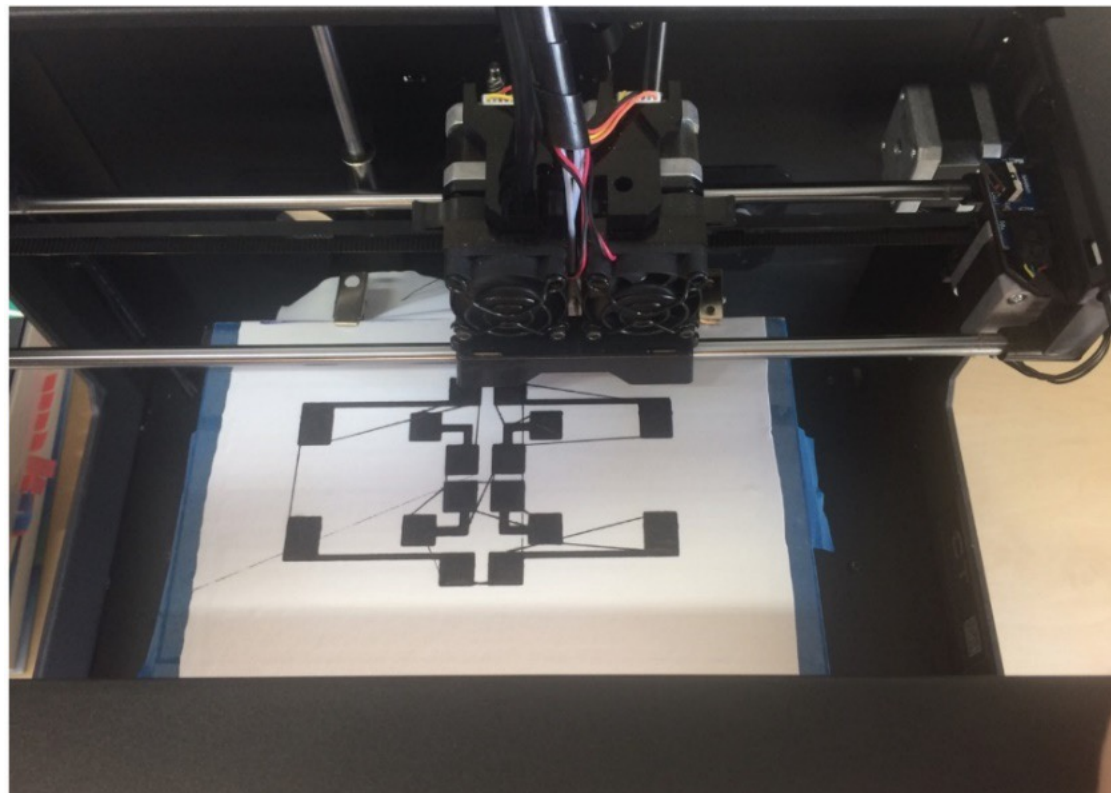
Electroluminescence application: 3D Printing of NinjaFlexFilament onto PEDOT:PSS-Coated Textile Fabrics



Left:
Electroluminescence
device fabrication
method

Right:
Prototype of (a) EL
device and (b) EL

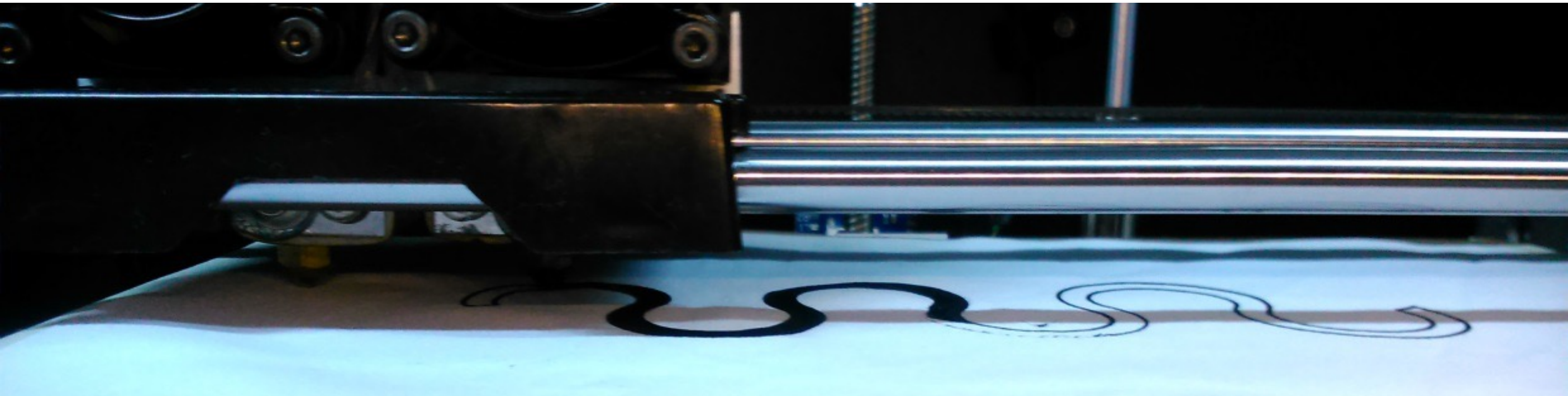
Towards electrodes application: Surface electromyography (sEMG)



Left:
3D printed electrical
circuitry

Right:
EMG electrodes

This was a summary of an open educational resource. Please visit <http://destexproject.eu/> to see the full amount of intellectual outputs of the project.



Disclaimer:

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