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Research Scholarship for International Graduate Students

Wearable energy generators and electronics progresses with flexible and stretchable electrospun nanofibers

可拉伸的奈米纖維在光電智慧型織物的應用

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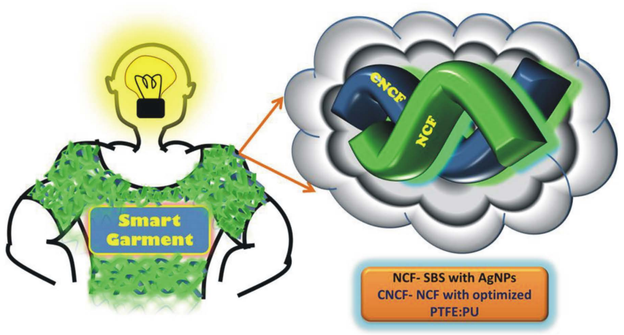
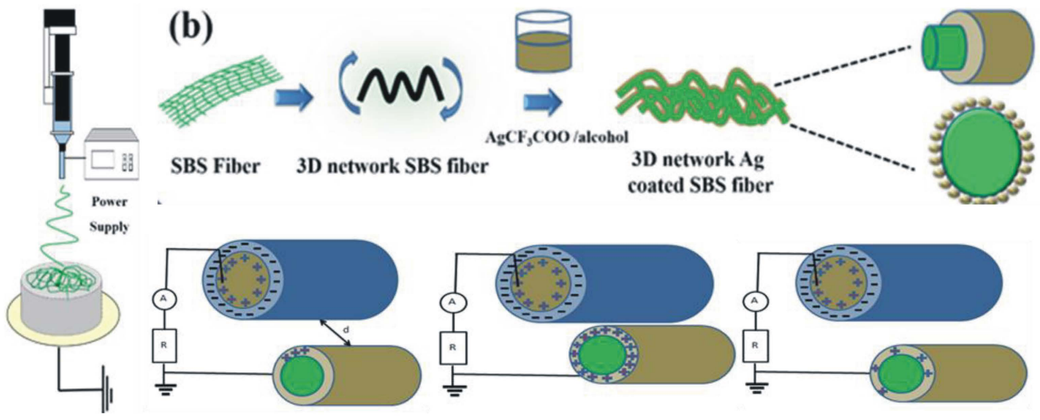
Abstract

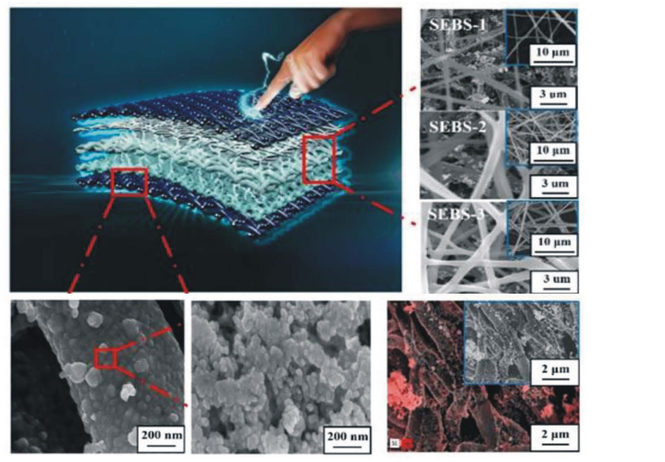
Stretchable wearable electronics fabrication is a growing fascinating field of research with greater challenges in achieving electrical and mechanical robustness concurrently. Majorly, device failure occurs with electrode conductivity ultimately suppresses the entire device performance. Wearable film based devices has gained significant thrust in wearable optoelectronics. Electrospinning provides a magnificent deal of creating continuous nanofibers with greater tunability in morphology, thickness, mechanical endurance, stability. Our aim is to harvest nanofibers in optoelectronics and energy harvesting devices which benefits the facile low cost processing, ultralow thicknesses, micro, and nano-level wearable device fabrication.

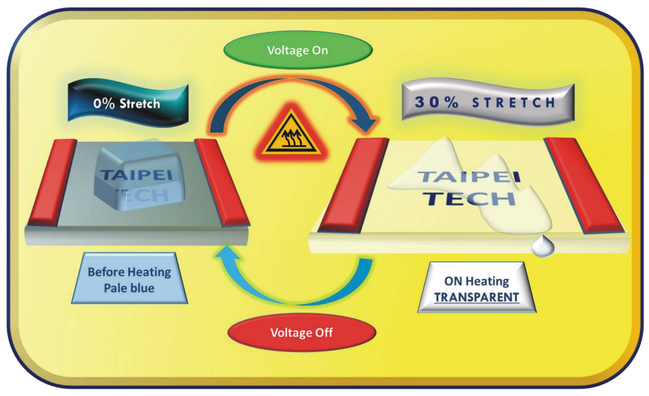
Research Outcomes



Reactive and Functional Polymers 142 (2019) 96–103







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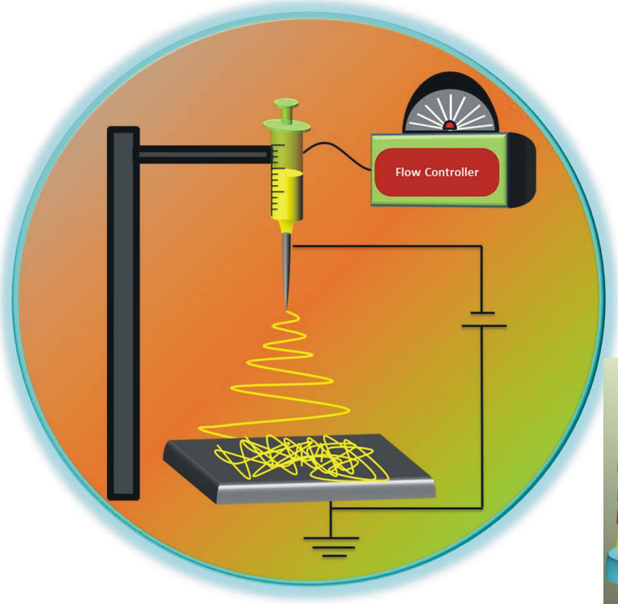

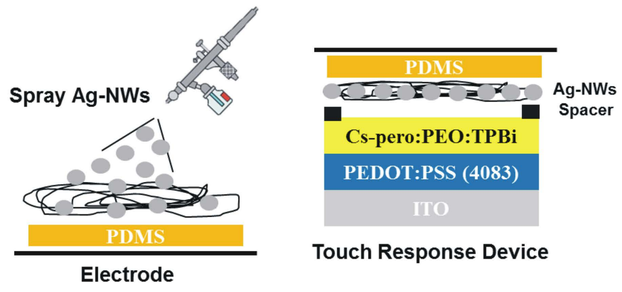

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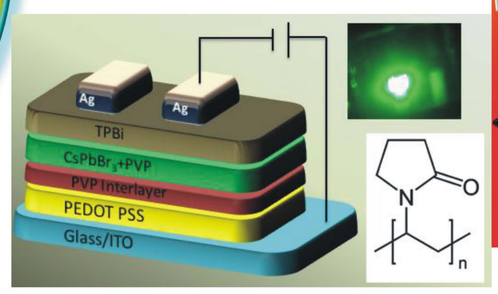

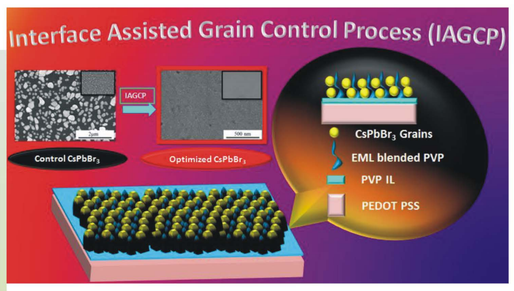

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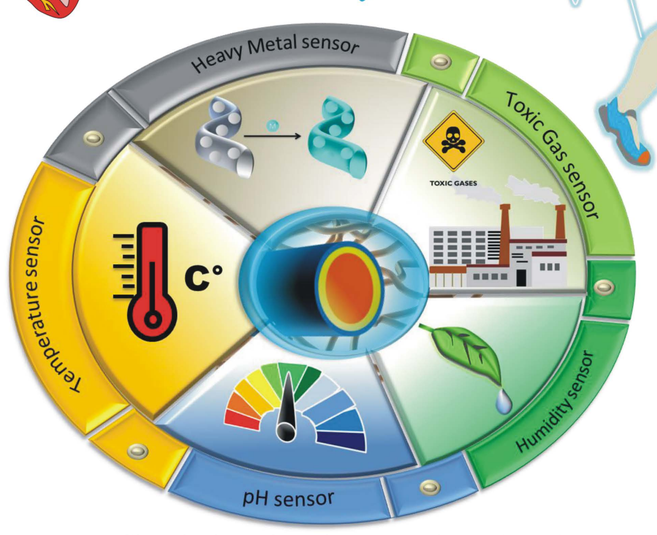

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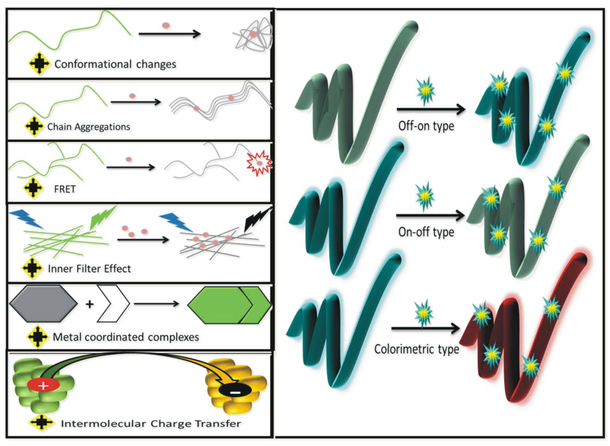
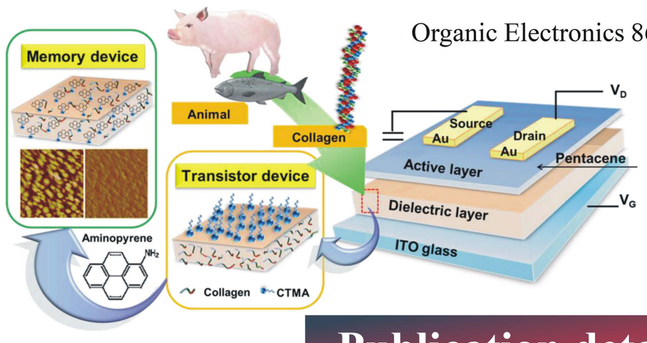


Polymers 2020, 12(3), 587.

Bio-Organic Field-Effect Transistor (BioFET) Memory



Organic Electronics 86 (2020) 105925.

Conclusions

In our works, we focused on fabricating nanofiber based wearable electronics which is intrinsically flexible and stretchable aiming to provide comfort and facile integrity. We intend to develop user friendly low cost and efficient wearable devices with less toxicity and eco-friendliness.

Publication details

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