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Development of Novel Micro-Supercapacitors with Smart Functions

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Abstract
Extensive attentions have been paid to the smart or stimuli-responsive devices, which can response to the changes from either the external environment or devices themselves. Some smart functions, including self-healing, electrochromism, stretchability, and thermal response are promising in various fields. The smart energy power sources also play an important role in intelligent electronics as functional components. Up to now, developing functional electrolyte, substrate, and electrode are three main approaches for introducing smart functions in micro-supercapacitors (MSCs). Although some progress has been made in smart responsive flexible MSCs, the research and development are still at the early stage due to the poor compatibility among those stimuli, active materials, and processing technologies. We will demonstrate the development of novel MSCs with electrochromic and thermoresponsive functions.

References

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Figures

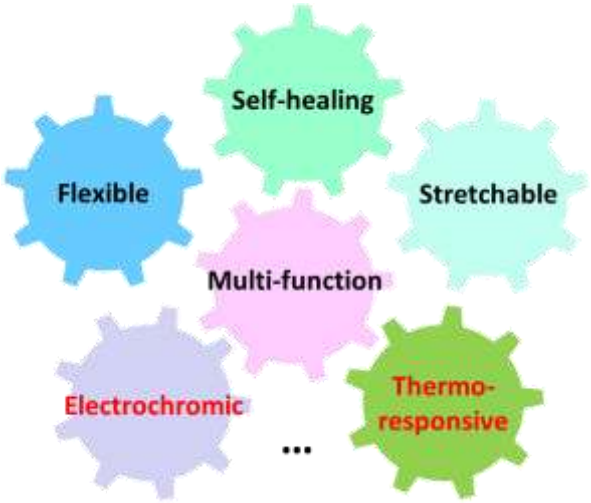

Figure 1: Novel micro-supercapacitors with smart functions.