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Flexible electronics biomedical applications

Recent advances in materials sciences and microfabrication technologies have enabled the development of flexible electronic systems that are able to integrate with soft tissues with curved and dynamic surfaces. The remarkable characteristics of these flexible devices have opened up a number of opportunities in disease condition control, improved surgical procedures and continuous health monitoring. The overall objective of this chapter is to provide an overview of current advances in the field of flexible electronics with an emphasis on biomedical applications. We will mainly discuss manufacturing strategies and materials for the development of physical, chemical and biological biosensors. The second part will explore emerging applications of flexible electronics in wound healing, wearable electronics, implantable devices and surgical tools, as well as point-of-care diagnostic devices. 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