

Conducting polymer-hydrogels for medical electrode applications

REVIEW ARTICLE

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Abstract Conducting polymers hold significant promise as electrode coatings; however, they are characterized by inherently poor mechanical properties. Blending or producing layered conducting polymers with other polymer forms, such as hydrogels, has been proposed as an approach to improving these properties. There are many challenges to producing hybrid polymers incorporating conducting polymers and hydrogels including the fabrication of structures based on two such dissimilar materials and evaluation of the properties of the resulting structures. Although both fabrication and evaluation of structure–property relationships remain challenges, materials comprised of conducting polymers and hydrogels are promising for the next generation of bioactive electrode coatings.

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