

综述

电活性导电聚合物组织工程支架材料研究进展

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收稿日期 2006-6-14 修回日期 网络版发布日期 2006-12-29 接受日期

摘要 摘要: 由于具有电活性,

导电聚合物在神经和心肌等电刺激响应性细胞的培养及相关电活性组织工程支架的研究中具有潜在的应用前景, 而通过键合氨基酸基团或与天然蛋白共混可以提高其生物相容性。本文主要综述两种典型的导电聚合物-聚吡咯和聚苯胺(PANi)在组织工程支架方面的研究进展, 并特别阐述短肽与PANi的共价键合和电纺PANi/明胶共混纳米纤维的研究。

关键词 [导电聚合物](#) [聚吡咯](#) [聚苯胺](#) [生物相容性](#) [组织工程](#)

分类号

Research Progresses on Electroactive and Electrically Conductive Polymers for Tissue Engineering Scaffolds

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Abstract ABSTRACT: Electroactive and/or electrically conductive polymers have shown potential applications in the culture of excitable cells and as the electroactive scaffolds for neuronal or cardiac tissue engineering. The biocompatibility of the conductive polymer can be improved by covalently grafting or blending with oligo- or po- lypeptides. The new progresses in this area on two types of conductive polymers, polypyrrole and polyaniline (PANi) are reviewed in this paper. The studies of oligopeptide-modified PANi and electrospun PANi/gelatin nanofibers are highlighted.

Key words [conductive polymer](#) [polypyrrole](#) [polyaniline](#) [biocompatibility](#) [tissue engineering](#)

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