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Drug delivery

The development of drug delivery systems is a critical area of research in biomaterials. These systems aim to improve the efficacy and safety of drug administration by controlling the release rate and targeting the drug to the site of action. Various biomaterials, including polymers, liposomes, and hydrogels, are being explored for their potential in drug delivery. The design of these systems often involves the use of porous structures or specific chemical modifications to achieve the desired release profile.

Medical implants

Medical implants are biomaterials that are used to replace or support a part of the body. They can be used for a wide range of applications, including orthopedic implants, dental implants, and cardiac implants. The design of medical implants must take into account the mechanical properties, biocompatibility, and long-term stability of the material. Advances in biomaterials have led to the development of more durable and functional implants, improving the quality of life for patients.

Materials and methods

Materials

Polymers

