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Preface of MedMat

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Since the 20th century, with the development of synthetic chemistry, especially polymer material science, the development of biomedical materials has entered a fast lane. Biomedical materials are implantable and biocompatible materials, which are mainly used to diagnose, treatment, repair or replace diseased tissues and organs of living organisms or improve their functions. As early as ancient times, some natural materials such as cotton, linen fibers, and horse hair were used as sutures to close wounds. False teeth, noses, and ears were found in tombs in ancient China and Egypt. Nowadays, with the continuous development of economics and the elevation of living quality, there is an increasing demand for biomedical materials, especially for joints, artificial teeth,

cardiovascular systems, special surgical instruments, skin and tissue engineering. Therefore, driven by intelligent technology, novel biomaterials such as alloys, ceramics, bioglass, carbon-based materials, polymers, and injectable gels are continuously derived with rapidly increasing varieties. At present, biomedical materials have become one of the fastest developing and most promising directions in materials science, and the biomedical material industry has also become a representative of emerging industries with low energy consumption and high added value.

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