

عنوان مقاله:

An overview of Micro Grippers used in Micro-Nano-Mechanical Systems and comparing the Results in Medical Applications

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خلاصه مقاله:

In recent years, a lot of effort has been made to minimize systems in different fields. The practice of picking, placing and moving the tiny and sensitive parts are important issues. Micro-gripper for very small displacements are among key elements and they are used because of their ability to transfer objects in different ways with high precision. These grippers are used in various industries and fields such as micro-assembly, accelerometers in the automotive industry, communications and Telecommunication, Medical and Microbiologic devices. In microbiology to understand the behavior and interactions between cells as well as to ensure about heterogeneity of the cell population, it is necessary that the single cells be displaced at specific locations, which for this purpose, micro-grippers are used. These grippers are used in micro-assembling of small gears, optical lenses and micro-components of hybrid circuits. In medicine for eye, brain and nerve surgeries, the micro-gripper are also being used. In this article, we review several micro grippers, including magnetic, electromagnetic, electrostatic, pneumatic, thermal and piezoelectric ones and the applied results of each of them are investigated

کلمات کلیدی:

.Micro grippers, Micro-Displacement, Cell Manipulation

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