عنوان مقاله:

DYNAMIC SIMULATION OF NANOPARTICLE MANIPULATION BASED ON AFM NANO ROBOT

محل انتشار:

پانزدهمین کنفرانس سالانه مهندسی مکانیک (سال: 1386)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Korayem - *Robotic Research Laboratory College of Mechanical Engineering, Iran University of Science and Technology*

Zakeri - *Robotic Research Laboratory College of Mechanical Engineering, Iran University of Science and Technology*

خلاصه مقاله:

In this paper, simulation of AFM-based nanomanipulation dynamics and its sensitivity to parameters variation in pushing purposes will study. The nanoparticle can be traced at every moment and at the same time all the dynamics and deformations can be achieved from numerical simulation. Dynamic equations of probe and particle are developed based on free diagram of problem. Initial conditions are defined based on geometry and material of cantilever, nanoparticle, and probe, and substrate constant velocity. Finally, simulation test is carried out by using a program written in Mathematica software.

کلمات کلیدی:

nanorobotic، nanomanipulation، pushing، dynamics، simulation