

particular cases.
New type of biomechanical motor. M.I. Molodtsov, E.L. Grishchuk, J.R. McIntosh, F.I. Ataullakhanov. *Russ. Khim. Zhurn.* (Zhurn. Ross. Khim. ob-va im. D.I.Mendeleeva), 2007, v. LI, № 1.

Chromosome segregation in mitosis is achieved due to interaction between microtubules of the mitotic spindle and kinetochore regions on chromosomes. In 80-s it has been suggested that microtubules during depolymerization can develop forces that contribute to chromosome movements. This article deals with experiments in which these forces have been measured with optical tweezers. Analysis of the experiments with a mathematical model showed that a single microtubule can generate force ten times larger than the force developed by a motor enzyme (kinesin). It has been found that mechano-chemical mechanism of the force generation by a depolymerizing microtubule is unique.