Optically driven mechanical micro/nanosystems

The aim to build and apply optically driven mechanical systems at ever smaller scale runs into many problems. The use of the linear momentum as well as orbital and spin angular momentum solves many problems and provides means to drive such systems. Significant progress has been made by a number of groups in optically driven micromachines. The ultimate scale to which one can take such systems according to classical mechanics depends on Brownian motion and fabrication. At increasingly smaller scale the quantum effects become more important. However these effects are not obstacles but rather represent resources to be exploited in order to provide a way to the development of novel quantum technologies.