

Tunable and storage potential wells using microring resonator system for bio-cell trapping and delivery

Abstract:

In this work, we propose the technique that can be used to trap/delivery bio-cell by using the concept of dark solitons and potential well, in which the trapping force is formed by using the intense optical vortices generated within the series ring and the PANDA ring resonator, the microscopic bio-cell can be trapped and moved dynamically, in which the valley of the dark soliton is generated and controlled within the PANDA ring resonator by the control port signals.