Optical resonance phase shift simulation within a modified add-drop filter for biosensors

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Whispering gallery mode (WGM) of light within a modified add-drop filter can be applied and formed the biosensor, in which the bio-molecules can be controlled and bound within the surface waveguide. In the principle, light signals can be absorbed by the active bio-molecules and surrounded by the center ring wave surface within the sensing device and introduced the optical phase shift related to the bio-molecule behaviors.


Figure 1. Schematic diagram of biosensor using a PANDA ring resonator.

Figure 2. WGM of light for the bio-sensing device.