

# Q & A

- **What is the difference between gain and loss cavities?**

Those are physically same cavities, manufactured in same processes. With a pumping beam, it can amplify light inside the cavity due to the property of the quantum well. Therefore, the shined microring experiences gain while the other one provides loss.

- **Pump laser beam shined on microrings does not seem to be symmetric. Why is it?**

To make PT-symmetric three microrings, each cavity have to act as a source of gain, neutral, loss. Gain and loss of the neutral cavity should be balanced. Also, gain and loss cavities should be balanced, too. To do that, at least two control parameters are needed. The power of the pump laser is the one of the factors can be controlled, and the other one is the shining area.