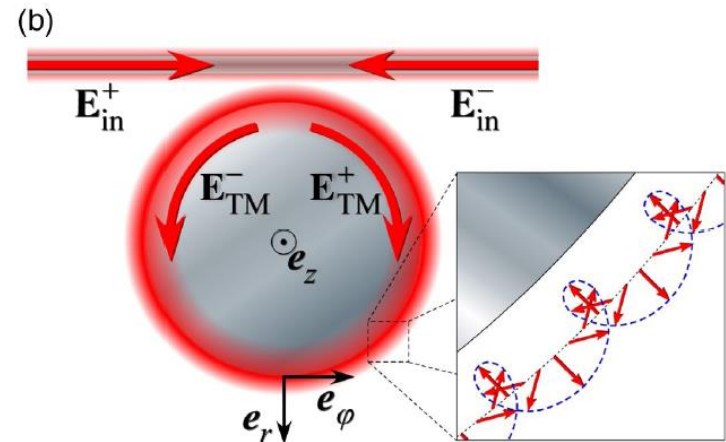


Q&A

- Q : How can decide quantum axis of the atom?
- A : If light is sent from the left through the nanofiber, it couples to E_{TM}^+ mode of which the magnetic field is perpendicular to wave vector. E_{TM}^+ mode can be represented as $E_{TM}^+ = |E_{trans}|e_r + |E_{long}|e_\phi$ and microresonator made of silica has a property that E_{TM}^\pm modes almost overlap with circularly σ^\pm polarized mode. And the quantization axis of the Rb atom is determined by the z-axis of input source. So, light pulse from the alternating direction will prepare the atom and subsequent pulse from the opposite side is used for photon subtraction.



Q&A

- Q : How to calibrate the input photon?
- A : According to the reference, it seems that they use nondestructive photon detection. (A. Reiserer, S. Ritter, G. Rempe, Science 342, 1349–1351 (2013))