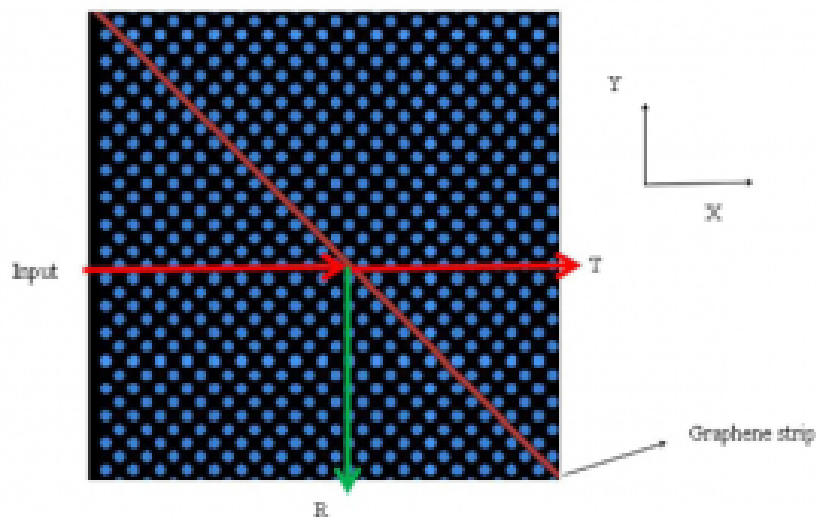


# A tunable high-efficiency optical switch based on graphene coupled photonic crystals structure



A plasmonic device for high-efficiency optical switch is proposed based on graphene coupled photonic crystals structure. The finite-difference time-domain simulation results show that the transmission and reflection ratio can be controlled by tuning the parameters of the graphene strip, such as chemical potential or width. And the corresponding contrast ratio can be 25 and 26.8 for a single and double graphene strips coupled photonic crystals structure, respectively. The results in this paper will have potential application in nanosensors and integrated photonic circuits.

**Sources:** <http://dx.doi.org/10.1080/09500340.2017.1298859>

**Related paper:** Fang Chen, BA tunable high-efficiency optical switch based on graphene coupled photonic crystals structure, Journal of

Modern Optics, Pages 1-7, (2017).