QPhysics
AT QUEENS COLLEGE

Colloquium Notice

Eleana Makri

Queens College of CUNY

Reflective photonic limiters based on resonant transmission

Photonic limiters are protection devices which transmit electromagnetic radiation at low-level incident intensity while blocking high-intensity electromagnetic signals. Passive limiters typically block excessive radiation by means of absorption, which can often cause their destruction due to overheating. We propose the design of a reflective limiter based on resonant transmission through a defect localized mode. The benefit of this design is that it offers protection by reflecting the excessive radiation instead of absorbing it, which reduces overheating problems and results in a device with an extended dynamic range. In this talk, I will present implementations of this idea in band-gap systems in (i) the infrared domain, based on multilayer photonic crystals, and (ii) the microwave domain, based on chiral or CT symmetric coupled resonator waveguide arrays.

Monday
December 10, 2018
Starts at 12:15 PM
Coffee at 12:00 PM
Physics Conference Room, SB B326