

Abstract Submitted  
for the MAR14 Meeting of  
The American Physical Society

**Optical Asymmetry Induced by PT-symmetric Nonlinear Fano Resonances** NICHOLAS BENDER, FAKRODDIN NAZARI, HAMIDREZA RAMEZANI, Wesleyan University, MOHAMMAD MORAVVEJ-FARSHI, Tarbait Modaers University, DEMETRIOS CHRISTODOULIDES, University of Central Florida, TSAMPIKOS KOTTOS, Wesleyan University — We introduce a new type of Fano resonances, realized in a photonic circuit which consists of two nonlinear PT-symmetric micro-resonators side-coupled to a waveguide, which have line-shape and resonance position that depends on the direction of the incident light. We utilize these features in order to induce asymmetric transport up to 47 dBs in the optical C-window. Our set-up requires low input power and does not compromise the power and frequency characteristics of the output signal.

Nicholas Bender  
Wesleyan University

Date submitted: 13 Nov 2013

Electronic form version 1.4