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Monipulation of Light Propagation in Photonic Crystal ZHIYUAN YANG, Department of Physics, UNT, AMITABH JOSHI, Department of Physics and Institute for Quantum Studies, Texas A&M University, YURI ROSTOVTSEV, Department of Physics, UNT — A propagation of probe electromagnetic waves have been investigated in a heterostructure formed by linear and nonlinear layers. The appearance of a forbidden band gap for a probe electromagnetic field induced by another control electromagnetic field has been shown to lead to trapping of a probe pulse inside structure. Switching off the control field leads to resuming the propagation of the probe pulse. Implimentation of nonlinear layer has been suggested.

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