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Study of ultrafast nonlinear pulse shaping effect of strained saturable Bragg reflector (SSBR) with coherent quantum control technique CHAO-KUEI LEE, CHIA-CHEN HSU, IEO, NSYSU — In this work, a strained saturable Bragg reflector (SSBR) for passive mode-locking of Ti:sapphire lasers was investigated by pulse shaping technique. Incident pulses of several wavelengths and with zero, positive, or negative chirp were employed. A Kramers-Kronig relation like behavior of pulse shaping factor in the strained quantum well was observed. The phenomenon is attributed to anomalous dispersion and higher order nonlinearity.

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