

ACTIVE FEEDBACK CONTROLLED
BEAM-COUPPLING IN TIN
HYPOTHIODIPHOSPHATE

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S u m m a r y

The first active feedback experiments are performed with photorefractive $\text{Sn}_2\text{P}_2\text{S}_6$ characterized by inhibition of the steady-state gain factor due to the superposition of two out-of-phase space-charge gratings (formed by movable charge carriers of different signs). The active feedback allows one to suppress the compensating grating and to keep the steady-state gain factor as large as the transient one. One way to achieve this goal is to use the second harmonic of the modulation frequency to generate an error signal and to choose the modulation frequency larger than the reciprocal relaxation time of the slow grating but smaller than that of the fast grating.