

High-efficiency real-time optical holographic display using quantum dot doped liquid crystal

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Abstract: We report a 60-Hz real-time optical holographic display using quantum-dot-doped liquid crystal. The transient first-order diffraction efficiency is improved to 20%.

OCIS codes: (090.2870) Holographic display

1. Introduction

We report a real-time optical holographic display featuring quantum-dot-doped liquid crystal. Its response time of holographic recording is measured in the order of several to tens of milliseconds, depending on recording beam intensities, applied voltage and grating periods. The transient first-order diffraction efficiency is up to 20%. A reconstructed holographic video at a refresh rate of 60 Hz is demonstrated by the experiments.

References

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