

Author: Keyword:

Search

ADVANCED

[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1882-4935

PRINT ISSN : 0914-3319

Journal of Printing Science and Technology

Vol. 41 (2004) , No. 5 pp.279-285

[\[Image PDF \(1190K\)\]](#) [\[References\]](#)**Study on Holographic Recording of Photopolymer Utilizing Cationic Polymerization**Ken'ichi KOSEKI¹⁾, Yohei SHOJI¹⁾ and Chiaki ISHII¹⁾

1) Graduate School of Science and Technology, Chiba University

(Accepted July 2, 2004)

Abstract

Volume shrinkage is one of the problems hindering the use of photopolymers as holographic memories. In this study, we examined holographic recording in photopolymers utilizing cationic polymerization reaction with little shrinkage. We utilized oxetane and epoxide as the cationic monomers. Binder and monomer optimization was carried out from the viewpoint of the diffraction efficiency of the recorded hologram and it was clarified that the glass transition temperature of the photosensitive layer and the refractive index difference between the binder and the monomer were correlated with the diffraction efficiency. A low glass transition temperature and a large refractive index difference indicate a high diffraction efficiency.

[\[Image PDF \(1190K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

To cite this article:

Ken'ichi KOSEKI, Yohei SHOJI and Chiaki ISHII, Journal of Printing Science and Technology, **41**, 279 (2004) .



[Japan Science and Technology Information Aggregator, Electronic](#)

