

Title (en)  
VOLUME PHASE HOLOGRAM AND METHOD FOR PRODUCING THE SAME

Title (de)  
VOLUMENPHASENHOLOGRAMM UND VERFAHREN ZU DESSEN HERSTELLUNG

Title (fr)  
HOLOGRAMME DE PHASE VOLUMIQUE ET PROCEDE DE PRODUCTION DUDIT HOLOGRAMME

Publication  
**EP 1023643 A4 20030611 (EN)**

Application  
**EP 98946901 A 19980910**

Priority  
• RU 97115684 A 19970919  
• US 9818778 W 19980910

Abstract (en)  
[origin: WO9915939A1] The hologram comprises: a porous transparent sileaceous body having a plurality of mutually interconnected microcavities or pores, the mean radius of which is lower than the wavelength of the hologram recording light and the wavelength of the hologram reading light, a photolysis product of a photolysable material, said product being attached to walls of certain microcavities and being spatially distributed in accordance with the recorded interference pattern, and a solid transparent polymeric material filling said microcavities, said polymeric material exhibiting local variations of refractive index, said variations being spatially modulated in conformity with the recorded interference pattern, said photolysis product being a polymerization modifier for a composition polymerizable into said polymeric filling material.

IPC 1-7  
**G03H 1/02**; **G03H 1/04**; **G03H 1/18**; **G03C 1/735**; **G03C 1/73**; **G03F 7/00**; **G03C 5/22**

IPC 8 full level  
**G03F 7/004** (2006.01); **G01H 1/00** (2006.01); **G03F 7/00** (2006.01); **G03F 7/04** (2006.01); **G03F 7/40** (2006.01); **G03H 1/02** (2006.01); **G03H 1/04** (2006.01); **G03H 1/18** (2006.01)

CPC (source: EP KR)  
**G03F 7/001** (2013.01 - EP); **G03F 7/04** (2013.01 - EP); **G03F 7/40** (2013.01 - EP); **G03H 1/02** (2013.01 - EP KR); **G03H 1/0272** (2013.01 - EP KR); **G03F 7/001** (2013.01 - KR); **G03F 7/04** (2013.01 - KR); **G03F 7/40** (2013.01 - KR); **G03H 1/0248** (2013.01 - EP KR); **G03H 2001/026** (2013.01 - EP KR); **G03H 2001/0264** (2013.01 - EP); **G03H 2270/53** (2013.01 - EP)

Citation (search report)  
• [XY] US 4187111 A 19800205 - CHANDROSS EDWIN A [US], et al  
• [X] US 4842968 A 19890627 - KOJIMA CHIAKI [JP], et al  
• [Y] EP 0353864 A2 19900207 - MARCONI GEC LTD [GB]  
• [Y] US 5213915 A 19930525 - ICHIHASHI TAICHI [JP], et al  
• [Y] EP 0409396 A2 19910123 - NIPPON SHEET GLASS CO LTD [JP], et al  
• [A] US 5627217 A 19970506 - RILLING KEN [CA], et al  
• [Y] LÉRONDEL ET AL.: "Holography in porous silicon", J. IMAGING SCIENCE & TECHNOL., vol. 41, no. 5, September 1997 (1997-09-01), pages 468 - 473, XP000721408  
• See references of WO 9915939A1

Designated contracting state (EPC)  
BE DE FR GB NL

DOCDB simple family (publication)  
**WO 9915939 A1 19990401**; CN 1271429 A 20001025; EP 1023643 A1 20000802; EP 1023643 A4 20030611; JP 2001517812 A 20011009; KR 20010024157 A 20010326; RU 2168707 C2 20010610

DOCDB simple family (application)  
**US 9818778 W 19980910**; CN 98809312 A 19980910; EP 98946901 A 19980910; JP 2000513176 A 19980910; KR 20007002924 A 20000318; RU 97115684 A 19970919