

Title (en)  
PHOTORESIST COMPOSITION FOR DEEP UV AND IMAGING PROCESS THEREOF

Title (de)  
FOTORESISTZUSAMMENSETZUNG FÜR DAS TIEFE UV UND VERFAHREN ZUR BILDERZEUGUNG DARAUS

Title (fr)  
COMPOSITION DE RESINE PHOTOSENSIBLE POUR L'ULTRAVIOLET PROFOND ET PROCEDE

Publication  
**EP 1631863 A2 20060308 (EN)**

Application  
**EP 04731579 A 20040507**

Priority  
• EP 2004004867 W 20040507  
• US 44054203 A 20030516

Abstract (en)  
[origin: WO2004102272A2] The present invention relates to a novel photoresist composition sensitive to radiation in the deep ultraviolet, particularly a positive working photoresist sensitive in the range of 100-300 nm, and a process for using it. The photoresist composition comprises: a) a polymer that is insoluble in an aqueous alkaline solution and comprises at least one acid labile group, and further where the polymer comprises at least one alicyclic hydrocarbon unit, at least one cyclic anhydride, at least one acrylate unit with the structure (1), and at least one acrylate unit with structure (2): where, R' and R are independently H or (C1-C4)alkyl; R1 is a pendant cyclic lactone, and, R2 is a pendant nonlactone aliphatic hydrocarbon moiety, b) a compound or a mixture of compounds capable of producing acid upon irradiation. The invention further relates to the use of a solvent comprising valerolactone as a solvent for photosensitive materials. Preferably, the solvent is gamma valerolactone. The solvent may be in a mixture with another photoresist solvent or solvents.

IPC 1-7  
**G03F 7/039**; **G03F 7/004**

IPC 8 full level  
**G03F 7/004** (2006.01); **G03F 7/039** (2006.01)

CPC (source: EP)  
**G03F 7/0048** (2013.01); **G03F 7/0395** (2013.01); **G03F 7/0397** (2013.01)

Citation (search report)  
See references of WO 2004102272A2

Designated contracting state (EPC)  
DE FR

DOCDB simple family (publication)  
**WO 2004102272 A2 20041125**; **WO 2004102272 A3 20050210**; CN 1791838 A 20060621; EP 1631863 A2 20060308; JP 2007505362 A 20070308; KR 20060020628 A 20060306; TW 200506531 A 20050216

DOCDB simple family (application)  
**EP 2004004867 W 20040507**; CN 200480013389 A 20040507; EP 04731579 A 20040507; JP 2006529755 A 20040507; KR 20057021777 A 20051115; TW 93112335 A 20040430