Title (en)

REMOVAL OF PHOTORESIST AND PHOTORESIST RESIDUE FROM SEMICONDUCTORS USING SUPERCRITICAL CARBON DIOXIDE PROCESS

Title (de)

ENTFERNUNG VON PHOTORESIST UND PHOTORESISTRÜCKSTÄNDEN AUF HALBLEITERN DURCH EIN ÜBERKRITISCHES KOHLENDIOXID-VERFAHREN

Title (fr)

ELIMINATION DE PHOTORESINE ET DE RESTES DE PHOTORESINE D'UN SEMI-CONDUCTEUR AU MOYEN DE DIOXYDE DE CARBONE SUPERCRITIQUE

Publication

EP 1309990 A1 20030514 (EN)

Application

EP 00954102 A 20000814

Priority

US 0022454 W 20000814

Abstract (en)

[origin: WO0215251A1] A method of removing a photoresist or a photoresist residue from a semiconductor substrate is disclosed. The semiconductor substrate with the photoresist or the photoresist residue on a surface of the semiconductor substrate is placed within a pressure chamber. The pressure chamber is then pressurized. Supercritical carbon dioxide and a stripper chemical are introduced to the pressure chamber. The supercritical carbon dioxide and the stripper chemical are maintained in contact with the photoresist or the photoresist residue until the photoresist or the photoresist residue is removed from the semiconductor substrate. The pressure chamber is then flushed and vented. In an alternative embodiment, supercritical CO2 carries organic or inorganic chemicals or a combination of the organic and inorganic chemicals into the pressure chamber. The organic or inorganic chemicals or a combination of the organic and inorganic chemicals interacts with resist, resist residues, and organic contaminants on the wafer surface and carry these materials and remaining chemicals out of the chamber.

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B08B 7/00 (2006.01); **G03F 7/42** (2006.01); **H01L 21/02** (2006.01); **H01L 21/027** (2006.01); **H01L 21/304** (2006.01); **H01L 21/306** (2006.01); **H01L 21/311** (2006.01); **H01L 21/3213** (2006.01)

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B08B 7/0021 (2013.01 - EP); **G03F 7/425** (2013.01 - EP); **H01L 21/02063** (2013.01 - EP); **H01L 21/02071** (2013.01 - EP); **H01L 21/304** (2013.01 - KR); **H01L 21/31133** (2013.01 - EP)

Citation (search report)

See references of WO 0215251A1

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