Title (en)

A NOVEL DEPOSITION-PLASMA CURE CYCLE PROCESS TO ENHANCE FILM QUALITY OF SILICON DIOXIDE

Title (de)

NEUARTIGER ABSCHEIDUNGSPLASMA-AUSHÄRTZYKLUSPROZESS ZUR VERBESSERUNG DER FILMQUALITÄT VON SILICIUMDIOXID

Title (fr)

NOUVEAU PROCEDE COMBINANT DEPOT ET DURCISSEMENT PAR PLASMA PERMETTANT D'AMELIORER LA QUALITE D'UN FILM DE DIOXYDE DE SILICIUM

Publication

EP 2036120 A2 20090318 (EN)

Application

EP 07784191 A 20070529

Priority

- US 2007069899 W 20070529
- US 80348106 P 20060530
- US 75396807 A 20070525

Abstract (en)

[origin: WO2007140377A2] Methods of filling a gap on a substrate with silicon oxide are described. The methods may include the steps of introducing an organo-silicon precursor and an oxygen precursor to a deposition chamber, reacting the precursors to form a first silicon oxide layer in the gap on the substrate, and etching the first silicon oxide layer to reduce the carbon content in the layer. The methods may also include forming a second silicon oxide layer on the first layer, and etching the second layer to reduce the carbon content in the second layer. The silicon oxide layers are annealed after the gap is filled.

IPC 8 full level

H01L 21/302 (2006.01); **C23C 16/04** (2006.01); **C23C 16/40** (2006.01); **C23C 16/56** (2006.01); **H01L 21/02** (2006.01); **H01L 21/316** (2006.01); **H01L 21/66** (2006.01); **H01L 21/762** (2006.01)

CPC (source: EP KR)

C23C 16/045 (2013.01 - EP KR); **C23C 16/402** (2013.01 - EP KR); **C23C 16/56** (2013.01 - EP KR); **H01L 21/02271** (2013.01 - EP); **H01L 21/02277** (2013.01 - EP KR); **H01L 21/02323** (2013.01 - EP KR); **H01L 21/0234** (2013.01 - EP KR); **H01L 21/02359** (2013.01 - EP); **H01L 21/0262** (2013.01 - KR); **H01L 21/76224** (2013.01 - EP KR); **H01L 22/12** (2013.01 - EP KR); H01L 21/02126 (2013.01 - EP); H01L 21/02164 (2013.01 - EP); H01L 21/02211 (2013.01 - EP); H01L 21/02216 (2013.01 - EP); H01L 21/02274 (2013.01 - EP); H01L 21/0228 (2013.01 - EP); H01L 2924/0002 (2013.01 - EP)

C-Set (source: EP)

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