

Title (en)
DOPED FUSED SILICA COMPONENT FOR USE IN A PLASMA-ASSISTED MANUFACTURING PROCESS AND METHOD FOR PRODUCING THE COMPONENT

Title (de)
BAUTEIL AUS DOTIERTEM QUARZGLAS FÜR DEN EINSATZ IN EINEM PLASMA-UNTERSTÜTZTEN FERTIGUNGSPROZESS SOWIE VERFAHREN ZUR HERSTELLUNG DES BAUTEILS

Title (fr)
PIÈCE CONSTITUÉE DE VERRE DE SILICE DOPÉ DESTINÉE À ÊTRE UTILISÉE DANS UN PROCESSUS DE FABRICATION ASSISTÉ PAR PLASMA ET PROCÉDÉ POUR PRODUIRE LA PIÈCE

Publication
EP 3938324 A1 20220119 (DE)

Application
EP 20706303 A 20200227

Priority
• EP 19162613 A 20190313
• EP 2020055116 W 20200227

Abstract (en)
[origin: WO2020182479A1] A known component in doped fused silica for use in a plasma-assisted manufacturing process, especially in semiconductor fabrication, comprises at least one dopant capable of reacting with fluorine to form a fluoride compound, the fluoride compound having a boiling point higher than that of SiF₄. To specify, on this basis, a doped fused silica component which when used in a plasma-assisted manufacturing process exhibits high dry-etch resistance and low particle formation and in particular a uniform etch ablation, a proposal made is that the doped fused silica should have a microhomogeneity that is defined (a) by a surface roughness with an Ra of less than 20 nm when the surface has undergone a dry-etch procedure specified in the description, and/or (b) by a dopant distribution having a lateral concentration profile in which maxima in the dopant concentration have a mean spacing of less than 30 μm from one another.

IPC 8 full level
C03B 19/06 (2006.01); **C03C 3/06** (2006.01)

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