

Title (en)  
RUTHENIUM LAYER DEPOSITION APPARATUS AND METHOD

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR ABSCHIEDUNG EINER RUTHENIUMSCHICHT

Title (fr)  
APPAREIL ET PROCEDE DE DEPORT DE COUCHE DE RUTHENIUM

Publication  
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Application  
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Abstract (en)  
[origin: WO2006081234A2] Embodiments of the invention provide apparatuses and methods for forming a ruthenium-containing layer on a substrate surface from a ruthenium tetroxide containing gas. Generally, the method includes exposing a substrate surface to a ruthenium tetroxide vapor to form a catalytic layer on the substrate surface and subsequently filling device structures on the substrate surface by at least one deposition process. In one embodiment, the ruthenium containing layer is formed on a substrate surface by creating ruthenium tetroxide in an external vessel and then delivering the generated ruthenium tetroxide gas to a temperature controlled substrate surface positioned within a processing chamber. In another embodiment, a ruthenium containing layer is formed on a substrate surface, using the ruthenium tetroxide containing solvent. In another embodiment, the solvent is separated from a ruthenium tetroxide containing solvent mixture and the remaining ruthenium tetroxide is used to form a ruthenium containing layer on the substrate surface.

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