1. Record Nr. UNINA9910787025503321

Titolo	Ultra clean processing of semiconductor surfaces XII : selected, peer reviewed papers from the 12th International Symposium on Ultra Clean Processing of Semiconductor Surfaces (UCPSS) September 21-24, 2014, Brussels, Belgium / / edited by Paul Mertens, Marc Meuris and Marc Heyns
Pubbl/distr/stampa	Pfaffikon, Switzerland : , : TTP, , 2014 Enfield, New Hampshire : , : Trans Tech Publications Ltd, , [date of distribution not identified] ©2014
ISBN	3-03826-626-4
Descrizione fisica	1 online resource (331 p.)
Collana	Solid State Phenomena, , 1662-7799 ; ; Volume 219
Disciplina	621.38152
Soggetti	Semiconductors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Ultra Clean Processing of Semiconductor Surfaces XII; Preface, Committee and Acknowledgement; Table of Contents; Chapter 1: Cleaning for FEOL Applications; Necessity of Cleaning and its Application in Future Memory Devices; Removal of Interfacial Layer in HfO2 Gate Stack by Post-Gate Cleaning Using NF3/NH3 Dry Cleaning Technique; Catalyst Assisted Low Temperature Pre Epitaxial Cleaning for Si and SiGe Surfaces; HF-Last Wet Clean in Combination with a Low Temperature GeH4-Assisted HCl In Situ Clean Prior to Si0.8Ge0.2-on-Si Epitaxial Growth Retardation Phenomenon of Oxide Removal during the Formation of Dual Gate Oxide via PR-Mask Wet Etching Aluminum Reduction in SC1; Metal Removal Efficiency in Deep Submicron Trenches by Wet Chemicals; Impact of Surface Treatment of Si3N4 on Subsequent SiO2 Deposition; Operation of a New Electrolyzed Cell Using Boron Doped Diamond Electrodes ; Chapter 2: Cleaning for FEOL Applications: Beyond-Si Active Area; InGaAs (110) Surface Cleaning Using Atomic Hydrogen; Surface Chemistry of GaAs(100) and InAs(100) Etching with

Tartaric Acid; Nanoscale Etching and Reoxidation of InAs Passivation of In Sb(100) with 1-Eicosanethiol Self-Assembled Monolayers Cross-Contamination Risk Evaluation during Fabrication of III-V Devices in a Silicon Processing Environment; Surface Cleaning of Graphene by CO2 Cluster; Chapter 3: Wet Etching for FEOL Applications; Process Control Challenges of Wet Etching Large MEMS Si Cavities; Wet Etch Rate Behavior of Poly-Si in TMAH Solution at Various Ambient Gas Conditions; Advanced Monitoring of TMAH Solution; Effect of Dissolved Oxygen for Advanced Wet Processing; Watermark Formation on Bare Silicon: Impact of Illumination and Substrate Doping Selective Nitride Etching with Phosphoric and Sulfuric Acid Mixtures Using a Single-Wafer Wet Processor Single Wafer Selective Silicon Nitride Removal with Phosphoric Acid and Steam; Pt Etching Method at Low Temperature Using Electrolyzed Sulfuric Acid Solution; Nickel Selective Etch for Contacts on Ge Based Devices; Chapter 4: Wet Processing of High Aspect Ratio Structures; Study of Wetting of Nanostructures Using Decoration by Etching; Impact of Electrostatic Effects on Wet Etching Phenomenon in Nanoscale Region; Freeze Drying of High Aspect Ratio Structures
Chapter 5: Fluid Dynamics, Cleaning Mechanics Effect of DI-Water Dilution and Etchant Arm Movement on Spinning Type Wet Etch; Effect of Nozzle Distance and Fluid Flow Rate in Jet Spray Wafer Cleaning Process; Effects of Chamber Pressure on the Performance of CO2 Beam Cleaning; Physical Chemistry of Water Droplets in Wafer Cleaning with Low Water Use; Metal Etch in Advanced Immersion Tank with Precision Uniformity Using Agitation and Wafer Rotation; Novel Slurry Injection System for Improved Slurry Flow and Reduced Defects in CMP Effect of Viscoelasticity of PVA Brush on Friction during Post-CMP Cleaning: A Guideline for Nodule Configuration

Sommario/riassunto

Collection of selected, peer reviewed papers from the 12th InternationalSymposium on Ultra Clean Processing of Semiconductor Surfaces (UCPSS), September 21-24, 2014, Brussels, Belgium. The 71 papers are grouped as follows: Chapter 1: Cleaning for FEOL Applications, Chapter 2: Cleaning for FEOL Applications: Beyond-Si Active Area, Chapter 3: Wet Etching for FEOL Applications, Chapter 4: Wet Processing of High Aspect Ratio Structures, Chapter 5: Fluid Dynamics, Cleaning Mechanics, Chapter 6: Photo Resist Performance and Rework, Chapter 7: Cleaning for BEOL Interconnect Applications, Chapter 8: C