

# Sylvain Maitrejean

## List of Publications by Year in descending order

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Version: 2024-02-01

56  
papers

1,190  
citations

430874

18  
h-index

434195

31  
g-index

59  
all docs

59  
docs citations

59  
times ranked

1210  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Confined selective lateral epitaxial growth of 16-nm thick Ge nanostructures on SOI substrates: Advantages and challenges. Applied Surface Science, 2018, 445, 77-80.                      | 6.1 | 1         |
| 2  | Local lateral integration of 16-nm thick Ge nanowires on silicon on insulator substrates. Applied Physics Letters, 2018, 112, 241602.  | 3.3 | 0         |
| 3  | An analysis of stress evolution in stacked GAA transistors. , 2016, , .  |     | 3         |
| 4  | A review of the mechanical stressors efficiency applied to the ultra-thin body & buried oxide fully depleted silicon on insulator technology. Solid-State Electronics, 2016, 117, 100-116. | 1.4 | 9         |
| 5  | Converting SOI to sSOI through Amorphization and Crystallization: Material Analysis and Device Demonstration. ECS Journal of Solid State Science and Technology, 2015, 4, P376-P381.       | 1.8 | 1         |
| 6  | A study of nitrogen behavior in the formation of Ta/TaN and Ti/TaN alloyed metal electrodes on SiO <sub>2</sub> and HfO <sub>2</sub> dielectrics. Applied Physics Letters, 2014, 104, .    | 3.3 | 5         |
| 7  | The effect of Ta interface on the crystallization of amorphous phase change material thin films. Applied Physics Letters, 2014, 104, .   | 3.3 | 7         |
| 8  | A Novel Programming Technique to Boost Low-Resistance State Performance in Ge-Rich GST Phase Change Memory. IEEE Transactions on Electron Devices, 2014, 61, 1246-1254.                    | 3.0 | 38        |
| 9  | Study of low temperature MOCVD deposition of TiN barrier layer for copper diffusion in high aspect ratio through silicon vias. Microelectronic Engineering, 2014, 120, 127-132.            | 2.4 | 30        |
| 10 | Material engineering of Ge <sub>x</sub> Te <sub>100-x</sub> compounds to improve phase-change memory performances. Solid-State Electronics, 2013, 89, 93-100.                              | 1.4 | 25        |
| 11 | Vibrational properties and stabilization mechanism of the amorphous phase of doped GeTe. Physical Review B, 2013, 88, .  | 3.2 | 24        |
| 12 | Plasma Enhanced Chemical Vapor Deposition of Conformal GeTe Layer for Phase Change Memory Applications. ECS Journal of Solid State Science and Technology, 2012, 1, Q119-Q122.             | 1.8 | 4         |
| 13 | Impact of Oxidation on Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> and GeTe Phase-Change Properties. Journal of the Electrochemical Society, 2012, 159, H373-H377.                     | 2.9 | 58        |
| 14 | Crystallization of Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> nanometric phase change material clusters made by gas-phase condensation. Applied Physics Letters, 2012, 101, 233113.   | 3.3 | 17        |
| 15 | Carbon-doped GeTe: A promising material for Phase-Change Memories. Solid-State Electronics, 2011, 65-66, 197-204.  | 1.4 | 73        |
| 16 | GeTe phase change material and Ti based electrode: Study of thermal stability and adhesion. Microelectronic Engineering, 2011, 88, 817-821.  | 2.4 | 16        |
| 17 | Analysis by simulation of amorphization current in phase change memory applied to pillar and GST confined type cells. Microelectronic Engineering, 2011, 88, 827-832.                      | 2.4 | 5         |
| 18 | Crystallization study of melt quenched amorphous GeTe by transmission electron microscopy for phase change memory applications. Applied Physics Letters, 2011, 99, 243103.                 | 3.3 | 20        |

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|----|---|-----|-----------|
| 19 | Effect of carbon doping on the structure of amorphous GeTe phase change material. Applied Physics Letters, 2011, 99, .  | 3.3 | 60        |
| 20 | Evidence of Heterogeneous Strain during Crystallization of Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> Thin Film. Electrochemical and Solid-State Letters, 2011, 14, H285.  | 2.2 | 2         |
| 21 | Pattern size dependence of grain growth in Cu interconnects. Scripta Materialia, 2010, 63, 965-968.   | 5.2 | 11        |
| 22 | Grain morphology of Cu damascene lines. Microelectronic Engineering, 2010, 87, 383-386.   | 2.4 | 14        |
| 23 | 32nm node BEOL integration with an extreme low-k porous SiOCH dielectric k=2.3. Microelectronic Engineering, 2010, 87, 316-320.   | 2.4 | 16        |
| 24 | Solution chemistry effects on cracking and damage evolution during chemical-mechanical planarization. Journal of Materials Research, 2010, 25, 1904-1909.   | 2.6 | 2         |
| 25 | Electrical Behavior of Phase-Change Memory Cells Based on GeTe. IEEE Electron Device Letters, 2010, 31, 488-490.  | 3.9 | 124       |
| 26 | Work Function Tuning of Ti <sub>x</sub> Si <sub>y</sub> N <sub>z</sub> Electrodes Using Partial Saturation of Chemisorbing Surface during Pulsing Chemical Vapor Deposition. Electrochemical and Solid-State Letters, 2009, 12, H272. | 2.2 | 2         |
| 27 | Evidence of Germanium precipitation in phase-change Ge <sub>1-x</sub> Te <sub>x</sub> thin films by Raman scattering. Applied Physics Letters, 2009, 95, 031908.  | 3.3 | 37        |
| 28 | Cu Grain Growth in Damascene Narrow Trenches. , 2009, , .   |     | 9         |
| 29 | Innovative process flow to achieve carbon nanotube based interconnects. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 1399-1401.   | 1.8 | 8         |
| 30 | Cu grain growth in interconnects trenches – Experimental characterization of the overburden effect. Microelectronic Engineering, 2008, 85, 2133-2136.   | 2.4 | 12        |
| 31 | Texture and strain in narrow copper damascene interconnect lines: An X-ray diffraction analysis. Microelectronic Engineering, 2008, 85, 2175-2178.  | 2.4 | 5         |
| 32 | ToF-SIMS imaging of Cl at Cu grain boundaries in interconnects for microelectronics. Applied Surface Science, 2008, 255, 1564-1568.   | 6.1 | 7         |
| 33 | Toward the integration of a single carbon nanofibre as via interconnect. Microelectronic Engineering, 2008, 85, 1971-1974.  | 2.4 | 6         |
| 34 | Enabling technologies for 3D chip stacking. , 2008, , .   |     | 38        |
| 35 | Test structure for characterizing metal thickness in damascene CMP technology. , 2008, , .  |     | 4         |
| 36 | Integration of single carbon nanofibers in standard via interconnects. Applied Physics Letters, 2008, 92, 223510.   | 3.3 | 8         |

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|----|--|-----|-----------|
| 37 | Experimental study of the minimum metal gate thickness required to fix the effective work function in metal-oxide-semiconductor capacitors. Applied Physics Letters, 2008, 92, 023503. | 3.3 | 10        |
| 38 | Undulation of sub-100nm porous dielectric structures: A mechanical analysis. Applied Physics Letters, 2007, 91, .  | 3.3 | 50        |
| 39 | Fatigue of Damascene Copper Lines under AC Loading. Materials Research Society Symposia Proceedings, 2007, 990, 1.   | 0.1 | 1         |
| 40 | Conduction regime in innovative carbon nanotube via interconnect architectures. Applied Physics Letters, 2007, 91, 252107.   | 3.3 | 30        |
| 41 | Three dimensional chip stacking using a wafer-to-wafer integration. , 2007, , .  |     | 35        |
| 42 | Challenges for 3D IC integration: bonding quality and thermal management. , 2007, , .  |     | 68        |
| 43 | Evolution of Cu microstructure and resistivity during thermal treatment of damascene line: Influence of line width and temperature. Microelectronic Engineering, 2007, 84, 2723-2728.  | 2.4 | 34        |
| 44 | Fatigue of damascene copper lines under cyclic electrical loading. Microelectronic Engineering, 2007, 84, 2658-2662.   | 2.4 | 6         |
| 45 | Measuring the diffusion of Ti and Cu in low-k materials for microelectronic devices by EELS, EFTEM and EDX. Journal of Physics: Conference Series, 2006, 26, 77-80.                    | 0.4 | 1         |
| 46 | Dependence of CMP-induced delamination on number of low-k dielectric films stacked. Microelectronic Engineering, 2006, 83, 2072-2076.  | 2.4 | 16        |
| 47 | Crosslinking impact of mesoporous MSQ films used in microelectronic interconnections on mechanical properties. Thin Solid Films, 2006, 495, 124-129.                                   | 1.8 | 35        |
| 48 | Experimental measurements of electron scattering parameters in Cu narrow lines. Microelectronic Engineering, 2006, 83, 2396-2401.  | 2.4 | 34        |
| 49 | Fracture Properties of Porous MSSQ Films: Impact of Porogen Loading and Burnout. Materials Research Society Symposia Proceedings, 2006, 914, 1.  | 0.1 | 2         |
| 50 | Cu Resistivity in Narrow lines: Dedicated Experiments for Model Optimization. Materials Research Society Symposia Proceedings, 2006, 914, 1.   | 0.1 | 2         |
| 51 | Investigations of titanium nitride as metal gate material, elaborated by metal organic atomic layer deposition using TDMAT and NH3. Microelectronic Engineering, 2005, 82, 248-253.    | 2.4 | 97        |
| 52 | Bias-stress-induced evolution of the dielectric properties of porous-ULK/ copper advanced interconnects. Microelectronic Engineering, 2005, 80, 345-348.                               | 2.4 | 6         |
| 53 | Copper post-electroplating anneal: evaluation of in-line vs. furnace anneal on layer properties. Microelectronic Engineering, 2003, 70, 470-477.                                       | 2.4 | 6         |
| 54 | Investigations of the interface stability in HfO2 metal electrodes. Microelectronic Engineering, 2003, 70, 384-391.  | 2.4 | 21        |

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|----|---|-----|-----------|
| 55 | Integration of Cu/SiOC in Cu dual damascene interconnect for 0.1- $\mu$ m technology. Microelectronic Engineering, 2002, 64, 35-42. | 2.4 | 27        |
| 56 | Morphological instabilities in Mg-7.7 at % Al. Scripta Materialia, 1999, 41, 1235-1240.   | 5.2 | 7         |