Curriculum Vitae: Vassilios Ioannou-Sougleridis

Recent research interests:

- **Neutron induced defects studies in ceramics material for fusion applications**
  - Electrical and optical and structural characterization methods in ceramic materials
- **Germanium front-end processes**
  - Fabrication and electrical characterization of Ge-insulator interfaces.
  - Development of techniques to control n-type doping in Ge utilizing nitrogen co-implants.
- **Processing issues of ALD Al_2O_3 for microelectronics devices.**
  - Processing induced defect studies in ALD alumina thin films.
- **Charge trapping devices for non-volatile memory applications**
  - Study of the influence of the high-k dielectric ALD precursors on electrical properties of SONOS type charge trapping devices.
  - Thermal oxidation of low-energy silicon implanted SiO_2/Si_3N_4 gate stacks. Structural and electrical properties.

Scientific activity

- 92 publications in journals, conference proceedings and book chapters
- 82 participations in International Conferences.
- Citations in December 2021**:1323**

  Breakdown: 872 citations by third parties, 200 citations by co-authors, 125 self-citations, 95 cited in students dissertations and 31 cited in patents.
- Participation in 15 EU and Greek research projects.
- 1 Greek patent "method of oxidizing silicon nitride materials at low thermal budgets"

Education

- B.Sc. in Physics, Physics department of Athens University, Greece (1985).
- M.Sc. degree in semiconductor science and technology Brunel University United Kingdom (1987).
- Ph.D. degree Physics Department of Athens University, Greece (1993). Dissertation thesis: *Study of point defects in SIMOX structures.*

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Web of Science Researcher ID: ABA-9332-2021

Google Scholar:

https://scholar.google.com/citations?hl=en&view_op=list_works&authuser=1&gmla=AJsN-F6KIXdBQXfb_daXVFdguJLO4IVu2Es8Za7AO3OMW1WrtodF7mRIYgVw3W_s5bTElPL6dCRRclspYHCnxY7cf9eCEPJz2g&user=601AnkcAAAAJ

Representative journal papers

1. **Degradation of Pt-Al_2O_3-Ge metal oxide semiconductor structures due to Pt-Al_2O_3 induced reactions**
   ECS Journal of Solid-State Science and Technology 9, 024003 (2020).
   https://doi.org/10.1149/2162-8777/ab682e

2. **Charge retention analysis of Si implanted and wet oxidized SONOS structures**
   Microelectronic Engineering 159 pp. 75-79 (2016).
   https://doi.org/10.1016/j.mee.2016.02.038

3. **Inert ambient annealing effect on MANOS capacitor memory characteristics**
   Nanotechnology 26, 134004 (14pp) (2015).
   https://doi.org/10.1088/0957-4484/26/13/134004

4. **Room temperature analysis of Ge p^+/n diodes reverse characteristics fabricated by platinum assisted dopant activation**
   Solid-State Electronics 81, pp. 19-26, (2013).
   https://doi.org/10.1016/j.sse.2012.11.012

5. **Influence of atomic layer deposition chemistry on high-k dielectrics for charge trapping memories**
   Solid State Electronics 68, pp38-47, (2012).
   https://doi.org/10.1016/j.sse.2011.09.016

6. **Study of interfacial defects induced during the oxidation of ultrathin strained silicon layers**
   Journal of Applied Physics 105 (11), art. no. 114503 (2009).
   https://doi.org/10.1063/1.3137202

7. **Dynamic charge transfer effects in two-dimensional silicon nanocrystal layers embedded within SiO_2**
   Journal of Applied Physics 106 (5), 054508, (2009).
   https://doi.org/10.1063/1.3211988

8. **Wet oxidation of nitride layer implanted with low-energy Si ions for improved oxide-nitride-oxide memory stacks**
   Applied Physics Letters 90 (26), art. no. 263513 (2007).
   https://doi.org/10.1063/1.2752769

9. **Effects of post-growth annealing experiments in epitaxial Y_2O_3 layers on Si (001)**
   Thin Solid Films 468, (1-2), 303 (2004).
   https://doi.org/10.1016/j.tsf.2004.05.076

10. **Electroluminescence from silicon nanocrystals in Si/CaF_2 superlattices**
    Applied Physics Letters 79, 2076, (2001).
    https://doi.org/10.1063/1.1405004

11. **Characterization of the buried oxide in SIMOX structures by a rate window method**
    Journal of Applied Physics 74, 3298, (1993).
    https://doi.org/10.1063/1.354552