



Choi Wee Kiong

Professor and Deputy Head (Administration)

Department of Electrical and Computer Engineering

Co-Chair

Programme for Advanced Materials for Micro & Nano Systems

Singapore-MIT Alliance

Visiting Professor

Department of Materials Science and Engineering

Massachusetts Institute of Technology

4 Engineering Drive 3, Blk E4, Level 5, Room 45

Phone: 6516 6473 Email : elechoi@nus.edu.sg

Website: www.ece.nus.edu.sg/stfpage/elechoi/choi

MAJOR RESEARCH INTERESTS

1. Nanolithography
2. Micro and nanoelectronics
3. Nanobiotechnology
4. Nanoparticles and nanomaterials
5. Self-assembled nanostructures

SELECTED PUBLICATIONS

1. **Choi, WK**, TH Liew, HG Chew, F Zheng, CV Thompson, Y Wang, MH Hong, XD Wang, L Li and J Yun, "A combined top-down and bottom-up approach for precise placement of metal nanoparticles on silicon", *Small*, 4 (2008): 330-333.
2. Zheng, F, **WK Choi**, F Lin, S Tripathy, JX Zhang, "Stress tuning of Ge nanocrystals embedded in dielectrics", *Journal of Physical Chemistry C*, 112 (2008): 9223-9228.
3. Zheng, F, **WK Choi** and TH Liew, "Influence of substrate geometry on the distribution and stress on Ge nanocrystals in silicon oxide matrix", *Journal of Applied Physics*, 104 (2008): 084312-1-084312-5.
4. **Choi, WK**, TH Liew, MK Dawood, HI Smith, CV Thompson and MH Hong, "Synthesis of silicon nanowires and nanofin arrays using interference lithography and catalytic etching", *Nano Letters*, 8 (2008): 3799-3802.
5. Zheng, F, HG Chew, **WK Choi**, J Zhang and HL Seng, "Synthesis of germanium nanocrystals in hafnium aluminum oxide matrix". *Journal of Applied Physics*, 101 (2007): 114310-1-114310-6.
6. Chew, HG, F Zheng, **WK Choi**, WK Chim, YL Foo and EA Fitzgerald, "Influence of reductant and germanium concentration on the growth and stress development of germanium nanocrystals in silicon oxide matrix", *Nanotechnology*, 18 (2007): 065302-1-065302-6.
7. **Choi, WK**, L Li, HG Chew, and F Zheng, "Synthesis and structural characterization of germanium nanowires from glancing angle deposition", *Nanotechnology*, 18 (2007): 385302-1-385302-6.
8. **Choi, WK**, HG Chew, F Zheng, W K Chim, YL Foo and EA Fitzgerald, "Stress Development of Germanium Nanocrystals in Silicon Oxide Matrix", *Applied Physics Letters*, 89 (2006): 113126-1-113126-3.
9. **Choi, WK**, YL Foo, V Ho and R Nath, "In-situ transmission electron microscopy study on the formation and evolution of germanium nanoclusters and nanoparticles in silicon oxide matrix", *Chemical Physics Letters*, 416 (2005): 381-384.
10. **Choi, WK**, V Ho, V Ng, YW Ho, SP Ng and WK Chim, "Germanium diffusion and nanocrystal formation in silicon oxide on silicon substrate under rapid thermal annealing", *Applied Physics Letters*, 86 (2005): 143114-1-143114-3.