



Kapila Gunasekera

Married to Shashi Mendis

Children: Nehara Gunasekera (1yr)

Lives in Lehi, Utah

Education:

- B.S. Electrical Engineering – North Dakota State University (2008)
- M.S. Electrical Engineering – University of Cincinnati (2010)
- Ph.D. Electrical Engineering - University of Cincinnati (2013)

Email: kgunasekera@imflash.com

Employment after UC graduation:

2013 – Present: Process Integration Engineer at IM Flash Technologies.

Current job description: Kapila Gunasekera is currently employed at IM Flash Technologies as a Process Integration Engineer. His responsibilities include but not limited to

- Engage and lead cross-area engineering teams to solve complex integration issues related to 300mm flash process flow.
- Design, execute and analyze advance experiments to understand the root cause of process issues and optimize process conditions.
- Partner with Industrial Engineering (IE), Product Engineering (PE) and production to better forecast and balance yield, output and process issues.
- Collaborate with Yield Enhancement (YE) to improve yield and reliability.
- Work closely with global partners to drive business process alignment.
- Develop and drive technical expertise in the organization.

IM Flash Technologies is a joint venture of Micron Technology and Intel Corporation, formed to manufacture NAND flash memory for consumer electronics, removable storage and hand held communication devices. IM Flash combines Micron's leadership in process and product technology with Intel's multi-level cell technology and history of innovation in Flash memory to successfully compete in the NAND Flash memory business, an increasingly important and fast growing market segment.

Journal Publications:

- **K. Gunasekera**, P. Boolchand, M. Micoulaut, "*Effect of mixed Ge/Si cross-linking on the physical properties of amorphous Ge-Si-Te networks*", J. Applied Phys. accepted (2014).
- S. Ravindren, **K. Gunasekera**, Z. Tucker, A. Diebold, P. Boolchand, M. Micoulaut, "*Crucial effect of melt homogenization on the fragility of non-stoichiometric chalcogenides*", J. Chem. Phys. 140, 134501 (2014)
- R. Bhageria, **K. Gunasekera**, P. Boolchand and M. Micoulaut, "*Fragility and molar volumes of non-stoichiometric chalcogenides – the crucial role of melt/glass homogenization*", Physica Status Solidi B, 1-8 (2014).
- **K. Gunasekera**, P. Boolchand, M. Micoulaut, "*Elastic Phases of $Ge_xSb_xSe_{100-2x}$ ternary glasses driven by topology*" J. Phys. Chem. B. 117, 10027-10034 (2013).

- **K. Gunasekera**, S. Bhosle, P. Boolchand and M. Micoulaut, "*Superstrong nature of covalently bonded glass-forming liquids at select compositions*", J. Chem. Phys. 139, 164511 (2013).
- P. Boolchand, **K. Gunasekera** and S. Bhosle, "*Midgap States, Raman scattering, Glass Homogeneity, Percolative Rigidity and Stress Transitions in Chalcogenides*", Physica Status Solidi B, 1-6 (2012) **Invited**.
- S. Bhosle, **K. Gunasekera**, P. Boolchand, M. Micoulaut, "*Melt Homogenization and self-organization of chalcogenide glasses - Part 1: Synthesis and homogenization of Ge_xSe_{100-x} glasses*", Intl. J. of Applied Glass Science 3, 189-204(2012).
- S. Bhosle, **K. Gunasekera**, P. Boolchand, M. Micoulaut, "*Melt Homogenization and self-Organization of chalcogenide glasses - Part 2: Sharply defined Intermediate phase in structurally homogeneous glasses*", Intl. J. of Applied Glass Science 3, 205-220 (2012).
- P. Boolchand, S. Bhosle, **K. Gunasekera**, K. Vignarooban and S. Chakraborty, "*Glass homogeneity precursive to self-organization*", J. of Optoelect. and Adv. Mater. 13, 1353-1358 (2011).
- S. Bhosle, **K. Gunasekera**, P. Chen, P. Boolchand, M. Micoulaut, C. Massobrio, "*Meeting experimental challenges to physics of network glasses: assessing role of sample homogeneity*", Solid State Communications 151, 1851-1855 (2011).
- K. R. Gunugunuri, **K. Gunasekera**, P. Boolchand, J. Dong and P. Smirniotis, "*High Temperature Water Gas Shift Reaction over Nanocrystalline Copper Codoped-Modified Ferrites*", J. Phys. Chem C 115, 7586-7595 (2011).
- K. R. Gunugunuri, **K. Gunasekera**, P. Boolchand and P. Smirniotis, "*Cr- and Ce-Doped Ferrite Catalysts for the High Temperature Water-Gas Shift Reaction: TPR and Mossbauer Spectroscopic Study*", J. Phys. Chem C 115, 920-930 (2011).

Conference Proceedings:

- **K. Gunasekera**, S. Bhosle and P. Boolchand, "*Consequences of the super-strong nature of chalcogenide glass-forming liquids at select compositions*", American Physical Society March Meeting 2014.
- **K. Gunasekera**, P. Boolchand, M. Micoulaut, S. Mamedov, "*Fragility, Intermediate Phase, ^{119}Sn Mossbauer Effect in homogeneous $Si_xGe_xTe_{100-2x}$ glasses*", The American Ceramic Society Glass & Optical Materials Division Meeting, June 2013.
- **K. Gunasekera**, P. Boolchand, M. Micoulaut, S. Mamedov, "*Fragility, slow homogenization and Intermediate Phase in $Si_xGe_xTe_{100-2x}$ ternary*", American Physical Society March Meeting 2013.
- **K. Gunasekera**, P. Boolchand, M. Micoulaut, S. Mamedov, "*Intermediate Phases and Phase Change Materials*", The American Ceramic Society Glass & Optical Materials Division Meeting, May 2012.
- **K. Gunasekera**, P. Boolchand, "*Elastic Phases and Intermediate Phase in $Si_xGe_xTe_{100-2x}$ glasses*", American Physical Society March Meeting 2012.
- **K. Gunasekera**, P. Boolchand, "*Elastic Phases in ternary $Ge_xSb_xSe_{100-2x}$ ternary glasses*", American Physical Society March Meeting 2011.
- **K. Gunasekera**, P. Boolchand, "*Intermediate Phase in ternary $Ge_xSb_xSe_{100-2x}$ bulk alloy glasses*", The American Ceramic Society Glass & Optical Materials Division Meeting, May 2010.
- **K. Gunasekera**, P. Boolchand, "*On the molecular structure of $Ge_xSb_xSe_{100-2x}$ glasses*", American Physical Society March Meeting 2010.