# SMFL Users News Letter – Number 140318 V7.1

This News Letter is intended to provide information of interest to MicroE faculty and other users of the SMFL. It is a report on equipment and processes used in the SMFL with emphasis on changes, problems, and details that may not be generally available to users. I distribute this to the MicroE faculty and others. If you feel that this News Letter has some information that might be useful to your graduate students please forward it to them. Past newsletters are posted on Dr. Fuller's webpage.

## Using the SVG Track as a backup for the SSI Track:

We would like to have COAT and DEVELOP recipes on the SVG Track that emulate the COAT and DEVELOP recipes on the SSI track.

The SSI has ORI620 resist which is a high contrast i-line resist. The SVG track has HPR504 resist, a lower contrast g-line resist. The ORI620 can be hand dispensed on the SVG track if the recipe is set up to allow that and the soft bake temperature can be set to match the SSI track. The SVG develop track does not have a post exposure bake so the develop time will need to be longer, and the hard bake temperature can be set to 140 C. Lilah Cook did some initial work on this project as part of the CMOS Factory Class and created new recipes on the SVG track that work for our CMOS Factory lots using the ASML stepper. These are not optimized recipes needed for the highest resolution (less than 1 um L/S) but do work for features at 2um and larger. Her report is given on my webpage: http://people.rit.edu/lffeee/steppers.htm

## Measuring Poly, Nitride and Oxide using the NanoSpec and Spectromap:

Measuring the thickness of Poly, Nitride and Oxide on bare dummy wafers is straight forward. Measuring on CMOS device wafers is more difficult because the user needs to know the properties of the films under the layer to be measured, where to measure on the wafer and how to set up the measurement tool correctly. There are many ways to make incorrect measurements. It helps to know the approximate thickness that you hope to measure, the thickness and type of underlying layers and the theory of how tool makes its measurement. I have created a powerpoint document that addresses these needs and may be useful to all SMFL users. It is on my webpage: http://people.rit.edu/lffeee/labnotes.htm