Resist TWG Meeting

- Date: 2016-02-21
- Time: 8:30 AM
- Internet: IMEC2016

  Username: Fairmont_Meeting

  Passcode: IMEC2016

- Chair/contact: Yu-Jen.Fan@sematech.org

EUVL Focus Area 2012-2015

2012 / 22hp	2013 / 16hp	2014 / 16hp	2015 / 16hp
1. Reliable source operation with > 75% availability - 200 W at IF in 2014 - 500 W at IF in 2016	**1. Reliable source operation with > 75% availability** - 125 W at IF in 2014 - 250 W at IF in 2015	**1. Reliable source operation with > 75% availability** - 125 W at IF in 1H / 2015 (at customer) - 250 W at IF in 1H / 2016 (HVM entry at customer)	**1. Reliable source operation with > 85% availability** - Expectation of 1500 average wafers per day in 2016
2. Mask yield & defect inspection/review infrastructure	**2. Mask yield & defect inspection/review infrastructure**	**2. Resist resolution, sensitivity & LER met simultaneously** - Progress insufficient to meet 2015 introduction target	**2. Resist resolution, sensitivity & LER met simultaneously** - Increased focus needed on manufacturing performance (defectivity, pattern collapase)
3. Resist resolution, sensitivity & LER met simultaneously	**3. Keeping mask defect free (by EUV pellicle)** - Availability of pellicle mfg HVM requirement - Minimize defect adders during use	**3. Mask yield & defect inspection/review infrastructure** - Enable high yield defect free mask blank supply chain	**3. Mask yield & defect inspection/review infrastructure** - Sustainability of mask tool supply chain remains critical
EUVL manufacturing integration	**4. Resist resolution, sensitivity & LER met simultaneously**	**4. Keeping mask defect free (by EUV pellicle)** - Availability of pellicle mfg HVM requirement need integrated industry strategy for solution - Minimize defect adders during use	**4. Keeping mask defect free (by EUV pellicle)** - Pellicle demonstration in the field (on 3300) required in 2016

Agenda

Time	Title	Presenter
8:30 AM – 8:35 AM	Welcome and Opening	*Yu-Jen Fan, SUNY Poly SEMATECH*
8:35 AM – 8:50 AM	Recent progress in nanoparticle photoresist development for EUV lithography	*Kazuki Kasahara, JSR/Cornell*
8:50 AM – 9:05 AM	Recent development status of EUV rinse	*Tatsuro Nagahara, Merck*
9:05 AM – 9:15 AM	Accelerating Fab Integration of Metal Containing Resists	*Jason Stowers, Inpria*
9:15 AM – 9:30 AM	Advances in Alternative Photo Materials for HVM EUV Lithography	*Danilo De Simone, imec*
9:30 AM – 9:45 AM	Status update on outgassing of alternative resists	*Gijsbert Rispens, ASML*
9:45 AM – 10:00 AM	Update of Resist Outgas Testing at EIDEC	*Eishi Shiobara, EIDEC*
10:00 AM – 10:15 AM	Considerations for resist outgas testing with EUV and hydrogen at NIST	*Shannon Hill, NIST*
10:15 AM – 10:25 AM	IBM outgas update	*Dario Goldfarb, IBM*
10:25 AM – 10:45 AM	Coffee break / Social network	
10:45 AM – 11:00 AM	Fundamental aspects of sensitivity enhancement and RLS trade-off of chemically amplified EUV resist	*Seiichi Tagawa, Osaka University*
11:00 AM – 11:15 AM	Unconventional Organic High Resolution Resist Materials for EUV and E-beam Nanoscale Patterning: An Update	*Clifford Henderson, Georgia Tech*
11:15 AM – 11:30 AM	Molecular resists for EUV lithography	*Alex Robinson, Univ. of Birmingham*
11:30 AM – 11:45 AM	Is an EUV quantum yield of 30 possible?	*Greg Denbeaux, CNSE, SUNY Poly*
11:45 PM – 12:00 PM	What don't we know about the EUV exposure mechanisms?	*Robert Brainard, CNSE, SUNY Poly*
12:00 PM – 12:10 PM	Summary	*Yu-Jen Fan, SUNY Poly SEMATECH*

IEUVI Resist TWG Feb 2016 San Jose, CA