

P09051 Oxygen Gas Sensor

Weekly Status Report MSD II Week 3

Submitted: March 27, 2009

Team Members		
Samuel Shin Hxs3092@rit.edu	Jeremy Goodman Jvg5404@rit.edu	

Major Milestone Chart *(Milestones from 11 week schedule):*

Task	Expected Date	Responsible Team Member	Modified Completion Date	Comments
Obtain Materials				
commercial photodiode	Complete	JVG		
LED (High Power)	Complete	JVG		
Ru(dpp) Powder	Complete	SHS		
Epiwafers	Complete	JVG		
Circuit Components	Complete	SHS		
N2 & O2 Gas	3-19-09	JVG		coordinating with SMFL
Test Chamber Materials	3-19-09	JVG		need specs for order
OG570 Optical Filter	3-19-09	JVG	3/27/09	Purchasing today
LED Pulsing Circuitry				
Design block diagram for basic operation	Complete	SHS		
Simulate System	3-23-09	SHS		
Build and Test Circuitry	3-23-09	SHS		
Ru(dpp) Polymer				
Contact Chris Collison	Complete	JVG		
Develop Fabrication Plan (in writing)	Complete	JVG		Mixing procedure found in ieee journal article
Establish BOM	Complete	All		Purchase order being created
Complete polymer fabrication	3-19-09	All	3/27/09	
Photodiode				
Observe Photodiode Behavior	Complete	All		
Simulate System	Complete	SHS		
Breadboard Testing	3-19-09	SHS		
Establish BOM	Complete	SHS		
Test System with Optical Filter	3-30-09	SHS, JVG		

Completed for 03/27/09:

Task	Responsible	Comp Date	Comment
Submitted test chamber design/plans to John Nash (better suited to help us build chamber)	JVG	2/19/09	
Received Permatex silicone	JVG	3/27/09	
Processed custom PCB boards	JVG	3/27/09	
Established Prototype for Emitter/ Receiver (1 st rev)	SHS	3/27/09	

To Be Completed for 4/03/09:

Task	Responsible	Comp Date	Comment
Transfer prototype to Board/ Use Aluminum trimmer to cut board	SHS	4/04/09	Will use the weekend if needed.
Complete Fabrication (Preliminary) of Polymer	JVG	4/03/09	Need to get in lab with Dr. collison
Continue Design and simulate conditioning circuit	SHS		
Update Edge	SHS, JVG		
Determine litho process for 5-mask layers	JVG	3/24/09	need masks back asap
Continue short-run wafer fabrication	JVG	----	@ field ox growth

Action Items

Item #	Description	Responsible	Due Date	Close Date	Comments
A001					
A002					
A003					
A004					
A005					

Issues

Item #	Description	Responsible	Open Date	Close Date	Comments
I005	SMFL Photodiode completion date, integration time	JVG/SHS	3/13/09		May take too long to be input into final sensor, might have to use comm. only
I006	Need the polymer to get full noise characterization.	SHS			

Decisions

Item #	Description	Contributing Individuals	Decision Date	Comments
D001	Use Schott Filter or already-at-RIT filter (probably not OG570)	JVG	Closed	uE will purchase filters from Edmunds optics
D002	Polymer base purchasing – RIT purchased or in-store (individually) purchased	JVG	Closed	uE will purchase from Grainger Supply Co.
D003				
D004				
D005				