

P09051 Oxygen Gas Sensor

Weekly Status Report MSD II **Week 1**

Submitted: March 12, 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	ME(TBA)		"
CFA Filter (next week known as OG570 Optical Filter)	3-19-09	JVG		Not using, changed to Schott OG-570 long-pass filter (will modify for next week)
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 (ChemE Dept)	Complete	JVG		
Develop Fabrication Plan (in writing)	Complete	JVG		Mixing procedure found in iee journal article
Establish BOM	Complete	All		Request for materials sent to Drs. Rommel/Pearson
Complete polymer fabrication	3-19-09	All		Contacting Dr. Collison (email sent on Monday, no reply)
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 03/13/09:

Task	Responsible	Comp Date	Comment
Obtained IC from Analog Devices	SHS		
Completed Preliminary Mask Design	JVG		
Prepared basic polymer fabrication schedule	JVG		
Establish Detailed Test Plan	JVG/SHS		
Designed/sent in mask request to T. Grimsley	JVG	Spr-Week2	Form received/accepted

To Be Completed for 3/20/09:

Task	Responsible	Comp Date	Comment
Establish Basic Prototype layout for Emitter	SHS		
Complete Fabrication (Preliminary) of Polymer	SHS		
Continue Design and simulate conditioning circuit	SHS		
Update Edge	SHS, JVG		
Obtain funding for Flow meter/ Box / Schott Glass (optical filter)	JVG		Still hunting...

Action Items

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

Issues

Item #	Description	Responsible	Open Date	Close Date	Comments
I001	Power required from LED (inverse square law over distance)	JVG	1/09/09	Close	Completed wtr qtr
I002	Establish contacts with CREE/Philips	JVG	1/09/09	Close	Completed/ received items
I003	Parameters of acquired epi-wafers (resistivity, epi thickness, etc...)	JVG	1/09/09	Close	Not Using
I004	LED drive circuit using push-button to generate a single, constant-time pulse	SHS	1/09/09	Close	Different method
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

Decisions

Item #	Description	Contributing Individuals	Decision Date	Comments
D001	Use Schott Filter or already-at-RIT filter (probably not OG570)	JVG	3/16/09	Have to speak with Prof. Ewbank or Dr. Jackson (in Wash. DC on business)
D002	Polymer base purchasing – RIT purchased or in-store (individually) purchased	JVG	3/16/09	Checking w/ Dr. Rommel
D003				
D004				
D005				