

PURCHASE ORDER

QR-ADMPPS-04

INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE

DOST Compound, Gen. Santos Ave., Bicutan, Taguig City
DOST Trunkline: 837-2071 local 2220 / 2221

12. 11/27

Supplier: DYNALAB CORPORATION	P.O. No.:	GIA-E-082-2012	
Address: <i>Unit 905 Atlanta Centre, Annapolis St., Greehillis, San Juan City</i> (3) PO-08-2	Date:	April 20, 2012	
	Mode of Procurement:	Public Bidding	
	Resolution No.	PR #	ASC #

Gentlemen

Please furnish this office the following articles to the terms and conditions contained herein:

Place of Delivery:	MSD Bldg.	Delivery Term:	August 15, 2012
Date of Delivery:		Payment Term:	

Stock No.	Unit	Description	Quantity	Unit Cost	Amount
1	unit	TIME OF FLIGHT SECONDARY ION MASS SPECTROSCOPE SYSTEM (ION-TOF GmbH) <i>Origin: Germany</i>	1	105,000,000.00	105,000,000.00
		Component Ion Gun			Required information Source Maximum Beam Current Lateral resolution. Beam energy Spot size Pulse width Other pertinent information
		Detector/Analyzer			Supplier Data Bismuth Cluster Ion Gun >30nA <80nm (best spot) 30keV <80 nm (best spot) <0.7ns DC FWHM Patented Burst mode, simultaneous high lateral & mass resolution
		Positive and Negative Ion Mode Analyses			Type Mass Analyzer Reflectron-Grid-less, no Aperture/slit, therefore no alignment needed, providing high mass resolution and high transmission simultaneously >12,000u >11,500 m/Δm at m=29u >16,000 m/Δm at m>200u Sensitivity >4,5x10 ⁹ AI ⁺ /nC @ 7,000 (FWHM) Spatial Resolution <80nm

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INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE

DOST Compound, Gen. Santos Ave., Bicutan, Taguig City
DOST Trunkline: 837-2071 local 2220 / 2221

12-11077

Supplier: DYNALAB CORPORATION	P.O. No.: GIA-E-082-2012
Address: <i>Unit 905 Atlanta Centre, Annapolis St., Greehillis, San Juan City</i> (3) PO-08-2	Date: April 20, 2012
	Mode of Procurement: Public Bidding
	Resolution No.
	PR # 08-2012-0060 ASC # 062-2012

Gentlemen:

Please furnish this office the following articles to the terms and conditions contained herein:

Place of Delivery: MSD Bldg.	Delivery Term: Aug. 15, 2012
Date of Delivery:	Payment Term:

Stock No.	Unit	Description	Quantity	Unit Cost	Amount
		TOTAL CARRIED FORWARD			105,000,000.00
		Component	Required information	Supplier Data	
			Detector Optics	A combined single micro-channel plate (MCP), scintillator & photomultiplier ion detector	
			Detector Electronics	Multi-stop Super Fast Time-to-Digital (TDC) with 50ps time resolution	
			Analyzer Control Electronics	First order energy focusing, an Einzel lens for secondary ion beam transportation, a beam deflector, dynamic emittance matching, secondary ion beam allowing for repetition rates up to 50kHz, sample at ground for charge neutralization up to 50kHz	
			Detector Supply	Detector Supply and 10 kV post-acceleration optics supply	
			Other pertinent information	High sensitivity depth profiling w/reproducibility better than <0.5%	
		Pulsed Charge Neutralizer and Electronics	Type	Low energy (0 to 25eV) self adjusting electron flood	

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INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE

DOST Compound, Gen. Santos Ave., Bicutan, Taguig City
DOST Trunkline: 837-2071 local 2220 / 2221

12-114TF

Supplier:	DYNALAB CORPORATION	P.O. No.:	GIA-E-082-2012		
Address: (3) PO-08-2	<i>Unit 905 Atlanta Centre, Annapolis St., Greehillis, San Juan City</i>	Date:	April 20, 2012		
		Mode of Procurement:	Public Bidding		
		Resolution No.			
		PR #	08-2012-0060	ASC #	062-2012

Gentlemen:

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Place of Delivery:	MSD Bldg.	Delivery Term:	Aug. 15, 2012	
Date of Delivery:		Payment Term:		

Stock No.	Unit	Description	Quantity	Unit Cost	Amount
		TOTAL CARRIED FORWARD			105,000,000.00
		<p>Imaging System</p> <p>Viewing Optics</p> <p>Ion Beam Imaging</p> <p style="text-align: center;"><i>Resolution</i></p> <p style="text-align: center;"><i>Image Capture</i></p> <p style="text-align: center;"><i>Image Shift Stability</i></p> <p style="text-align: center;"><i>Other pertinent information</i></p> <p>Sputtering System (Depth Profile)</p> <p>Sputter Ion Gun</p> <p style="text-align: center;"><i>Source</i></p>			<p><i>gun. Synchronized with ion gun pulsing with high repetitive rate up to 50kHz.</i></p> <p><i>Two color CCD for real-time macro and micro imaging, a pilot laser, SEM imaging and SI imaging.</i></p> <p><i><60 nm</i></p> <p><i>Included for optical, SE and SI image acquisition</i></p> <p><i>Shift correction software included</i></p> <p><i>For inorganic depth profiling applications: Dual Source Column-Cesium source (Cs⁺) and EI Source (Ar⁺, O₂⁺, Xe⁺, Kr⁺, He⁺, ...)</i></p> <p><i>For organic depth profiling applications: Gas Cluster Source (Ar_n)</i></p>

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INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE

DOST Compound, Gen. Santos Ave., Bicutan, Taguig City
DOST Trunkline: 837-2071 local 2220 / 2221

12-1147E

Supplier: DYNALAB CORPORATION	P.O. No.: GIA-E-082-2012
Address: <i>Unit 905 Atlanta Centre, Annapolis St., Greehillis, San Juan City</i> (3) PO-08-2	Date: April 20, 2012
	Mode of Procurement: Public Bidding
	Resolution No.
PR # 08-2012-0060	ASC # 062-2012

Gentlemen:

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Place of Delivery: MSD Bldg.	Delivery Term: Aug. 15, 2012
Date of Delivery:	Payment Term:

Stock No.	Unit	Description	Quantity	Unit Cost	Amount
		TOTAL CARRIED FORWARD			105,000,000.00
		<i>Ion Current</i>		El Source:	
				Lowest sputter enegy: 200eV	
				100nA, 70µm @ 500eV	
				250nA, 70µm @ 1keV	
				600nA, 70µm @ 2keV	
				Cs Source:	
				Lowest sputter enegy: 200eV	
				40nA, 70µm @ 500eV	
				75nA, 70µm @ 1KeV	
				150nA, 70µm @ 1 keV	
				Gas Cluster Source (option):	
				10nA, 70µm @ 10keV	
		Sputtering Ion Energy Range		200eV to 2keV (Dual Source Column)	
		Sputter rates		2.5-20 keV (GAS CLUSTER SOURCE)	
				El Source (O ₂): up to 120 nm/min on Si	
				Cs Source: up to 50 nm/min on Si	
				Gas Cluster Source: up to 1.6 µm on PS	
		Other pertinent information		Advantages of Bismuth source:	
				~High useful lateral resolution	
				~High data acquisition time	
				~High sensitivity-subµm area molecular analysis	

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INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE

DOST Compound, Gen. Santos Ave., Bicutan, Taguig City

DOST Trunkline: 837-2071 local 2220 / 2221

12 - 114 TF

Supplier:	DYNALAB CORPORATION	P.O. No.:	GIA-E-082-2012	
Address: (3) PO-08-2	Unit 905 Atlanta Centre, Annapolis St., Greenhills, San Juan City	Date:	April 20, 2012	
		Mode of Procurement:	Public Bidding	
		PR #	08-2012-0060	ASC #

Gentlemen:
Please furnish this office the following articles to the terms and conditions contained herein:

Place of Delivery:	MSD Bldg.	Delivery Term:	Aug. 15, 2012
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Stock No.	Unit	Description	Quantity	Unit Cost	Amount
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		Stage Options: #-axis motorized stage Maximum sample height Translation limit/resolution Rotation limit/resolution Tilt limit/resolution Sample/Specimen Holder Sample Heating/Cooling Temperature Control Sample Viewing Other pertinent information		5-axis motorized stage with eucentric tilt and rotation 20mm thick with top mounting holder. 8mm thick with rear mounting holder, A 200mm wafer holder is included, 8" loadlock with internal bakeout X=90mm, Y=150mm, Z=25mm/ 0.0001mm (encoder resolution) 360° endless / 0.0001° (encoder resolution) -15° to +45° 0.0001° (encoder resolution) Heating/cooling in both loadlock & analysis chamber -150°C to 600°C Two color CCD for real-time macro and micro imaging, a pilot laser, SE imaging and SI imaging Automatic height adjustment Dynamic emittance matching Temp. Control accuracy (+/-1°C)	

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INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE

DOST Compound, Gen. Santos Ave., Bicutan, Taguig City
DOST Trunkline: 837-2071 local 2220 / 2221

2-110TF

Supplier:	DYNALAB CORPORATION	P.O. No.:	GIA-E-082-2012		
Address: (3) PO-08-2	Unit 905 Atlanta Centre, Annapolis St., Greenhills, San Juan City	Date:	April 20, 2012		
		Mode of Procurement:	Public Bidding		
		Resolution No.			
		PR #	08-2012-0060	ASC #	062-2012

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Stock No.	Unit	Description	Quantity	Unit Cost	Amount
		TOTAL CARRIED FORWARD			105,000,000.00
		Chamber Base Vacuum Pressure *Pump-down time (high-vacuum): <i>in minutes</i> Load lock, sample introduction stage Beam/Mass Blanker <i style="text-align: center;">Other pertinent information</i> Vacuum system TMP Roughing Pumps Differential pumping for (for ion guns) <i style="text-align: center;">Other pertinent information</i>		<9E-10 torr <5min from air to analysis, 200mm loadlock with internal bakeout Secondary ion beam blanking allowing for repetition rates up to 50kHz 200mm Loadlock internal bakeout MAG 300 (Leybold) TMP for UHV chamber TMU 260 (Pfeiffer) TMP for loadlock TMU 064 (Pfeiffer) TMP for all ion sources and differentially pumped TOF-analyzer TMH 064 for drag stage SC 5/15 D (Leybold) oil-free all ion sources and TOF- Analyzer Clean and oil-free vacuum system	

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12-114TF

Supplier: DYNALAB CORPORATION	P.O. No.:	GIA-E-082-2012	
Address: <i>Unit 905 Atlanta Centre, Annapolis St., Greenhills, San Juan City</i> (3) PO-08-2	Date:	April 20, 2012	
	Mode of Procurement:	Public Bidding	
	Resolution No.	PR #	ASC #
		08-2012-0060	062-2012

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Stock No.	Unit	Description	Quantity	Unit Cost	Amount		
		TOTAL CARRIED FORWARD			105,000,000.00		
		<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> System options Library of Spectra Computer specification Utility Requirements </td> <td style="width: 50%; vertical-align: top;"> Standard utilities Operating System Graphical user interface Color mapping 3D reconstruction software Image analysis and archive software Other pertinent information Mains Gas/compressor/vacuum </td> </tr> </table>	System options Library of Spectra Computer specification Utility Requirements	Standard utilities Operating System Graphical user interface Color mapping 3D reconstruction software Image analysis and archive software Other pertinent information Mains Gas/compressor/vacuum			Two SurfaceLab software licenses including TOF-SIMS library for the instrument PC and one off-line PC. SIMS library integrated in Surface Lab software includes ca.500 spectra for polymers, additives, amino acids, metal oxides, thiols, silanes, substrates and etc. Windows 7 Included Included Included Included Compressor, dry nitrogen and misc. See installation requirements (IR11A11)
System options Library of Spectra Computer specification Utility Requirements	Standard utilities Operating System Graphical user interface Color mapping 3D reconstruction software Image analysis and archive software Other pertinent information Mains Gas/compressor/vacuum						

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	Mode of Procurement:	Public Bidding		
	PR #	08-2012-0060	ASC #	062-2012

PO-08-8

Gentlemen:
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Place of Delivery:	MSD Bldg.	Delivery Term:	Aug. 15, 2012		
Date of Delivery:		Payment Term:			
Stock No.	Unit	Description	Quantity	Unit Cost	Amount
		TOTAL CARRIED FORWARD			105,000,000.00
		<i>Electrical UPS/matching transformer</i>		<i>UPS is included</i>	
		<i>Other pertinent information</i>		<i>See installation requirements (IR11A11)</i>	
		ADD-ONS		<i>Environment site test will be carried out FOC before installation.</i>	
		<i>Training</i>		<i>On-site training (number is flexible)</i>	
		<i>Service support</i>		<i>Overseas training for two qualified users at ION-TOF Munster Germany</i>	
		<i>Warranty coverage</i>		<i>Local Service engineer based in Manila for fast response</i>	
		<i>Consumables</i>		<i>Inclusive for two year operations all TOF SIMS consumables</i>	
		<i>Parts</i>		<i>Two years warranty against manufacturer's defects</i>	

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DOST Compound, Gen. Santos Ave., Bicutan, Taguig City
DOST Trunkline: 837-2071 local 2220 / 2221

02 110TF

Supplier: DYNALAB CORPORATION	P.O. No.: GIA-E-082-2012
Address: <i>Unit 905 Atlanta Centre, Annapolis St., Greenhills, San Juan City</i>	Date: April 20, 2012
	Mode of Procurement: Public Bidding
PO-08-8	PR # 08-2012-0060 ASC # 062-2012

Gentlemen:

Please furnish this office the following articles to the terms and conditions contained herein:

Place of Delivery: MSD Bldg.	Delivery Term: Aug. 15, 2012
Date of Delivery:	Payment Term:

Stock No.	Unit	Description	Quantity	Unit Cost	Amount
		TOTAL CARRIED FORWARD			105,000,000.00
		<i>Repair Other pertinent information</i>			
		<i>FOC within warranty We have proven track record of major TOF SIMS installations in ASEAN, Namely: IMRE (NUS), PSB, Seagate, S E H, Freescale (Motorola) and Chartered Semiconductor</i>			
			<i>Less: VAT</i>	4,687,500.00	
			<i>EWT</i>	937,500.00	5,625,000.00
					99,375,000.00

End-user: **JO ANN C. SY**
Charge to: *PCIEERD Assisted Project on "Establishment of an Advanced Device and Materials Testing Laboratory for the Semiconductor and Electronics Manufacturing Industries"*

Prepared by: *Rebecca L. Santiago 4/20*
REBECCA L. SANTIAGO
Administrative Officer V

Page 9 of 9 pages

(Total Amount in Words) *Ninety nine million three hundred seventy five thousand pesos & 00/100*

In case of failure to make the full delivery within the time specified above, a penalty of one-tenth (1/10) of one percent for every day of delay shall be imposed.

Very Truly yours,

[Signature]
DR. NINA S. ALMANZOR
Director

Conforme: _____
(Signature over printed name)

_____ (Date)

Requisitioning Office/Dept. BLESSIE A. BASILIA, Ph.D. Chief-MSD	Funds Available: <i>[Signature]</i> SOLEDAD S. REYES Accountant IV	Amount ALOBS No. 9,145,000.00
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PO form/PPS/mel

FINANCIAL MANAGEMENT