

Report No.	SW2008-0306
Total pages	4

Test Report

Shenzhen Center for Analysis and Measurement of Material Surface



Test Report

Customer	Name	Darje By Robert's Jewellery												
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	Postcode	518048	Contact Person	Jinxin He										
Test Item	Name	Composition of Surface	Submit No.	/										
	Amount of Sample	1	Date for Received	20080523										
	Sample Description	gem												
Analysis and Measurement	Sample Source	By customer	Sample No.	SW2008-0306										
	Facility Used	ULVAC-PHI 1800	Conditions	Temp.: 22°C Humidity: 48%RH										
	Standard and Methods	GB/T 19500-2004 General rules for X-ray photoelectron spectroscopic analysis method	Test No.	SW2008-0306										
			Date for Test	20080526										
Results	<p>XPS test conditions: X-ray source: mono Al, Analysis Area: diameter 800μm, Vacuum: 7.4×10^{-8}Pa, information depth: about 5nm; Ar ion sputter conditions: 2kV, area 1*1mm, sputter rate ~13nm/min.</p> <p>Fig.1 and Fig.2 are XPS spectra of sample surface before and after 10nm ion sputtering respectively. The composition results are: (% means Atomic Percentage)</p> <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">Before sputter</td> <td style="text-align: center;">After 10nm sputter</td> </tr> <tr> <td style="text-align: center;">C 73.9%</td> <td style="text-align: center;">C 87.0%</td> </tr> <tr> <td style="text-align: center;">O 22.8%</td> <td style="text-align: center;">O 11.2%</td> </tr> <tr> <td style="text-align: center;">Si 3.3%</td> <td style="text-align: center;">Si 1.4%</td> </tr> <tr> <td></td> <td style="text-align: center;">Ar 0.4%</td> </tr> </table> <p>(Corresponding spectrum is on the next page)</p> <p>From the above, we know that parts of C and O are from surface pollution, Ar is from sputter source. Si, parts of C and O are from sample. Si is in oxide state.</p>				Before sputter	After 10nm sputter	C 73.9%	C 87.0%	O 22.8%	O 11.2%	Si 3.3%	Si 1.4%		Ar 0.4%
Before sputter	After 10nm sputter													
C 73.9%	C 87.0%													
O 22.8%	O 11.2%													
Si 3.3%	Si 1.4%													
	Ar 0.4%													
Remarks	In the XPS method, the detected lower limit of Atomic Percentage is 0.1%.													
Signature	Test	Audit	Approve	Date										
				20080527										

Test Report

gem1.spe: SW2007-0124
2007 Mar 14 Al mono 200.0 W 0.0 75.0° 187.85 eV
Sur1/FulV1 (Shf) 1.2444e+005 max 5.92 min SZSA

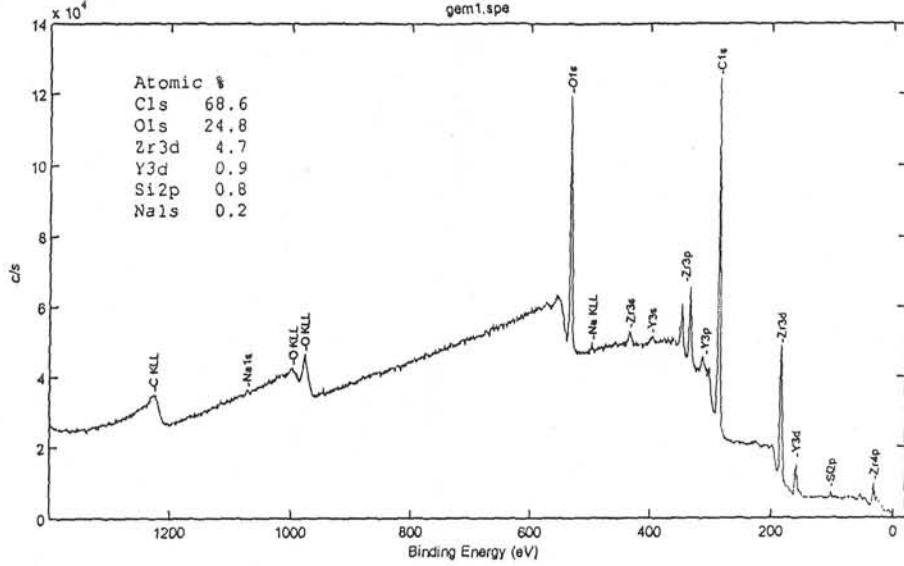


Fig.1: XPS spectrum of sample surface

gem3.spe: SW2007-0124
2007 Mar 14 Al mono 200.0 W 0.0 75.0° 187.85 eV
Sur1/FulV1 1.4469e+005 max 5.92 min SZSA

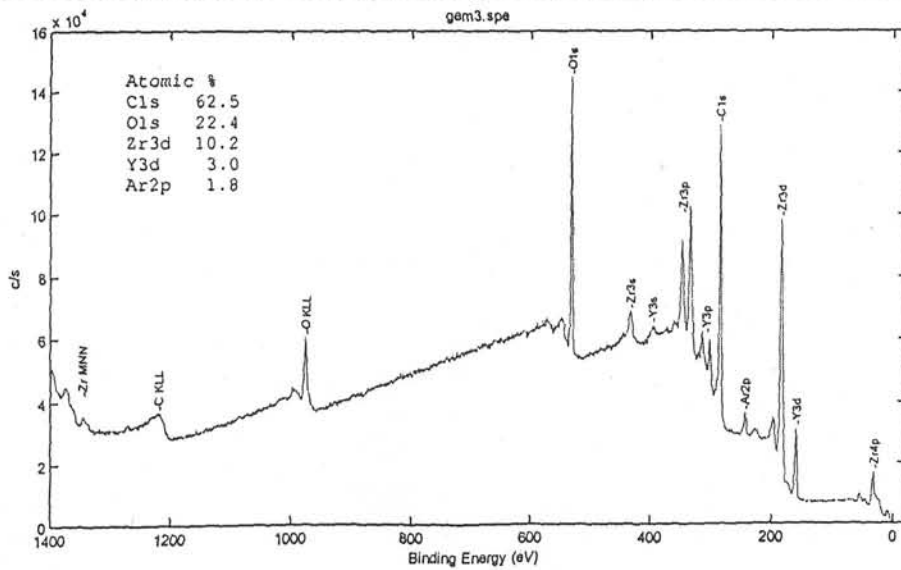


Fig.2: XPS spectrum of sample surface after sputtering

STATEMENT

- 1 The report is invalid without the special stamp of our center.
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- 3 The report is invalid with modification by customer.
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