SIC presents.
Optical Waveguide spectroscopy

SIS5000/S-SPR6000 series

Optical waveguide spectrometry is very sensitive , since the incident light advances by repeated total reflection in the waveguide substrate , and a sample on the waveguide surface absorbs the **evanescent wave** at every reflection point. The intensity of the **evanescent wave** diminishes strongly with distance from waveguide surface , and only distance similar to the wavelength of the incident light are effective in detecting the spectrum. This **high-sensitivity** is one of advantage for **interfacial analysis.**

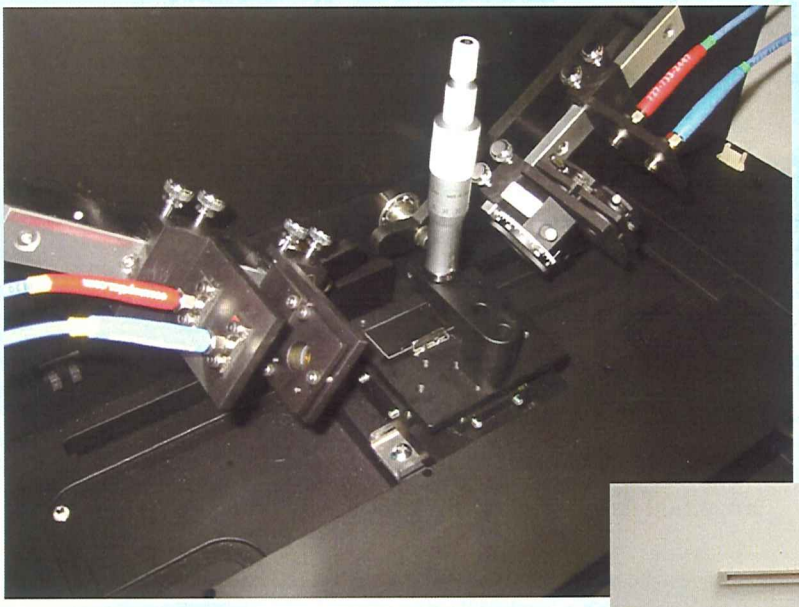


Fig.2 sample room for analysis

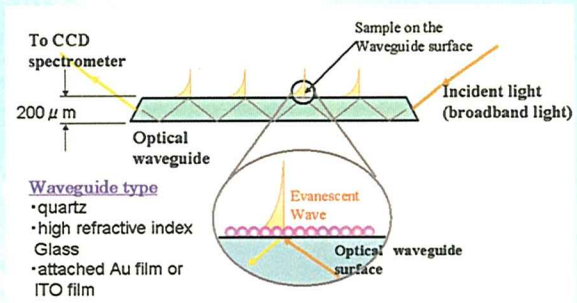


Fig.1 Image of optical waveguide spectrometry

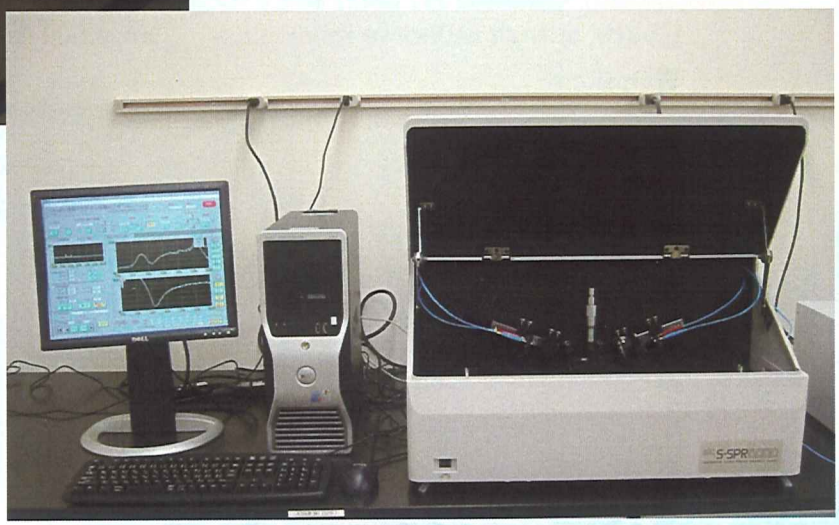


Fig.3 S-SPR6000 system front view

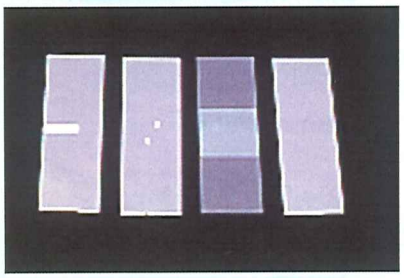


Fig.4 wave-guide variation

Applications

- ◎Photo functional surface, Photo chromism, Photo deplete
- ◎Collaborate electrochemistry, collaborate fluorescence spectra
- ◎Molecule devices, Organic EL, Dye-sensitized Solar Cell
- ◎Bio sensing by spectroscopic-SPR, interaction of bio molecule
- ◎Langmuir-Blodgett membrane, molecule orientation ...etc

SIC SYSTEM INSTRUMENTS CO., LTD.

◇Specification

■The main system

Incident angle adjustment　normal to 90～35degrees(fine adjustment bellow 0.005)

Out put angle adjustment　normal to 90～35degrees(fine adjustment bellow 0.005)

Indication chouse normal to angle or parallel to angle

Y scan adjustment　0～20mm(fine adjustment bellow 0.05)

Light source　Xe 150W(Hamamatsu photonics KK　L2175)

Dimension　620(W)×550(D)×330(H)

■Computer

Windows　XP Base (Dell computer Dimension well)

Original application software for absorption spectra and SPR spectra and save on time

■Power　100～110V AC　0.6KVA

■Spectrometer　Ocean Optics inc S2000(S4000) spectrometer

Wavelength　220～700nm or 400～1000nm ,

220～700nm and 400～1000nm 2 spectrometers

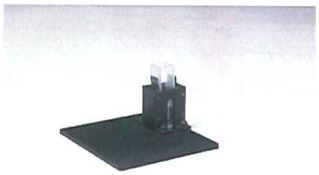
CCD　2048pix , resolution 1 .25nm

■ Optical wave-guide type

Dimension　0.2(t)×65(l)×20(W) each side has 60 degree tilt anger.

Quartz or high reflective index glass　attached Au, attached ITO

■Options

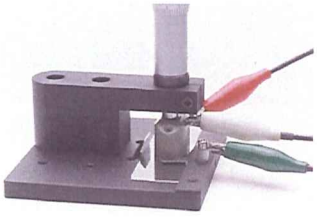


Transmission cell

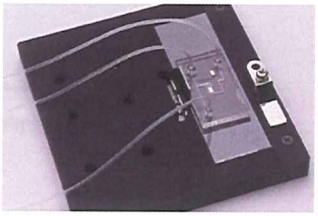
Z axis adjust stage

Polarizer unit

Halogen light source



electro chemical cell



PDMS μ-line

Manufacturer

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