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Vaksis Vacuum Systems Bulletin
Year: 4, No: 12, December 2014

PVD AND CVD COATING SYSTEMS FOR VARIOUS APPLICATIONS

www.vaksis.com

- systems with glovebox
- new product
  MiDAS in GB
- activities

- PVD: Physical Vapor Deposition
- CVD: Chemical Vapor Deposition
- GB: Glovebox

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Systems with Glovebox

A glovebox has a function of creating an "oxygen-free" and "water-vapor-free" atmosphere so that materials, which have great affinities to them, do not get converted to their oxidized forms. In other words, they stay in their purest forms during their handling. Such protective atmosphere of the glovebox is similar to vacuum atmosphere in which the oxygen and water vapor partial pressures are very low that they cannot easily form their oxides. The disadvantage of vacuum is that it requires robots to handle such materials in a vacuum chamber due to the pressure difference between the lab atmosphere and the vacuum chamber. Whereas, in a glovebox a lab operator can easily handle the "high oxygen affinity materials" due to the fact that there is no significant pressure difference between the enviroments.

The present day technologies (e.g., OPV, OLED, PLED, etc.) require materials, which are very prone to oxidation during their handling, and also after they are deposited as thin films. Such extreme condition forced the experimenters to combine the two protective enviroments together. The combination would give the opportunity to handle the bulk form and the thin film form without any danger of oxidation.

Dr. Baybars ORAL
COMPANY MANAGER

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VAKSIS has been one of the distinguished companies who combine a glovebox with PVD system(s). The recently sold "combination system" has two PVD systems. One of which is capable of evaporating the organic materials (6 of effusion cell type sources) and the other is capable of evaporating inorganic materials (4 of the Joule heating type evaporation sources).

The glovebox atmosphere has oxygen and water vapor concentration of less then 1 ppm. The ultimate vacuum levels of the PVD systems are in the order of 10^{-8} Torr. Both values are perfect values to avoid oxidation of susceptible materials.

Please do not heasitate to discuss your needs with us if your research requires such conditions.

Very Respectfully Yours,
Baybars Oral

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new product

MiDAS in Glovebox

This system is comprised of two chambers and two gloveboxes. One chamber includes six effusion cells and the other chamber includes four thermal evaporation sources.

Technical Specifications

Base Pressure: 8x10^{-8} Torr
Leak Rate < 10^{-8} Torr.l/s
Substrate Heating: Max. 600^{0}C
Substrate Rotation: 3-30 rpm
Control: Manual

Glovebox
Material: 304 Stainless Steel, Butyl Rubber Gloves
Flow Rate: 45 m^{3}/hr
Leak Rate < 0.001 vol%/hr (ISO 10648-2)

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activities

We attended...

E-MRS 2014 Fall Meeting
Warsaw, Poland (September 15-19, 2014)

http://www.emrs-strasbourg.com/index.php

European Materials Research Socicety (E-MRS) 2014 Fall Meeting was held in Warsaw (Poland).

VAKSiS was the participant of the exhibition.

20th Condansed Matter of Physics Ankara Meeting (26th December 2014)

http://www.ymf.hacettepe.edu.tr/ymf20/

20th Condensed Matter of Physics Ankara Meeting was held in Ankara (Hacettepe University) on 26 December 2014.

Vaksis was the sponsor and the participant of the conference.

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activities

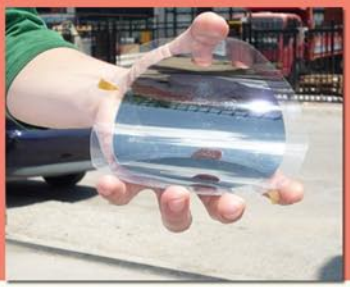
We are planning to attend...

2nd International Winterschool of Bioelectronics
Tirol, Austria (February 28 - March 7, 2015)

http://www.jku.at/conferences/content/e216103

2nd International Winterschool of Bioelectronics (BioEl 2015) will be held in Tirol, Austria from February 28 to March 7, 2015.

VAKSiS will be the participant and the main sponsor of the exhibition.



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