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Vaksis Vacuum Systems Bulletin
Year: 6, No: 16, May 2016

PVD AND CVD COATING SYSTEMS FOR VARIOUS APPLICATIONS

www.vaksis.com



Glovebox
Integrated Vacuum
Systems



Glovebox+
MiDAS / 40



activities



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

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Glovebox Integrated Vacuum Systems

The system which is represented in this newsletter is the smallest member of Vaksis MiDAS Coating Systems series integrated into the glove box.

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 two environments.



Dr. Baybars ORAL
COMPANY MANAGER

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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 environments together. The combination would give the opportunity to handle the bulk form and the thin film form without any danger of oxidation.

VAKSIS has been one of the distinguished companies who combine a glovebox with PVD system(s). The glovebox atmosphere has oxygen and water vapor concentration of less than 1 ppm. Both the ultimate vacuum levels of the PVD systems and the glovebox atmosphere which has oxygen and water vapor concentration of less than 1 ppm, are perfect values to avoid oxidation of susceptible materials.

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

Very Respectfully Yours,
Baybars Oral



Dr. Baybars ORAL
COMPANY MANAGER

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new product

Glovebox + MiDAS / 40

Glovebox Integrated PVD system with Four Organic Evaporation Source



Technical Specifications

Ultimate Vacuum Pressure $\leq 5 \times 10^{-7}$ Torr

Leak Rate $\leq 10^{-8}$ Torr

Glovebox: with Two Gloves

Max. Sample Size: 100 mm diameter

Substrate Heating: $350 \text{ }^\circ\text{C} \pm 1^\circ\text{C}$

Deposition Sources: Min. 4 pcs. organic evaporation

Turbomolecular Pump: 300 l/s

Backing Pump: $10 \text{ m}^3/\text{h}$ Scroll or Mechanical Pump

Thickness Monitor: Min. 2

Pressure Measurement: Pirani and Cold Cathode

Loading: From front and back doors

Control: Fully automatic

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activities

We attended...

3rd International Winterschool of
Bioelectronics (BioEI2016)
Tirol, Austria (March 12-19 2016)

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

3rd International Winterschool of
Bioelectronics (BioEL 2016) was held in
Tirol, Austria from March 12th - March
19th, 2016

Vaksis was the participator and the
sponsor of the exhibition.



YUKPOP-2016 Uluslararası Vakum Çalıştayı
Afyonkarahisar, Turkey (28-30 Mart 2016)

<http://e2e.aku.edu.tr/yukpop/bilgi.html>

"International Vacuum Workshop" (YUKPOP IV)
was held in Afyonkarahisar, Turkey between
March 28-30, 2016. Vaksis was a sponsor and
participator of the event.

Also, Vaksis' technical team made a
presentation about "Vacuum Thin Film
Coating Technology and Techniques".



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activities

We attended...

Adim Physics Days V
Eskişehir, Turkey (April 21-23, 2016)

<http://fizik.ogu.edu.tr/atg5/adimfizik5.html#>

Vaksis was a participator and a sponsor of "ADIM Physics Conference" which was held in Eskisehir, Turkey from April 21st - 23rd, 2016.



E-MRS Spring Meeting 2016
Lille, France (May 3-5, 2016)

<http://www.european-mrs.com/meetings/2016-spring/exhibition-exhibitor-workshop>

Vaksis was one of the exhibitors of "E-MRS 2016 Spring Meeting" which was held in Lille, France from May 2nd - 6th, 2016. Vaksis team was at booth #73 and met with related participants. Doç. Dr. Baybars Oral made a presentation with title "Perovskite Thin Film Deposition Under Vacuum" on 5th May 2016. Also, Vaksis was a sponsor of Sempozyum T "Advanced materials and characterization techniques for solar cells III".



V. National Sun and Hidrogen Energy Conference
(UGHEK 2016) Eskişehir, Turkey (May 12-13, 2016)

<http://fizik.ogu.edu.tr/ughek2016/ughek2016.html>

V. National Sun and Hidrogen Energy Conference
(UGHEK 2016) was held in Eskisehir, Turkey between 12-13 May, 2016.



Vaksis was one of the sponsors. We thank all the participants who visited our booth.

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