

e-bulletin

Vaksis Vacuum Systems Bulletin
Year: 6, No: 18, November 2016

PVD AND CVD COATING SYSTEMS FOR VARIOUS APPLICATIONS

www.vaksis.com



perovskite
thin films

new product
VAKSiS
Perovskite System

activities

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

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Perovskite Thin Films

Photovoltaic (PV) cells (solar cells) are one of the most prominent research topics on renewable energy in the recent years. The efficiency of these cells varies with the materials that are used for the production of the cells. Researchers are in search of new materials that will increase the efficiency and will enable to produce the large scale solar energy.

Perovskite materials which are very popular recently, although they are very new in this area, draw the attention with the efficiency of approximately 20.1% and the cell lifetime extrapolating 15 years. Moreover, Perovskite materials are promising on solving the most important problems on using the solar cells commonly and commercializing with its low raw material and production cost with high efficiency.

Since, our country receives solar radiation for a long period of time in a year, R&D studies that will increase the efficiency of the production of the electrical energy from the solar energy, is very crucial by means of providing added value to and increasing capacity of the renewable energy. With no doubt, these kinds of studies are very important.

Within this scope, in order to produce thin film organic Perovskite Solar Cells (PSC), a vacuum coating system that is able to produce highly efficient and reproducible cells by using the necessary deposition techniques was developed. Vaksis has increased "quality/cost percentage" thus; Vaksis has presented to world market a vacuum coating system which is more preferable than the other atmospheric techniques "cheap but low quality systems". Vaksis Perovskite system which is user-friendly and efficient equipment can be used for researches on synthesizing of perovskite materials. Up to now two Vaksis Perovskite systems have been sold.

For your questions, please do not hesitate to contact us.

Very Respectfully Yours,
Baybars Oral



Dr. Baybars ORAL
COMPANY MANAGER

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new product

Vaksis Perovskite System



$\text{CH}_3\text{NH}_3\text{PbX}_3$
(X: I, Cl, Br)
Thin Films



Technical Specifications

Base Pressure $\leq 5 \times 10^{-7}$ Torr
Leak Rate $\leq 10^{-8}$ Torr
Substrate Size: 80 mm (diameter)
Substrate Heating: 250 °C
Substrate Rotation: 3-30 rpm
Deposition Mode: Upward
Loading: From the front door
Control: Full automation by PC
Number of Sources Max. 4
Thickness Measurement: Quartz X-tal Oscillator

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activities

Which we attended...

2nd International Conference on Perovskite Solar Cells and Optoelectronics Genoa, Italy (26th-28th September 2016)

<http://www.pSCO-conference.org/>

2nd International Conference on Perovskite Solar Cells and Optoelectronics (PSCO-2016) was held in Genoa, Italy from September 26th to 28th, 2016.

Vaksis was a participator of the exhibition.



Our new representative: Solutions on Silicon BV

Solutions on Silicon (SoS) which is located in the Netherlands becomes Vaksis' new representative. The companies recently signed an agreement which allows SoS to market and support the Vaksis line of equipment in most of Europe.

You can get more information about SoS with the below link.

<http://www.solutions-on-silicon.com/>



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