

The Vacuum Society of Japan (VSJ)

June 2010 Topical Meeting

“ Recent Advances in Vacuum-Processing of Materials —from CVD to ALD”

Chemical vapor deposition (CVD), sputtering, molecular beam epitaxy (MBE), ion implantation, etc., are well recognized and widely used material processing techniques utilizing vacuum environments. Following the trend of device downscaling, the increasingly thin film materials synthesized by these techniques are still required to be implemented as homogeneous and atomically flat structures. Especially for the CVD technique, important progress has been made in the development and application of atomic layer deposition (ALD), in which different reactant gases are supplied in an alternating manner to control the film growth in a layer-by-layer fashion. In this Topical Meeting, we invited outstanding ALD experts to present their achievements and to discuss the advantages, the present status, and future challenges for the ALD technique from the viewpoint of vacuum technology.

Date: Wed. June 2, 2010, 13:00~16:45 (Registration desk opens at 12:30.)

Venue: Kikai-Shinko-Kaikan Bldg, Rm B3-2 (in the 3rd Basement Floor)

3-5-8 Shiba-koen, Minato-ku, Tokyo 105-0011, Japan (located in front of the Tokyo Tower)

Presentations and their abstracts will be given in JAPANESE.

— Program—

13:00 ~13:05 Opening Remarks Naoharu SUGIYAMA (Research Division Chair, VSJ)

13:05 ~ 13:45 “Recent Advances in ALD for Semiconductor Materials Processing: Reactor Cleaning Technique of Thin Film Fabrication Process”

Hitoshi HABUKA (Yokohama National University)

13:45 ~ 14:25 “Developing ALD Precursor Materials for Semiconductor Processing”

Shintaro HIGASHI (Kojundo Chemical Laboratory, Co. Ltd.)

14:25 ~ 15:05 “ Developing Diaphragm Valves for the Introduction of an ALD Precursor Gas into Semiconductor Processing Equipments”

Noritsugu ISHIDA and Koji ONARI (Nippon Swagelok FST, Inc.)

Break

15:20 ~ 16:00 “ Fabrication of Pr Oxide Films by ALD using $\text{Pr}(\text{EtCp})_3$ and Their Electrical Properties”

Hiroki KONDO (Nagoya University)

16:00 ~ 16:40 “ Fabrication of High-k Gate Insulator Films by ALD and Their Properties Influenced by Substrate Hydrophilicity”

Yukinori MORITA (AIST)

16:40 ~16:45 Closing Remarks

Ken NAKAMURA (Research Division Member, VSJ)

Registration Fee :

Member of VSJ: ¥1,500 Non-Member: ¥2,500 Students: Free of charge

Book of Abstracts: ¥1,000

Payment will be received in cash on-site.

Advance payment by credit card is possible at the following website (in Japanese only)
until the day before the Meeting.

<http://vacuum-jp.open365.jp/>

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Arranged and moderated by Ken NAKAMURA (AIST) and Yasunori TANIMOTO (KEK), Research Division Members, VSJ.