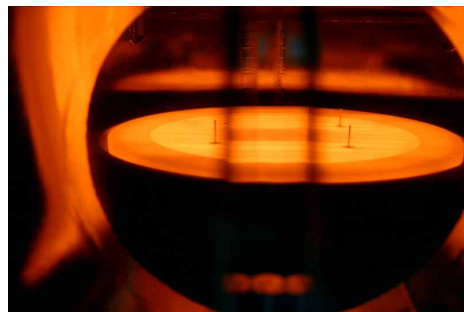


ATS-CVD Series Thermal CVD System for Nanowire Synthesis



Special Features

- ◆ Multi-functional thermal CVD system for nanowire synthesis
- ◆ Combined with plasma treatment and probe station
- ◆ Maximum substrate temperature: 900°C
- ◆ Growth direction controllable
- ◆ Automatic loading available during substrate heating
- ◆ High density plasma source for chamber cleaning
- ◆ PC-based control system
- ◆ Average throughput 4,800 wafer / year

Specifications

- ◆ Wafer capacity 6" wafer × 1
- ◆ Dimension 1,175L × 1,551H × 870W (mm³)
- ◆ Others
 - Power: TCP power supply RF 1kW
Bias power supply RF 300W
 - Gas : GeH₄, SiH₄, H₂, B₂H₆, PH₃, N₂, NH₃
 - Heater : Heating element – graphite
max. temp.:1,200°C,
 - Pump: Dry pump (1,400l/s)

Applications

- ◆ nanowires (Si & doped Si)
- ◆ nanotubes

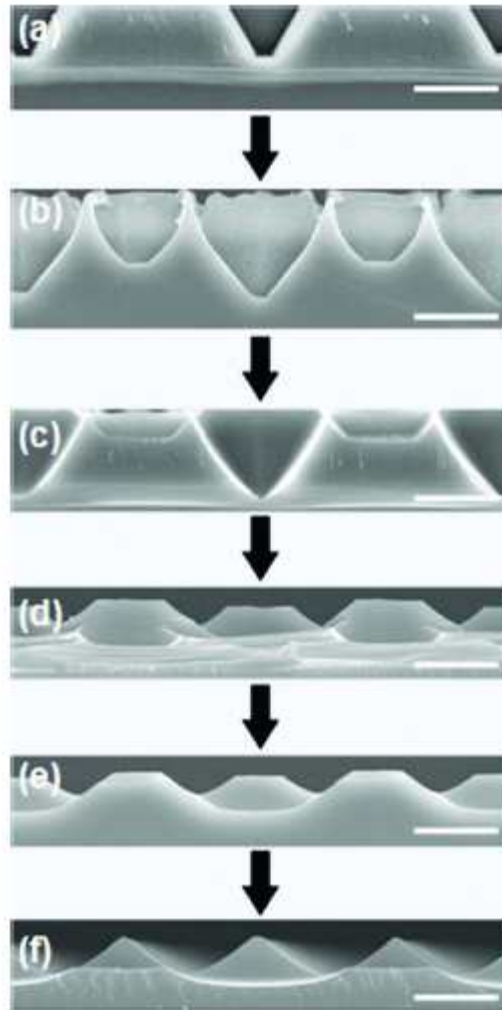


Figure (Color online) Cross-sectional scanning electron microscopy (SEM) images showing the structure development for truncated pyramids at 2.5 V as a function of time. (a) Initial inverted pitches after KOH etching and after (b) 30, (c) 45, (d) 60, (e) 120, and (f) 180 min. The scale bars represent 5 μm .

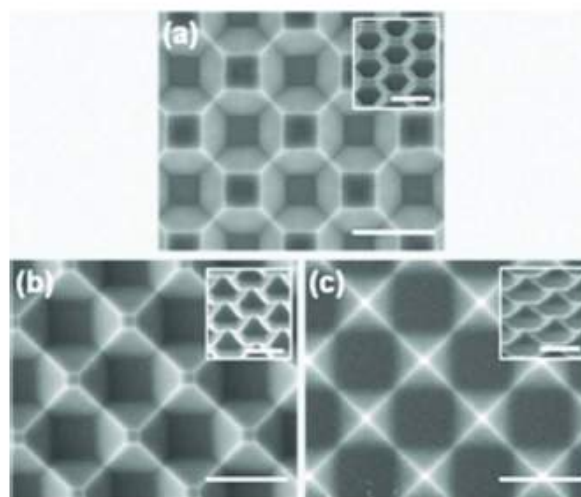
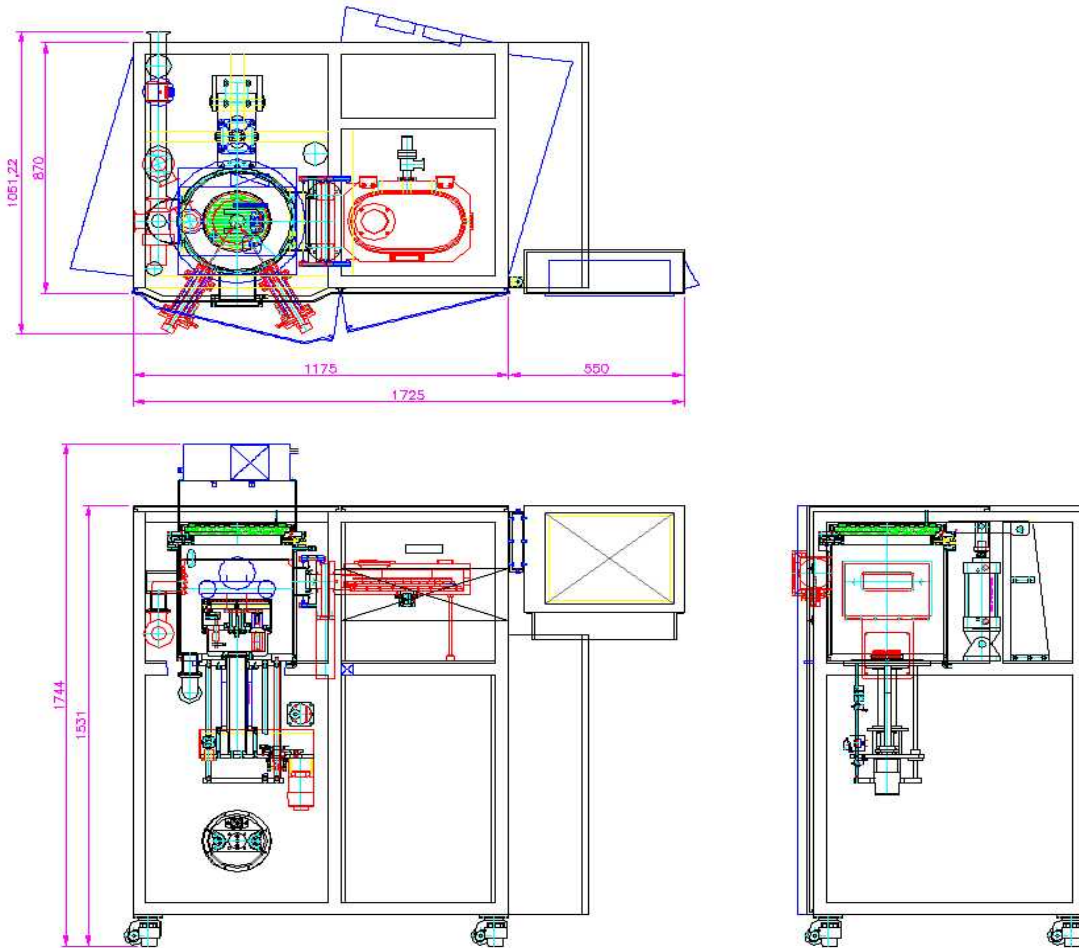


Figure (Color online) Top-view SEM images as a function of potential: (a) 1.5, (b) 2.0, and (c) 2.5 V. The insets are tilted-view images. The scale bars represent 10 μm .

References: Hong-Seok Seo, Xiaopeng Li, Han-Don Um, Bongyoung Yoo, Yong Woo Cho, and Jung-Ho Lee, "Fabrication of Truncated Silicon Pyramid Arrays by Electrochemical Etching", *Electrochemical and Solid-State Letters*, 12(12), D89-D91,2009

Layout



175-25, Cheongcheon-Dong 2, Bupyeong-Gu,
Incheon, 403-853, Rep. Korea
Phone: +82-32-508-8060/8067
Fax: +82-32-508-8069
E-mail: atech@atechsystem.co.kr
Website: www.atechsystem.co.kr