

赛伦  
Saratoga

Saratoga Technology

International

# 赛伦科技

为中国半导体电子能源技术产业服务



# 赛伦科技

## Saratoga Technology International

赛伦科技致力于半导体电子能源技术研究开发、技术咨询和设备销售，总部位于美国加州硅谷中心的赛伦多佳市，并在北京和上海设有销售和服务中心。

赛伦科技与十几家国际著名设备生产厂商在中国地区有着广泛的合作，具有深厚的技术实力和行业背景。赛伦科技可为中国的生产企业、高校和科研机构提供包括设备、材料、生产工艺和器件等多方面的技术支持。

赛伦科技代理销售的工艺设备及检测设备，已被众多国内外生产企业、科研机构 and 大学选购，广泛应用于 IC Fab (Si、GaAs等)、Solar Cell、LED、MEMS、FPD、以及 Photonics 等方面的生产和科研。

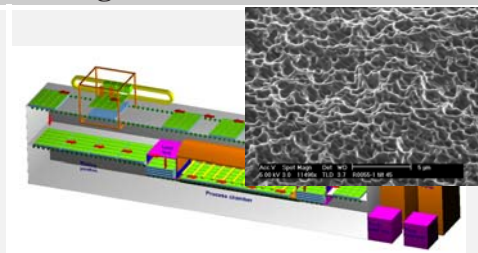
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### 太阳能电池干发制绒 Solar Cell Dry Texturing

应用领域: Solar cell, mono-crystal and multi-crystal silicon.

设备特性: Microwave plasma texturing of solar cell surfaces.

- High efficiency microwave plasma processes.
- Improve cell efficiency.
- Reduce wafer breakage. Improve process reliability.
- Pilot or High volume production, up to 3,000 WPH.



### 薄膜光伏激光工艺 Thin Film PV Laser Processing

应用领域: Thin Film Photovoltaic PV, TFPV.

设备特性: Complete laser processing system for a-Si, CIGS, CIS, CdTe thin film PV.

- P1 front contact TCO such as ITO, IZO, SnO2 and ZnO2.
- P2 active layer, a-Si, CdTe, CIGS, CIS.
- P3 back contact metals such as Al, Mo, Au.
- Best in the industry! .



### 太阳能电池专用扩散炉 Diffusion Furnaces for Solar Cell

应用领域: Solar cell manufacturing and pilot lines.

设备特性: POCl3 furnaces 用于PV电池生产和研发.

- Up to 156mm x 156mm solar substrates. Over 40" flat zone.
- Automatic cantilever substrate loading.
- Advanced controller and user-friendly interface.
- POCl3 processes is provided.



### 等离子去边 Solar Cell Plasma Edge Isolation

应用领域: Solar cell, mono-crystal and multi-crystal silicon.

设备特性: Wafer edge isolation with remote plasma etching.

- High throughput, low Cost of Onership.
- Wafers are placed away from plasma generation zone.
- Easy to handle and easy to operate.
- Highly reliable.



### 扩散炉自动装卸 Furnaces Boat Auto Loaders

应用领域: Solar cell, mono-crystal and multi-crystal silicon.

设备特性: Automatically load and unload solar wafer boats.

- Highly reliable and easy to operate.
- For POCl3 furnaces, PECVD furnaces, and diffusion furnaces.
- Easy to integrate with many furnace models from different manufacturers.
- Customized for your specific boat designs.



### 合金膜厚与成份 XRF Film thickness Composition CIGS CIS CeTd CTZSS TCO

应用领域: Thin Film Photovoltaic PV, TFPV.

设备特性: Advanced X-ray fluorescence analysis tools for thin film PV materials.

- XRF 检测合金薄膜的厚度及成份, CIGS, CIS, CdTe, CTZSS, TCO.
- Off-line and in-line models for R&D and production.
- Non-invasive and easy to use.
- Customized for your specific needs.



## 四探针 Four Point Probes

应用领域: Solar cell, IC fab.

设备特性: Four Dimensions (4D)四探针280. 太阳能POC13扩散检测的必要设备。

- 磷扩散方块电阻检测. 准确, 快速, 可靠.
- 125X125, 156X156, 自动 mapping 功能.
- 精度高, 测量范围极广. Sheet resistance 可达  $1E-3$  to  $8E+11$  ohm/sq.
- 产品优质可靠, 在全球市场享有盛誉, 市场占有率极高.



## P-N结漏电流检测 P-N Junction Leakage Test

应用领域: Solar cell, IC fab.

设备特性: Four Dimensions (4D) Mo280, 具有漏电流检测功能的四探针.

- 4D 独有的最新技术: P-N 结漏电流检测.
- Junction Conductivity from  $10^{-9}$  Siemens/cm<sup>2</sup> to  $10^{-2}$  Siemens/cm<sup>2</sup>.
- Mo280 具有全球 PV 业享有盛誉的 280 的所有功能.

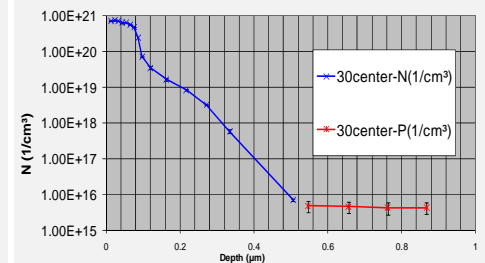


## ECV 扩散浓度检测 ECV Dopant Profiling

应用领域: Solar cell, IC, wafer manufacturing, MEMS, LED.

设备特性: WEP is a world leader in ECV dopant profiling.

- Electrochemical CV profiling - 电解液 CV (ECV)法检测掺杂-深度曲线.
- ECV 测量活性杂质, 直观简易, 优于 SIMS and SRP.
- ECV 广泛用于各种半导体工艺, Group IV (Si, Ge, SiC), Group II/VI (GaAs, InP ...), Group II/VII (CdTe, HgCdTe, ZnO ...), Nitrides (GaN, AlGaN ...), 及其它化合物半导体 (AlGaAs, GaInP, AlGaInP ...).



## 椭圆仪 Ellipsometer

应用领域: IC fab, wafer manufacturing, MEMS, LED, solar cell, photonics.

设备特性: Gaertner 精密光学仪器具有一百多年的历史, 它的 ellipsometers 享誉全球. 有激光椭圆仪和光谱椭圆仪.

- 用于精密检测各种薄膜的厚度, 包括 oxide, nitride, metal oxide, ITO.
- 采用四极偏振器, 无转动器件, 稳定性强, 准确率高.
- 膜厚范围可自 0nm 到 6000nm. 可具有达 12"直径自动 mapping 功能.



## 光谱薄膜测试 Spectro-Refletometer for Thin Film Measurement

应用领域: IC fab, MEMS, LED, solar cell, photonics, nano technologies.

设备特性: 光谱反射仪广泛用于各种透明、半透明薄膜测试.

- 用于检测各种薄膜的厚度, 包括 oxide, nitride, photo resist, metal oxide, ITO.
- 膜厚范围可自 10 nm to 50 µm. 可选各种光谱范围, 自 UV 200nm 到 IR 1700nm, 以满足各类材料检测的需要.
- 可具有高达 12"直径自动 mapping 功能. 可检测多达 5 层薄膜.



## 电池和组件缺陷视测 Cell & Module Vision Inspection

应用领域: 硅电池与组件, 薄膜组件.

设备特性: Inline or off line, fast, high resolution inspection.

- Detects cracks, scratches, holes, particles, residues
- 100% inline inspection at multiple steps.
- Inline inspection rate in cycle time of the line.
- Defects classification and statistical evaluation

