Norstel’s expertise in Silicon Carbide (SiC) epitaxy builds on more than 15 years of experience. Since the very beginning we have developed pioneering concepts partnering with Linköping University and leading equipment manufacturers.

Today we operate modern equipment in a state-of-the-art facility dedicated to SiC. With a flexible and customer-oriented attitude we provide everything from regular volume deliveries for industrial companies to single substrate structures for university and R&D labs.

Norstel offers SiC epitaxy growth on Norstel or on customer supplied substrates. The grown layers can be fully characterized in-house.

**SIC INDUSTRIAL GRADE EPITAXY**

**Equipment:** Aixtron/Epigress VP-2400HW  
Hot-wall technique  
Radial flow type planetary reactor  
Mechanical drive plus gas foil rotation  
Capacity: Six wafers (3” / 100mm) per run  
Doping: n-type and p-type

**Typical process performance**  
Thickness range: 5-30 µm  
Thickness uniformity (σ/mean): < 5%  
n-type doping uniformity (σ/mean): < 10%  
p-type doping uniformity (σ/mean): < 20%  
Epitaxial defects: < 2 per cm²

**SIC R&D EPITAXY**

**Equipment:** Aixtron/Epigress VP-508  
Hot-wall technique  
Single wafer chamber  
Gas foil rotation  
Capacity: 1x3” or 1x100mm  
Doping: n-type and p-type

**Typical process performance**  
Thickness range: 0.1-100+ µm  
Thickness uniformity (σ/mean): < 5%  
Doping uniformity (σ/mean): < 15%

**CHARACTERIZATION**

Routine in-house techniques available includes  
Epitaxial layer thickness by FTIR  
Epitaxial layer doping by mercury probe CV  
Wafer thickness and shape by non-contact mapping  
Surface roughness by AFM  
Normanski microscopy  
Full-wafer inspection using KLA-Tencor Candela CS10  
KOH Etching  
Substrate characterization and benchmarking

**RELATED SERVICES**

**CMP Polishing**  
The substrates can be processed before or after epi in order to achieve the desired surface conditions. Backside thinning allows for customized solutions.

Ref: 255-B-Q SIC Industrial grade Epitaxy, April 2014  
256-B-Q SIC R&D Epitaxy, April 2014  
257-B-Q Characterization, April 2014

For more information please contact Norstel sales! email: sales@norstel.com