Single-walled Carbon Nanotubes

- Purely Carbon
- Entirely sp² bonds
- 1-2 nm in diameter
- Lengths of > 750 microns
- Individual nanotubes can be semiconducting or metallic depending on chirality
Industrially Useful Carbon Nanotubes

Aligned Arrays

Directed Growth

Single Chirality CNTs

High Growth Temperature

Post Growth Purification

Film Transfer

Quartz
Monolithic 3D Integration

1000x Improvement
CNT-Based Monolithic 3D Performance

75x improvement using 8 generation old silicon technology
Our Product

Wafer scale arrays of Aligned Carbon Nanotubes (CNTs)

Covered in $10^9$ aligned CNTs
Technology Building Blocks

Align

Pure

Manufacturable

- Align
- Pure Manufacturable

Graph showing the relationship between $I_D$ and $V_{GS}$ with labels "metal" and "semi".
Road Map

Best Carbon Nanotubes in Foundries
Vision

Best Carbon Nanotubes in Foundries
Thank you.

Aligned Carbon