



TECHNOLOGY AVAILABLE FOR LICENSING

Three Dimensional Dielectrophoretic Assembly of Single-Walled Carbon Nanotubes for Integrated Circuit Interconnects *and* Three Dimensional Dielectrophoretic Assembly of Gold Nanoparticles for Nanodevices

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Details About the Invention:

The invention represents a significant improvement upon available technologies for nanoparticle assembly. Current manufacturing methods are energy-intensive, and only generate nanostructures on planar surfaces. This novel method allows the assembly of nanostructures on a three-dimensional (3-D) surface in a highly energy-efficient way, which is compatible with batch fabrication.

Benefits of the Invention:

Advantages

- Low processing temperature
- Catalyst not needed
- Low cost systems
- High yield
- Growth of nanostructures on a 3D surface

Applications

- Integration into CMOS electronics
- Development of 3D interconnects
- Development of 3D nano-electromechanical
- Single-walled carbon nanotube manufacturing
- Thermal sensors
- Characterization of manufactured nanoelements

The Bottom Line:

Over the past five years, there has been explosive growth in patent activity relating to carbon nanotubes. However, 3D is an area left relatively untouched. A low-cost, high-performing 3D product should have a considerable competitive advantage.

For More Information:

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