



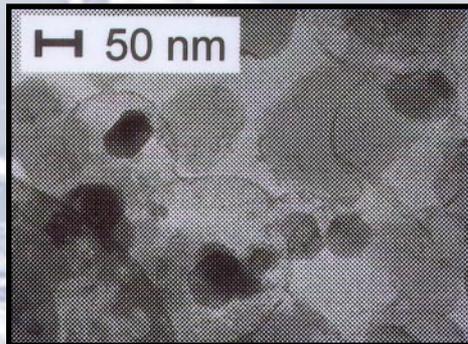
Glenn Research Center



Nanoparticle Synthesis in Flames

"...when we have some control... on a small scale we will get an enormously greater range of properties that substances can have."

Richard Feynman
Nobel laureate



Micrograph of encapsulated Ti particles

◆ Significance

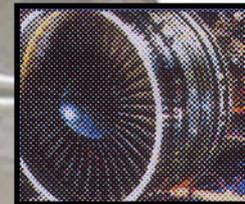
- High strength-to-weight ratio
- Selective thermal conductivity
- Easier processability
- Enhanced superplasticity
- Increased magnetic susceptibility

◆ Advantages of μg

- Quiescent environment
- Spherical flame
- Simplified analysis



- ◆ Electronic substrates for next-generation computers



- ◆ Advanced ceramic engine components
- ◆ Transparent armor
- ◆ Catalysts
- ◆ UV-protective coatings