

## SAN JOSE' STATE UNIVERSITY

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### At a Glance

Status: University

Number of employees, r&d personnel: 2000+ staff members on campus, but only a few hundred are involved in R&D (mainly faculty members)

Year of establishment: 1857

### Main Activity

- 1) Development of inorganic/organic Nanocomposites (the major applications will be for gas separation, bio-sensing, semiconductors, etc.)
- 2) Research and development of organic substrates for microfluidics (using plasma treatment and laser ablation to roughen organic substrates)
- 3) Improving interfacial bonding strength between two dissimilar materials (the study is focused at the interface between nanoparticles and polymeric resins)
- 4) Preliminary work on self-assembly polymers (e.g. dendrimers and star polymers) and surface Plasmon resonance characterization for bio-molecules

### Company Strengths

**HIGH END PRODUCTS:** Intellectual Properties (such as patents and know-hows)

**NETWORKING:** aligned with major corporations in Silicon valley

**R&D:** currently collaborated with IBM-Almaden Research Center, NASA-Ames Research Center, Stanford Research Institute International, Hitachi Global Storage Inc., Membrane Technology Research, Inc.

### Sector

#### NANOTECHNOLOGY

Nanomaterials & Chemistry

-Coatings/Thin films

-Composites

-Fibres

-Inorganic

-Organic

-Environment

-Monitoring

-Protection

-Remediation

-Energy

-Production

-Saving

-Storage

Electronics and Devices (ICT)

-MEMS/ NEMS

-Nanobiotechnology

-Transport & Aerospace

### Type of Cooperation

-JOINT CREATION OF AN ENTERPRISE OR CONSORTIUM

-DEVELOPMENT OF NEW PRODUCTS

### Partnership Proposal

Improved fracture resistance in composite structures -by adding nanoclays, carbon nanotubes, or garphene particles in a traditional fiber-reinforced composite structure, the mechanical properties and fracture resistance of the composite can be enhanced.