

# Curriculum Vitae

## Gan Liang

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For more information about me, see webpage of **Gan Liang**

### Education:

1990 Ph. D. in Experimental Solid State Physics, *Rutgers University*, New Brunswick, New Jersey.  
Dissertation Topic: *Mixed-Valent, Kondo, and Heavy-Fermion Behavior in CeMn<sub>2</sub>Si<sub>2</sub>-Based 3d Magnetic Host Series*  
Dissertation Advisor: Professor Mark C. Croft

1982 B. S. in Nuclear Physics, Peking University, Beijing, China.

### Professional History:

2002-Present *Professor*, Department of Physics, Sam Houston State University, Huntsville, Texas.

1996-2002 *Associate Professor*, Department of Physics, Sam Houston State University, Huntsville, Texas.

1990-96 *Assistant Professor*, Department of Physics, Sam Houston State University, Huntsville, Texas.

1990-1996 *Research Scientist*, Houston Advanced Research Center, The Woodlands, Texas

1989-90 *Postdoctoral Research Associate*, Department of Physics, Rensselaer Polytechnic Institute, Troy, New York.

1985-89 *Research Assistant*, Department of Physics, Rutgers University, New Brunswick, New Jersey.

1983-85 *Teaching Assistant*, Department of Physics, Rutgers University, New Brunswick, New Jersey.

1982-1983     *Teaching Assistant*, Department of Technical Physics, Beijing University, Beijing, China

### **Research Interests:**

- Study of Li-ion Battery cathode materials.
- Study of high-temperature superconductors and MgB<sub>2</sub>-related materials.
- Study of rare-earth intermetallic compounds which show strong transition metal-host magnetism, valence instability, Kondo-effect, and heavy-fermion behavior.
- Magnetic nanoparticle systems for medical applications.
- Laser optical imaging.
- Applied superconductivity with concentration at the fabrication and characterization of high-temperature superconducting wires/tapes and cables.
- Superconducting magnet technology which includes design of superconducting magnets, superconducting joints, winding and epoxy impregnation of superconducting magnet coils.

### **Scientific and Technical Expertise**

- Synchrotron x-ray absorption spectroscopy (XAS) and x-ray photoemission spectroscopy (XPS) study of electronic properties of material systems.
- Making of coin-cell type lithium ion batteries and characterization of lithium-ion battery cathode materials by charge/discharge, cyclic voltammetry (CV), electrochemical impedance spectroscopy (EIS) measurements.
- Transmission electron microscopy (TEM) and Scanning electron microscopy (SEM) measurements.
- X-ray diffraction measurement of crystal structure of crystalline materials
- Magnetization measurement of magnetic materials using Superconducting Quantum Interference Devices (SQUID).
- Measurement of temperature dependent electrical resistivity using both four-lead and field-decay techniques.
- Measurement of low temperature specific heat.
- Measurement of critical current of superconducting materials.
- Synthesis of materials using both solid state reaction and arc-melting techniques..
- Design of superconducting magnets
- Fabrication of various superconducting joints for NMR superconducting magnets.
- Winding and impregnation of superconducting magnet coils.
- Fabrication high-temperature superconductor wire, tape, and cables

### **Grant History**

I am the principal investigator of total 25 research grants. For detail list of the grants, please see the page VITA on Professor Gan Liang's personal website: [http://www.shsu.edu/~phy\\_gnl](http://www.shsu.edu/~phy_gnl).

**PUBLICATIONS (subject to peer or vigorous editorial review):**

Total 98 peer review journal papers and 114 conference abstracts/presentations. For detail list of the publications, please see the page Publications on Professor Gan Liang's personal website: [http://www.shsu.edu/~phy\\_gnl](http://www.shsu.edu/~phy_gnl).