MEMORANDUM OF AGREEMENT
between
Zhejiang University
and
The University of Tennessee, Knoxville
regarding
Partnership in Materials Science

This Memorandum of Agreement (MOA) is by and between Zhejiang University, Hangzhou, Zhejiang Province, People’s Republic of China and The University of Tennessee (UT), Knoxville, Tennessee, hereinafter jointly referred to as the “Parties.”

Zhejiang University is one of the top universities in China and is under the direct administration of China's Ministry of Education. Zhejiang University is a key comprehensive university whose fields of study cover 11 branches of learning, namely philosophy, literature, history, education, science, economics, law, management, engineering, agriculture and medicine. The University of Tennessee, Knoxville is the flagship campus of the statewide UT system and has 10 colleges and 26,000 students. A common direction of the two parties is materials science.

A. Purpose.
Both institutions recognize that a close collaboration in education and research will mutually enhance the productivity and stature of each party. This collaborative effort will involve the Joint Institute for Advanced Materials (JIAM) of The University of Tennessee (UT) and Oak Ridge National Laboratory (ORNL), and the Center for Quantum Science and Engineering (CQSE) of Zhejiang University. UT and Zhejiang agree to collaborate in a variety of areas to facilitate the establishment of both centers devoted to research and education. Cooperation will include, but not be limited to, research, conduct of joint workshops, exchange of undergraduate and graduate students, a joint academic degree, and the short-term exchange of faculty.

B. Linkage of Research Centers.
The parties will work together to forge a linkage of research centers: JIAM (UT-ORNL) and the new CQSE at Zhejiang University and agree to cooperate in the following areas:
- Acquisition and construction of complementary research equipment
- Major commitment in new hires and a facility by Zhejiang University for CQSE
- Sharing of equipment between JIAM and CQSE
- Direct participation of JIAM leadership in the creation, funding, and direction of CQSE
- Faculty exchange and research visits in both directions, starting immediately with long-term visits by faculty at Zhejiang University associated with CQSE to JIAM
- Undergraduate research projects for a semester or summer
- The creation of a joint academic degree.
C. Management of CQSE.
The management of CQSE at Zhejiang University will be structured in the following way.
  o It is proposed that Professor Ward Plummer act as the director of CQSE.
  o Professor Plummer will spend at least three months each year in Hangzhou to direct CQSE in its initial stages of development.
  o A deputy director of CQSE will be appointed from the faculty at Zhejiang University.
  o It is proposed that Dr. Jian Shen (ORNL) will act as associate director of CQSE in charge of exchange programs.
  o Zhejiang University will commit funding for three to five years to assure the success of CQSE. This funding must be adequate to offer competitive startup packages for new hires, to upgrade infrastructure at Zhejiang University, and to facilitate travel of faculty and students from Hangzhou to Tennessee for extended periods of time.
  o A search for an internationally recognized experimentalist will be conducted. This person should complement the strengths of the existing faculty, bringing new capabilities and signaling to the research community that the CQSE is a major research center in the area of quantum science and engineering.

D. Joint academic doctoral degree between UT and Zhejiang University.
The parties agree to work with their respective institutions and with each other to develop an educational model that will lead to a joint doctoral degree in physics. In the interim graduate students will be expected to satisfy the separate requirements of each university and receive simultaneous degrees from the two universities.

E. Reporting and supervision.
The leaders of the three institutions will maintain oversight of the linkage agreement.
  o An annual report on the activity of the linkage will be prepared by the coordinators and submitted to an oversight committee consisting of appointed leaders.
  o Periodic visits of institutional leaders will be made to monitor and enhance the activities resulting from the agreement.

Other terms of the agreement:

1. Points of Contact.
Coordinators (points of contact) will be named by each institution to ensure that the terms of this agreement are carried out. Furthermore, all activities conducted under the auspices of this exchange program must have the endorsement of the coordinators. The coordinators will be appointed by the oversight committee to five-year terms. The initial coordinators will be Ward Plummer representing UT and ________________ for Zhejiang University. The coordinators will notify their counterparts should a new person be named to the position.
The designated Points-of-Contact are:

Zhejiang University:
Name:
Title:
Telephone:
E mail address:

The University of Tennessee:
Name: Ward Plummer
Title: Director, Joint Institute for Advanced Materials
Telephone: 1-865-974-2288
E mail address: EPlummer@utk.edu

2. Amendments. This MOA may be amended in writing and signed by both parties.

3. Funding. No funds are committed and no legal obligations are created by this MOA. Any commitment of funds shall be made under a separate document. In the visits of researchers in both directions, the host institution is responsible for local living costs; the sending institution covers travel expenses. Commitments for these expenses must be arranged in advance.

4. Intellectual Property Disposition. Terms for sharing of intellectual property will be addressed in the individual funding agreement.

5. Export Control. (a) The Parties agree to adhere to all applicable U.S. Export Laws and Regulations; (b) each Party acknowledges that it is responsible for its own compliance with all U.S. export control laws and regulations; and (c) each Party acknowledges it will not knowingly export directly or indirectly, through its affiliates, licensees, or subsidiaries, any export controlled hardware, software, or technical data in the performance of this MOA without a required license which will be obtained by the responsible party from the appropriate U. S. Authority.

6. Conflicts. Conflicts or issues may arise which cannot be resolved between the parties. Such conflicts or issues should be raised to the necessary level of management to obtain resolution. It is expected that normal communication channels will be used for routine issues; however, should satisfactory resolution not be obtained through normal interactions, the designated Points of Contact will take the issues up their respective organizational levels until the issues are resolved.

7. Effective Date and Termination. This Agreement will be in effect for a period of five years effective upon the date of the last signature and may, thereafter, be extended by mutual agreement of the Parties. Either Party may terminate this Agreement by giving written notice to the other Party. The Agreement will terminate 30 days thereafter.
Authorized Signatures

Those individuals whose signatures appear below hereby certify that they are authorized to sign on behalf of the respective Parties to this Agreement. This MOA will be executed in duplicate, and is not effective until signed by all Parties.

The University of Tennessee, Knoxville

By: [Signature]
Name: Dr. Loren Crabtree
Title: Chancellor

For

[Signature]
Name: Dr. Yang Wei
Title: President

Nov. 19, 2006

Zhejiang University

By: [Signature]
Name: [Name]
Title: [Position]

Nov. 19, 2006

By: [Signature]
Name: [Name]
Title: [Position]

Nov. 19, 2006