

Please **RSVP** by November 12 to 713-743-8213. See details in program.

Please join us as we celebrate the 25th Anniversary of the Texas Center for Superconductivity at the University of Houston, the 25th Anniversary of the Discovery of the High Temperature Superconductor YBCO at the University of Houston, and the inauguration of the International Materials Forum-Houston.

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Texas Center  
for  
Superconductivity  
at the  
University  
of Houston



## SYMPOSIUM INVITATION

You are invited to attend the

### TCSUH 25th Anniversary Symposium on Creativity and Innovation

Monday, November 19, 2012

- 8:30 - 11:30 a.m. Morning Session  
Nobel Lectures: Frontiers of Materials, Science,  
and Technology
- 11:30 - 1:30 p.m. Lunch Break (Attendees of morning Symposium  
will receive a box lunch ticket if RSVP is received  
by 11/12/12.)
- 1:30 - 6:10 p.m. Afternoon Session  
Creativity, Innovation, and Education - A Public  
Dialog

Hilton University of Houston  
Shamrock Ballroom  
4800 Calhoun Road, Houston, Texas 77004

RSVP to +1 713.743.8213 [Box lunch available for those who RSVP.]

#### Information:

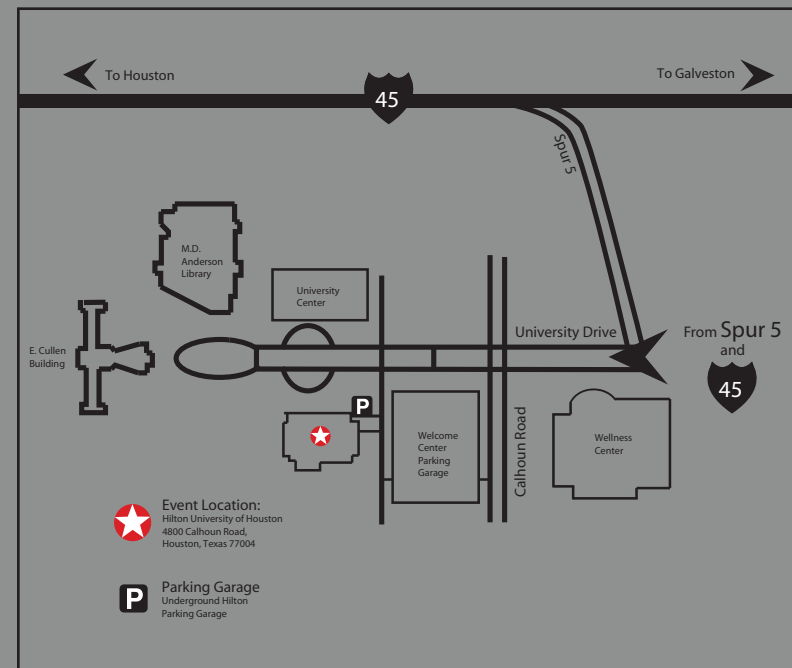
Texas Center for Superconductivity, Office of Public Affairs  
3201 Cullen Boulevard, Houston, Texas 77204-5002  
Main Phone: +1 713.743.8213  
Fax: +1 713.743.8201

### Frontiers of Materials, Science, and Technology (Morning)

This special symposium will provide a unique opportunity to hear Nobel laureates and world-renowned scientists share their personal insights on the major discoveries in materials, science, and technology.

### Creativity, Innovation, and Education: A Public Dialog (Afternoon)

Symposium participants will join high school teachers and students, the university community, and the general public for this enlightening and interactive discussion on the process of discovery. Nobel laureates and Academy members will share their insights on the creative process.





## TcSUH 25<sup>th</sup> Anniversary Symposium – General Program

Hilton University of Houston, Shamrock Ballroom  
4800 Calhoun Road, Houston, TX 77004

### MONDAY, NOVEMBER 19

8:00 – 8:45 Coffee, Tea & Pastries – Shamrock Ballroom Foyer

### 9:00 – 11:30 **TcSUH 25<sup>th</sup> ANNIVERSARY SYMPOSIUM on CREATIVITY and INNOVATION**

Note: There will be no formal break during the sessions. Beverages will be provided in the foyer throughout the session.

#### 9:00 **Welcome to the TcSUH 25<sup>th</sup> Anniversary Symposium**

Allan J. Jacobson, Robert A. Welch Chair of Science, Professor of Chemistry, and Director, Texas Center for Superconductivity at the University of Houston (TcSUH)

#### **Greetings from the University of Houston**

Dr. Rathindra N. Bose, Vice Chancellor/Vice President for Research and Technology Transfer

#### **Introductory Remarks & Introduction of Session Chairs**

Paul C. W. Chu, T. L. L. Temple Chair of Science, Professor of Physics, and Founding Director/Chief Scientist, TcSUH; Honorary Chancellor, Taiwan Comprehensive University System; President Emeritus, and University Professor Emeritus, Hong Kong University of Science and Technology

#### 9:15 **MORNING SESSION**

#### **Creativity & Innovation in Frontiers of Materials, Science, and Technology**

This special session provides a unique opportunity to hear renowned scientists share their personal insights on major discoveries in materials, science and technology.

#### **Session Chairs**

**Prof. David Pines**, Founding Director, Institute for Complex Adaptive Matter (ICAM); Distinguished Professor of Physics at UC Davis, and Research Professor of Physics/Professor Emeritus of Physics and Electrical and Computer Engineering in the Center for Advanced Study, University of Illinois at Urbana-Champaign

**Prof. Dr. Øystein Fischer**, Professor, Département de Physique de la Matière Condensée (DPMC); Founder and Director, Swiss National Center of Competence in Research (NCCR); Initiator, Geneva Creativity Center, University of Geneva, Switzerland

#### **Thoughts on the Discovery of the First High Temperature Cuprate Superconductor** 9:15 – 9:35

**Dr. K. Alex Mueller** (greetings/video lecture), IBM Zürich Research Laboratory, Ruschlikon, and Department of Physics, University of Zürich; 1987 Nobel Prize in Physics for superconductivity in ceramic materials. Introduction by **Prof. Dr. Annette Busmann-Holder**, Department of Physics, University of Basel, and Max Planck Institute for Solid State Research, Stuttgart, Germany

**Origin of the Theory of Superfluid He3 and Superconductivity** 9:35 – 9:55

**Prof. Sir Anthony J. Leggett**, *John D. and Catherine T. MacArthur Professor, and Center for Advanced Study Professor of Physics at the University of Illinois at Urbana-Champaign; 2003 Nobel Prize in Physics for the theory of superconductors and superfluids*

**The Discovery of Superfluidity in He3 and its Implications for Science and Technology** 9:55 – 10:15

**Prof. David M. Lee**, *Distinguished Professor of Physics, Physics & Astronomy Department, at Texas A&M University; 1996 Nobel Prize in Physics for the discovery of superfluidity in helium-3*

**The Development of the BCS Theory, The Most Comprehensive Microscopic Theory of Superconductivity, and its Impact on Physics** 10:15 – 10:35

**Prof. Leon N. Cooper**, *(video lecture), Thomas J. Watson, Sr. Professor of Science and Director of the Institute for Brain and Neural Systems at Brown University; 1972 Nobel Prize in Physics for the BCS theory of superconductivity*

**Discovery of C<sub>60</sub> and the Beginning of the Nanoscience and Technology Era** 10:35 – 10:55

**Prof. Robert Curl**, *University Professor Emeritus, Pitzer-Schlumberger Professor of Natural Sciences Emeritus, and Professor of Chemistry Emeritus, Rice University; 1996 Nobel Prize in Chemistry for the discovery of fullerenes*

**The Discovery of the J-Particle and the Search for Dark Matter** 10:55 – 11:15

**Prof. Samuel C. C. Ting**, *Thomas D. Cabot Professor of Physics, Massachusetts Institute of Technology; 1976 Nobel Prize in Physics for discovering the subatomic J/ $\psi$  particle*

11:30 – 1:30 **Lunch Break**

Box lunches will be provided for attendees who **RSVP** to 713.743.8213 **by November 12** and attend the morning Symposium. Tickets will be available at the nametag table outside the Shamrock Ballroom.

1:30 – 6:10 **TcSUH 25<sup>th</sup> ANNIVERSARY SYMPOSIUM** – *Continued in Shamrock Ballroom*

**AFTERNOON SESSION:**

**Frontiers of Materials, Science, and Technology: Creativity, Innovation, and Education**

**Note:** *There will be no formal break during the sessions. Beverages will be provided in the foyer throughout the session.*

**Session Chairs**

**Dr. Maw-Kuen Wu**, *President, National Dong Hwa University, Taiwan*

**Dr. Larry R. Faulkner**, *President Emeritus, The University of Texas at Austin; President Emeritus, Houston Endowment; TcSUH Advisory Board member*

*Note: The afternoon session will consist of panels. Renowned scientists will share their personal insights on HTS science, materials, applications, and science and technology policy.*

1:30-2:35 **PANEL 1: High Temperature Superconductivity: PRESENT SCIENCE & MATERIALS RESEARCH**

- **Dr. Ivan Bozovic**, *Senior Scientist and Leader, Molecular Beam Epitaxy Group, Brookhaven National Laboratory*
- **Prof. Richard L. Greene** (Chair), *Alford L. Ward Professor of Physics, and Director Emeritus, Center for Superconductivity Research, University of Maryland*
- **Dr. T. K. Lee**, *Distinguished Research Fellow and Director, Institute of Physics, Academia Sinica, Taiwan*
- **Dr. Igor Mazin**, *Materials Science and Technology Division, Naval Research Laboratory*
- **Dr. James L. Smith**, *Materials Technology: Metallurgy, and Laboratory Fellow, Los Alamos National Laboratory*

2:40-3:45 **PANEL 2: High Temperature Superconductivity: APPLIED RESEARCH, DEVELOPMENT & APPLICATIONS**

- **Dr. Amit Goyal**, *UT-Battelle Corporate Fellow, Battelle Distinguished Inventor and an ORNL Distinguished Scientist, Materials Science and Technology Division, Oak Ridge National Laboratory*
- **Prof. David C. Larbalestier** (Chair), *Francis Eppes Professor of Superconducting Materials, Department of Mechanical Engineering, and Director of the Applied Superconductivity Center, Florida State University; Chief Materials Scientist, National High Magnetic Field Laboratory*
- **Dr. Marty Nisenoff**, *M. Nisenoff Associates; IEEE Council on Superconductivity*
- **Dr. Horst Rogalla**, *National Institute of Standards and Technology (NIST)*
- **Dr. Bruce P. Strauss**, *Program Manager, High Energy Physics, Office of Science, U. S. Department of Energy*

3:50-4:55 **PANEL 3: High Temperature Superconductivity: THE FUTURE**

- **Prof. Øystein Fischer**, *Professor, Département de Physique de la Matière Condensée (DPMC); Founder and Director, Swiss National Center of Competence in Research (NCCR); Initiator, Geneva Creativity Center, University of Geneva, Switzerland*
- **Prof. Laura H. Greene** (Chair), *Swanlund Professor of Physics and Center for Advanced Study Professor of Physics, University of Illinois at Urbana-Champaign; Associate co-Director, Center for Emergent Superconductivity, an Energy Frontier Research Center; TcSUH Advisory Board Member*
- **Dr. Peter D. Johnson**, *Chairman, Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory*
- **Prof. Shin-ichi Uchida**, *Professor, Department of Physics, Graduate School of Science, The University of Tokyo*
- **Dr. Harold Weinstock**, *Program Manager, Air Force Office of Scientific Research (AFOSR)*

5:00-6:05 **PANEL 4: PERSPECTIVES ON SCIENCE & TECHNOLOGY POLICY**

- **Prof. Dr. Kristian J. Fosheim**, *President, Royal Norwegian Society of Sciences and Letters; Professor Emeritus, Institute for Physics, Norwegian University of Science and Technology, Trondheim*
- **Dr. Mary L. Good**, *Special Advisor to the Chancellor for Economic Development, Founding Dean and Dean Emeritus, Donaghey College of Engineering and Information Technology, University of Arkansas at Little Rock; former Under Secretary for Technology, Technology Administration, Department of Commerce; former President, American Chemical Society*
- **Dr. Koichi Kitazawa**, *Counselor to the President, Japan Science and Technology Agency (JST), Tokyo; former President, JST; Head, The Independent Investigation Commission on the Fukushima Daiichi Nuclear Accident*
- **Prof. Neal F. Lane** (Chair), *Malcolm Gillis University Professor, Professor of Physics and Astronomy, and Senior Fellow, James A. Baker III Institute for Public Policy, Rice University; Former Director of the National Science Foundation, Assistant to the President for Science and Director of the White House Office of Science and Technology Policy; TcSUH Advisory Board Member*
- **Prof. H. D. Yang**, *President, National Sun Yat-Sen University, Taiwan; representative on behalf of the Taiwan Comprehensive University System (TCUS); former Vice Chair, National Research Council, Taiwan, ROC*

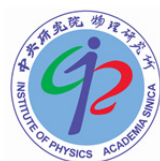
6:05-6:10 **Concluding Remarks**

The Texas Center for Superconductivity at the University of Houston wishes to express its gratitude to the University of Houston and the following sponsors.

**Friends of Paul Chu and TcSUH**



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