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Table of Contents Page

I

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II

Review of Research Projects

GENERAL INTRODUCTION

The Institute of Physics was founded in Shanghai in 1928 and was reestablished in Taiwan in 1962, with Dr. Ta-You Wu as its first Director. The succeeding Directors of the Institute were: Dr. W. N. Wang (1976-1977), Dr. E. K. Lin (1977-1989), Dr. L. T. Ho (acting, 1989-1990), Dr. T. T. Tsong (1990-1999), Dr. Y. D. Yao (acting, 1999-2002), Dr. Maw-Kuen Wu (2002-2004), Dr. S. P. Li(acting, 2004-2006), and Dr. Maw-Kuen Wu(2006–present). In 1966, the Institute, together with the National Tsing-Hua University and the National Taiwan University, co-organized the Physics Research Center, under the auspices of the National Science Council, in order to promote physics research in Taiwan. In 1970, an interdisciplinary research program for atmospheric science and fluid mechanics was initiated in the Institute of Physics, and later a similar program for biophysical research in 1975. During the First Five-Year Plan (1981-1985) of the Academia Sinica, the original two-story Physics Building was replaced by a four-story building at the same site in April, 1983. The Institute's scope of research was then further expanded to include theoretical physics, covering mainly field theory and particle physics, nuclear physics, and statistical and computational physics. Since the beginning of the Second Five-Year Plan (1986-1991), the Institute has continued to grow, both in research staff and facilities. To meet the demands of rapidly growing research activities in the Institute, a new ten-story building immediately adjacent to the original building was completed in 1999. The Physics Building is named the "Ta-You Hall" to commemorate its first director, who passed away on March 4, 2000.

At present, the Institute has 42 research staff: 2 distinguished research fellows, 23 research fellows, 7 associate research fellows, 7 assistant research fellows, 1 research technologist, and 2 associate research technologist. The Institute also maintains 450 temporary employees, which include visiting scholars, postdoctoral research associates, as well as research assistants and graduate students. Current research areas can be grouped into three main categories: Nanoscience, Complexity, Medium and High Energy Physics. Specific interests are in the areas of particle physics and cosmology, experimental high-energy physics, nuclear physics, condensed-matter and surface physics, statistical and computational physics, biophysics, as well as fluid mechanics and nonlinear physics. The Institute of Physics is expected to play an increasingly important role in the development of physics and technology in Taiwan.

The Institute of Physics Logo

The logo for the Institute of Physics was the winning design from a logo submission contest held by the Institute. It was an idea born on April 15, 2003 by Dr. Chia-seng Chang, an Institute Fellow, with the following spirit in mind:

The letters I.O.P are drawn with the additive primary colors blue, green, and red, and they are placed in such a way that one can depict G，ε，h，k, the 4 fundamental constants which represent classical mechanics, electromagnetism, quantum mechanics, and statistical mechanics. With further imagination, one can conceive the number 1928 from the design, which is the year the IOP was founded.

Nanoscience Research Group

Nanoscience and nanotecnology have become the major research focus in the Institute. We have already built up our capabilities and expertise during the past few years. To further enhance our research strength we have decided that all our efforts and interests will be grouping into the following categories:

(i) Development of state-of-the-art research tools for nano-science

(ii) Synthesis and characterizations of nano-structures, nano-materials

(iii) Manipulation and control of single atom and single molecules

(iv) Theoretical modeling and simulations of nano-system and novel materials

The followings are the research groups that involve in nanoscience researches and summaries of their research activities:

I. Surface Physics and Nanoscale Microscopy

This research group includes five faculty members and four joint appointment faculty members and routinely maintains a size of around 30 researchers comprised of visiting scholars, post-doctors, assistants, and students. We have established several major research tools such as scanning tunneling microscopy (STM), atomic force microscopy (AFM), field ion microscopy (FIM), transmission electron microscopy (TEM), photoemission electron microscopy (PEEM), low energy electron diffraction (LEED), Auger spectroscopy (AES), x-ray microscopy and etc. In past years, our focus has been on studying surface dynamics, film growth mechanisms, principles of atomic manipulation, quantum phenomena associated with low dimensionality, and microscopic instrumentations. In next five years, we plan to make progress in investigating the site-specific and shape-related properties of nanoscale objects with atom-resolvable STM; analyzing the real-time correlation between the functionality of a quantum dot or quantum wire and its structure with the TEM/STM combined system; designing quantum phenomena laboratory at the atomic scale with ultra-low temperature STM equipped with superconducting magnet; improving the resolution of x-ray radiology to nanometer scale; implementing the phase plate and wet cell to TEM for biological studies; and modeling nanomaterials with calculations and simulations. Some past research accomplishments are summarized in the following:

- We use STS to observe the transmission resonance on Ag films grown on the Si(111)7x7 surface We have found the transmission resonance is shifted to higher energies with increasing the electric field, but beyond a critical field it may drop to lower energy discontinuously. This field-dependent behavior can be qualitatively explained by a field-induced phase variation in the quantization rule. Phys. Rev. B **74**, 155330 (2006)

- We have developed a simple, reliable and reproducible method for preparing single-atom tips. With electrochemical techniques, a very small amount of a noble

metal is plated on the surface of a clean W(111) tip (see Figs. 1 and 2). Jpn. Journal of Applied Phys. Vol. **45**, No. 11, 8972 (2006)

- We propose a post-fitting control scheme for driving the x-scanner of SPM periodically. This method possesses the advantages of both the feed-back and feed-forward methods, and achieves a higher image resolution and a higher accuracy than a pure feed-back or feed-forward method, without sacrificing scanning speed. Jpn. Journal of Applied Phys. Vol. **45**, No. 3B, 1917 (2006)

- We report finding the magic numbers in two-dimensional Ag clusters grown on Pb quantum islands (see Fig. 3). Phys. Rev. Lett. **97**, 165504 (2006)

- We use the optical pickup head of a commercial compact disk (CD)/digital versatile disk (DVD) read only memory (ROM) drive to detect the vertical displacement of micro fabricated cantilever in atomic force microscopy (AFM) (see Fig. 4). Jpn. Journal of Applied Phys. Vol. **45**, No. 3B, 2368 (2006)

- We find that the curvature effect on the surface diffusion can well be described by using the relation between the deposition time t and the scaled deposition time τ in the form of $\tau \sim t d_c^{-\upsilon/2}$, with υ being the exponent characterizing geometric properties of CNTs and the nanotube helicity. Phys. Rev. B **74**, 125424 (2006)

- We use coherent synchrotron X-rays to explore the microscopic details of Lewy bodies in thick (~3 mm) midbrain tissues. The morphology of Lewy bodies was clearly revealed by the phase contrast radiography without any staining treatment (see Fig. 5). Three-dimensional volume rendered microtomography of the autopsied midbrain tissues demonstrates striking evidence that several Lewy bodies are agglomerated by dim edges in a neuron. NeuroImage **32**, 566 (2006)

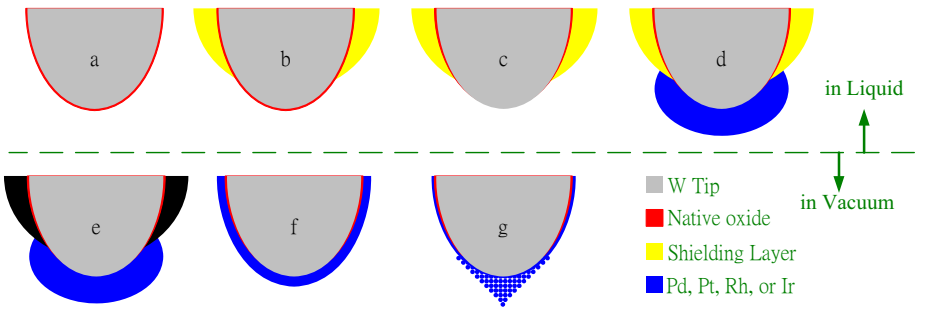


Fig. 1 Procedure for preparation of SAT. (a) Etch a single crystal W(111) tip. (b) Cover with nail polish except for the tip apex. (c) Reduce the native oxide. (d) Electroplate a noble metal film on the tip. (e) Remove the nail polish and transfer the tip into vacuum. (f) Anneal the tip to diffuse the noble metal atoms.

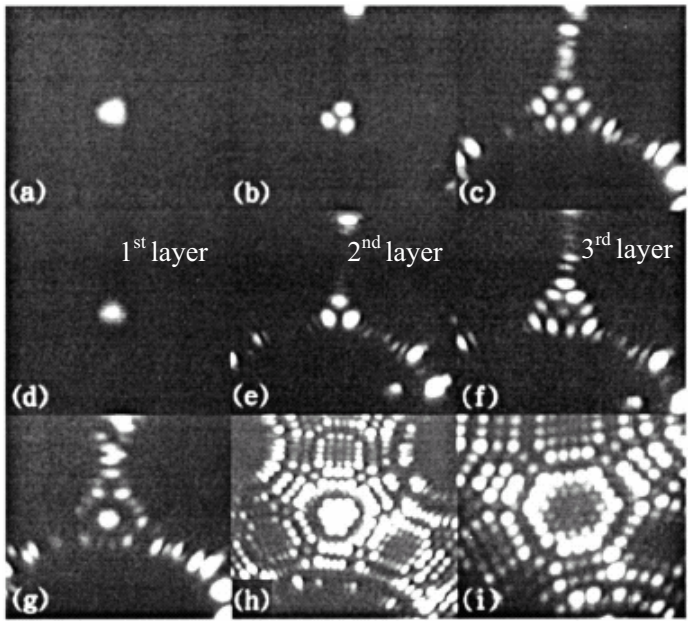


Fig. 2 FIM images showing the structure of a single-atom tip: (a) the top layer consists of only one atom; (b) the second layer consists of three atoms; (c) the third layer consists of seven atoms; (d) a regenerated single-atom tip by annealing to 1000 K for 3 min, again only one atom is in the first layer; (e) the second layer consists of three atoms; (f) the third layer now consists of ten atoms; (g) one field-evaporation-resistive atom is left on the third layer, which should be W atom; (h) we can observe the size of (211) facets increase after field evaporating many layers for comparing with (i) a clean W tip without extra treatment of forming a single atom tip.

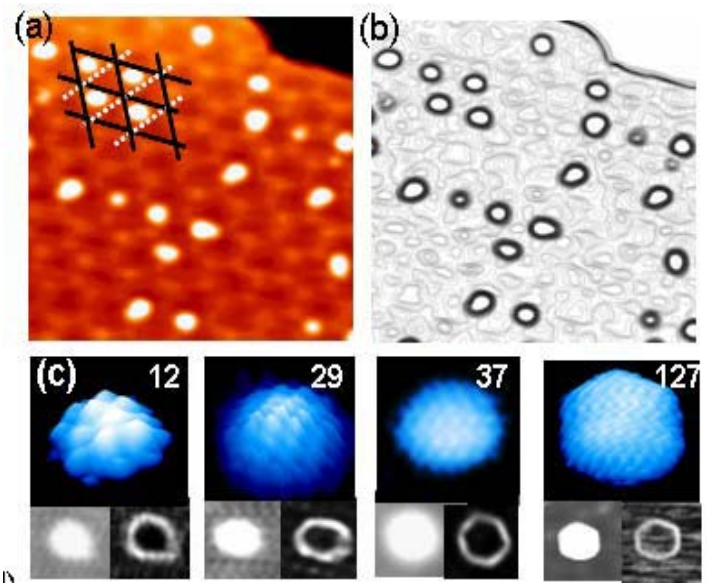


Fig. 3 (a) Ag nanopucks possessing various shapes and sizes grown on Pb quantum islands. The black lines outline the unit cell of the superstructure and each unit cell is divided into two triangular halves by the white lines. (b) The corresponding shapes of Ag nanopucks in (a). The shapes are highlighted by differentiation. (c) Atomically resolved images of Ag magic nanopucks with 12, 29, 37, and 127 atoms. The corresponding STM images and shapes are shown in the insets.

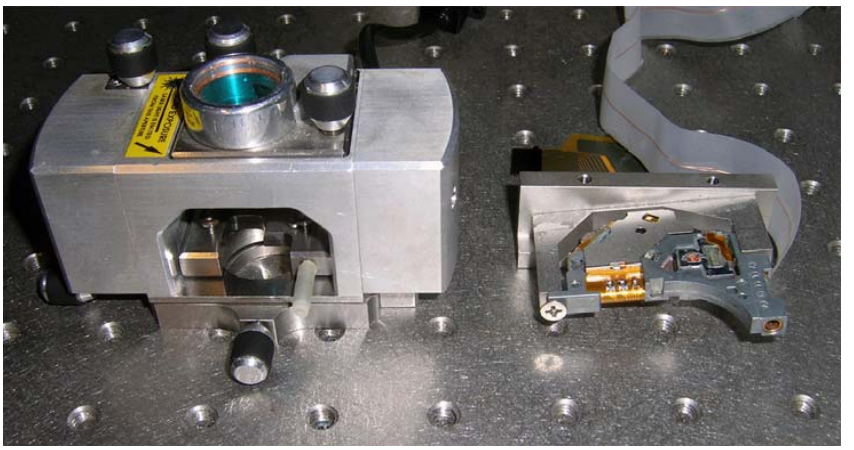


Fig. 4 Two optical path systems used in SPM (a) Beam deflection module (b) Our setup.

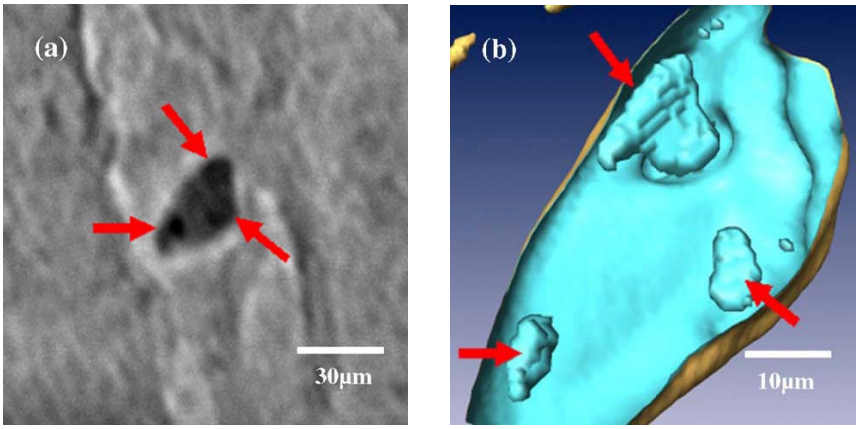


Fig. 5 Three Lewy bodies in remaining neurons were clearly observed in very thick (3 mm) midbrain tissues by the nondestructive, three-dimensional phase contrast X-ray imaging techniques. The white boundary in (a) indicates the neuronal cell body. Three-dimensional volume rendered microtomography image of the autopsied midbrain tissues is shown in (b). The dark cores of the Lewy bodies are clearly seen. One or two Lewy bodies were observed in one field of view sized with 600×1100μm.

II. Optic materials and semiconductor physics

This research group consists of two faculty members and some research associates. The major research interest covers a broad range of topics concerned with the fundamental properties of shallow-levels in semiconductors and with impurity related issues of importance to semiconductor physics and technology, e.g., single and multiple donors and acceptors, shallow excited states of deep-level impurities, defect interaction on the atomic scale such as impurity-pair or complex formation. Crystal growth technique of some optical materials is also being studied hoping to manufacture useful tunable solid- state lasers.

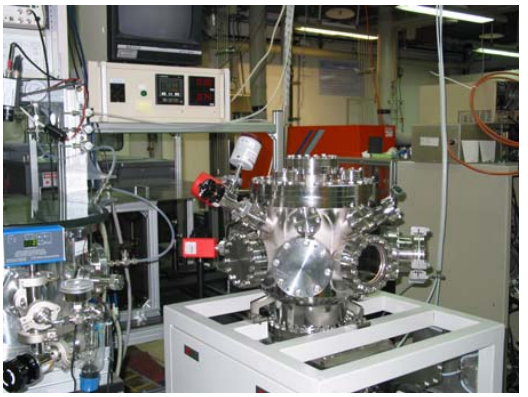
III. Nanomaterial and low temperature physics

The nanomaterial and low temperature physics research group was first established in 1989. Now it involves three full-time faculty members and maintains a size of around 15 researchers comprised of visiting scholars, post-doctors, assistants, and students. Our research interests include phenomena that associated with strongly correlated electrons such as heavy fermion physics, Kondo effect and high temperature superconductivity. Other areas include the understanding of quantum-size

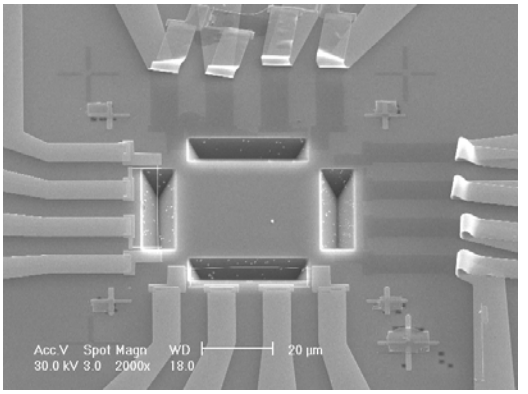
effects on the above mentioned phenomena and others such as thermopower and thermoconductivity in alloys and/or semiconductors. We have developed our own research equipments such as a SQUID magnetometer operated in He^3 cryostat, low-temperature microcalorimeter, and measurements of thermopower and thermoconductivity, transport measurements up to 20 Tesla in a dilution refrigerator; magnetic susceptibility and electrical resistivity measurements under high pressure up to 20 kilobars. We also have setups for the preparation of nanoparticles, thin film and single crystals. Some past research accomplishments are summarized in the following:

- The observations of several interesting quantum-size effects on the magnetisim or superconductivity in nanomaterials of heavy fermion systems.
- The observation of the coexistence of magnetic order and superconductivity in Ru-based double perovskite oxides.
- The observations of coexistence of Kondo anomaly and superconductivity in V-doped spinel $LiTi_2O_4$
- The development of new methods for the production of high quality magnetic/or superconducting nanoparticles and thin films
- The development of a new wide-range low temperature sensor for calorimeter application using transition metal oxides.
- The development of a system for measuring thermodynamic properties, such as-thermal conductivity and heat capacity, of a single nanowire using 3ω techniques

Dilution Refrigerator for low-temperature experiments



Thin film fabrication by laser ablation



Suspended Ni nanowires with diameter ~ 150 nm

IV. Spintronics and magnetotranport physics

This research group was established more than twenty years. Currently it includes two full-time and one part time members of the institute and maintains about 30 researchers comprised of visiting scholars, post-doctors, assistants, and students. Our research areas cover wide-range of topics associated with interesting magnetic properties such as the interface properties between ultra-thin magnetic films on semiconductor; magnetic superlattices; magnetic coupling in multilayer magnetic/superconductor thin films, patterned magnetic nano-structures and etc. Other topics such as the magnetostriction of single-layered or multi-layered magnetic films; the magneto-optical effect; the piezoresistance (or the elastic properties) of metal (magnetic or non-magnetic) films are also of our research interests. We have established the capabilities to create artificial nano-patterned magnetic structures and ultra-thin magnetic multilayer films. We have also developed a very sensitive technique to measure at low temperature the very small current perpendicular to plane (CPP) resistance of large area thin films with our SQUID pico-voltmeter setup. This

technique provides us the possibility to further understand the
Interplay between spin-relaxation and Andreev reflection at the ferromagnetic/superconducting interface and to quantitatively study the Andreev reflection as functions of different physical quantities. A "Polar Kerr effect magnetometer" has been developed to study the polar Kerr rotation, polar Kerr ellipticity, and reflection coefficient of MO multi-layers. Some recent research accomplishments are summarized in the following:

- We have studied an interesting Magneto current effect in a bipolar spin transistor at room temperature. [Appl. Phys. Lett. **85**, 2959 (2004)].
- We have utilized the magnetic force microscopy to analyze quantitatively the magnetization reversal in submicron S-patterned structures with narrow junctions. [Appl. Phys. Lett. **86**, 053111 (2005)].
- We have calculated the resonant exit time in stochastic and deterministic systems. [Phys. Rev. E **71**, 067102 (2005)].
- We have investigated experimentally the particle size and magnetic field induced optical properties of magnetic fluid nanoparticles. [Phys. Rev. E **72**, 031408 (2005)].
- In ultra-high vacuum system, we have studied the microscopic interfacial structures and magnetic properties of ultrathin Co/Si(111) films. [Appl. Phys. Lett. **88**, 102506 (2006)].
- By driving frequency technique, we have observed an enhancement and inverse behaviors of magneto impedance in a magneto tunneling junction. [Appl. Phys. Lett. **89**, 202515 (2006)].
- We have studied the heteroepitaxial growth of 6-fold symmetric osmium on Si (111) and Si (100). [Appl. Phys. Lett., accepted (2007)].
- The saturation magnetostriction (λ_s) of magnetic tunnel junctions (MTJs) has been measured in the form of laminated CoFeB/AlO_x/Co. [Appl. Phys. Lett.88, 222509(2006)].
- We have fabricated a series of Co/AlO_x(d_o)/Co/IrMn magnetic tunnel junctions (MTJs), with d_o = 12-30 Å. They can be used as ultra-sensitive strain gauges. [Appl. Phys. Lett. 89, 222510(2006).].

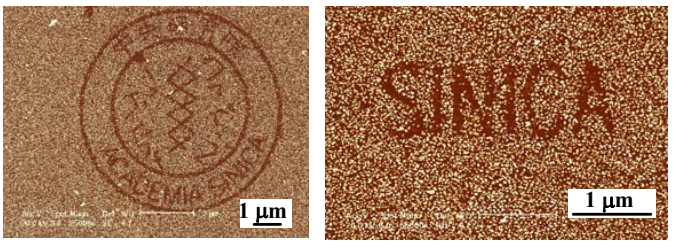
V. Nano-devices and physics

Our recent research work mainly focuses on combined molecular engineering and advanced nano-lithographic techniques for fabrication of functional devices and detectors. Particularly, we have put effects in manipulation and detection of individual DNA molecules, and have rudimentary, but substantial progresses. In addition, We

continue to work on topics that are related to transport properties of nano-electronics, including nanowire devices and lithographically made silicon devices. In the following, we present some of our recent results:

DNA as an Electron-Beam Sensitive Reagent for Nano-Patterning

In this study, we propose and demonstrate a new application using DNA as an e-beam sensitive reagent for patterning. The technique allows direct electron-beam patterning of oligonucleotides. To this end, thiolated single-strand DNA was bombarded using a focused electron beam, resulting in the inhibition of hybridization to complementary strands. The degree of inhibition as a function of the exposure dose was studied using both fluorescence-probe and Au-nano-particle labeling. Finally, for demonstration purposes gold nano-particles were used as markers to produce nano-scaled patterns. The results of which are presented in this paper. This technique has potential applications in the fabrication of DNA-based nano-structures. [*Advanced Materials*, *18*, 1517–1520 (2006)]

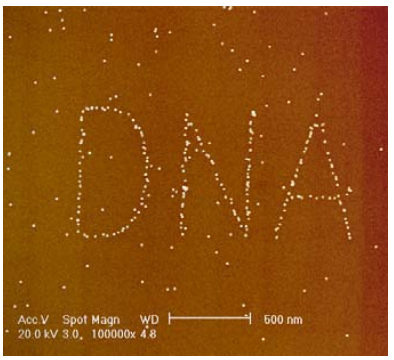


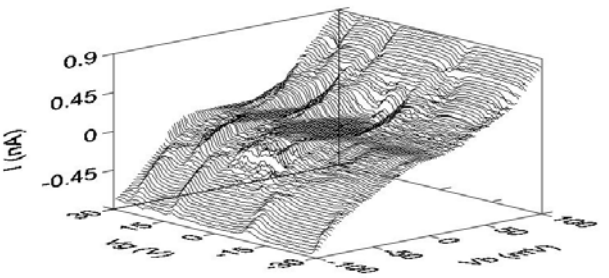
Gold nano-particle pattern produced by utilizing DNA molecular layer as an e-beam sensitive reagent. In this approach, thiolated single-strand DNA was bombarded using a focused electron beam, resulting in the inhibition of hybridization to complementary strands, and then gold nano-particles were used as markers to reveal nano-scaled patterns. This technique has potential applications in the fabrication of DNA-based nano-structures.

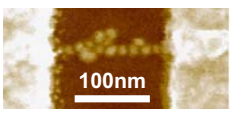
Fabrication of One-Dimensional Au-Particle Electronics with DNA-mediated Charge Trapping Technique

We report a unique approach for producing nano-scaled one-dimensional (1D) gold-particle electronic devices. In this approach, a focused electron beam was first utilized to generate a positive charge layer on a SiO_2 surface. Biotinated DNA molecules attracted by these positive charges were subsequently used to grasp Au-nanoparticles revealing the e-beam exposure single-line patterns. Due to repulsive force between Au colloidal particles, the particles in the single-line patterns were, to a large extent, orderly separated. We further develop a simple method to bridge the particles to form conductive nanowires of high or low wire resistance. While low resistance wires showed linear current-voltage characteristics with a high maximum allowed current density, the high resistance wires exhibited charging effect with clear Coulomb oscillation behavior at low temperatures. This demonstrates that the

technique is capable of producing interconnects as well as single-electron-transistors, and opens up possibilities for fabrication of integrated circuits. [Advanced Functional materials, 2007]

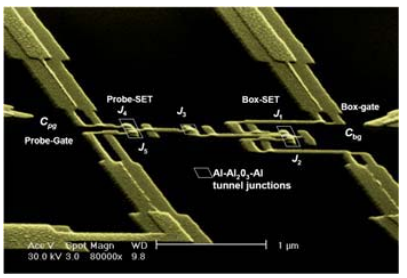






Coupled single electron transistors as a differential voltage amplifier

We have investigated a possible application of single electron transistor (SET) devices for use as a differential voltage amplifier. The device consists of a pair of box-SET and probe-SET coupled with each other through a tunnel junction, with the gate electrodes of the two SETs acting as differential signal inputs. The voltage across the probe-SET at a fixed bias current provides information about the charge states of both the probe-SET and the box-SET, which was confirmed by simulations based on the orthodox theory of single-electron tunneling. When operated as a differential amplifier, the output probe-SET voltage signal was measured as a function of the two gate input signals. While the output signal was found to be proportional to the difference in the two input signals, it remained unchanged for input signals of the same amplitude (referred to as the common mode signal), and the common mode rejection ratio was found to be 27.5dB. [New Journal of Physics, 8, 300 (2006)]

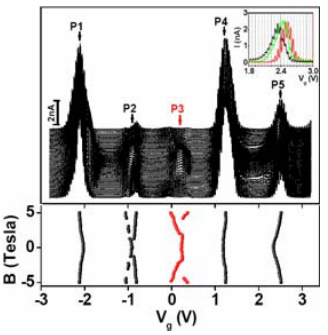


SEM image of a measured sample. The junctions areas are marked by white parallelograms and the two control gates are located outside the image.

Cyclotron Localization in a sub-10nm Silicon Quantum Dot Single Electron

We have fabricated and measured a lateral Si-SET consisting of a succession of a big

island and small quantum dots. In this device, small Coulomb oscillation wiggles, due to the big island, acted as a scale to reveal shifts in peaks of Coulomb oscillation envelopes, due to the small quantum dots, in the presence of a magnetic field. The observed shifts in peak position are analyzed in the context of field-induced Landau level shift in dots with a soft-wall confinement potential. Furthermore, the current peak was suppressed for fields beyond a threshold value. An explanation based on cyclotron localization at non-interacting Landau levels of the small quantum dots is presented. [**A**pplied Physics Letters, 90, 032106 (2007)]



Dynamics of 5 current peaks in magnetic field. The curves shift with field from -5T at the bottom to +5T at the top. The current peaks at ±5T are clearly suppressed as seen from peak P3 due to electron cyclotron localization.

VI. Theoretical condensed matter physics

This group consists of three faculty members and more than 15 postdoctors, visiting scholars and research assistants including graduate students. The major research interests are high temperature superconductivity, novel phases in quantum spin systems, nano-materials, optimization algorithms, nano-structure x-ray tomography, protein folding, quantum Monte Carlo method, cold trapped atoms, physics in low dimension, optical lattices, spinor Bose condensates and Fermionic superfluids, electric transport and noise properties in superconducting quantum point contacts ,and properties of unconventional superconductors

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Postdoctoral Research Associates

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Intermediate and High Energy Physics Research Group

I. Theory Program

A. Particle Phenomenology

(1)B meson wave function in k_T factorization

(2)Transition to perturbative QCD in two-photon collisions

(3)Weak phases from $B \to \pi\pi, K\pi$ decays

(4)$B \to PV$ decays in perturbative QCD

(5)Final-state interactions in hadronic B decays

(6)Scalar glueball and scalar quarkonium

(7)Generalized parton distributions

(8)Out of equilibrium and RHIC physics

(9)Photon production from nonequilibrium disoriented condensates in a spherical expansion

(10)Loop gravity

(11) p-brane production in fat brane or universal extra dimension scenario

(12) Nonperturbative bound on high multiplicity cross sections in theory in three dimensions from lattice simulation

(13)Neutrino mass and neutrino oscillation

(14)Quantum bit commitment

B. Particle Astrophysics and Cosmology

(1) Possible effects due to non-equilibrium dynamics in the Affleck-Dine baryogenesis

(2) Origin of a cosmological constant from gauge fields living in extra dimensions

(3) Constraints on the coupled quintessence from cosmic microwave background anisotropy and matter power spectrum

(4) Coupling fields in inflation and large-scale cosmic microwave background anisotropy

(5) Effect on cosmic microwave background polarization of the axionic coupling of quintessence to electromagnetism

C. Theoretical Nuclear Physics

(1)Cascade production in heavy-ion collisions at SIS energies

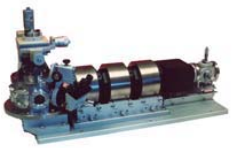
(2)Two-level model and magnetic field effects on the hysteresis in n-GaAs

(3) Tsallis information theory

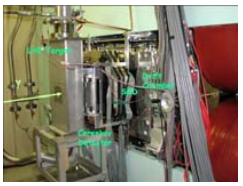
II. Nuclear Physics Experiment

We have a on-site facility of 3MV 9SDH-2 pelletron tandem accelerator which was installed in 1989. Since then the accelerator became an important facility for experimental research in the low energy nuclear physics, accelerator based atomic physics, and applied accelerator technology. The accelerator system has two negative ion sources, SNICS for solid source material and Alphatross for noble gases Helium-3 and Helium-4, capable of producing a wide range of ion beam species. The ion-beams for a given charged (q) state with a maximum energy E=3(q+1)MeV can be obtained and selected by an analyzing magnet to meet experimental need. There are three beamlines available with different scattering chambers for various research needs, especially the newly-installed Oxford micro-beam system (Fig. 1). We have made the accelerator available for outside users. Every year a fraction of the machine time was provided to people of domestic institutions such as Institute of Atomic and Molecular Sciences, Academia Sinica, the National Tsing-Hua University, National Taiwan University and National Sun Yat-sen University

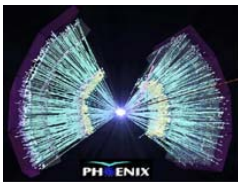
As for the high energy nuclear experiment, we participate at two international projects: SPring-8 LEPS experiment (Fig. 2) and BNL PHENIX experiment (Fig. 3). Photon beam with maximum energy up to 2.5 GeV can be generated from the backward Compton-scattering of incident eV laser photons with 8 GeV electrons circulating inside the storage rings of synchrotron facility, SPring-8 in Japan. We study the mechanism of interactions between photon and quarks at a few GeV via the reconstruction of $\gamma N \rightarrow \phi N$ reaction. In year 2003, we published the first observation of pentaquark state Θ^+ (1540) which decays into neutron and kaon. A new LEPS2 facility with higher photon beam energy and flux is planned and under construction. In Brookhaven National Lab, U.S., RHIC collider can crate a collision of Au nuclei of center of mass energy to be 200 GeV. PHENIX experiment is capable of measuring the di-lepton and photon signal of Quark Gluon Plasma. The experimental confirmation of QGP will greatly help the understanding the effect of finite temperature and baryon density on QCD and also the story of universe creation.



The newly-installed Oxford micro-beam system.



SPring-8 LEPS experiment



BNL PHENIX experiment

III. Particle Phyiscs Experiment

(A) Collider Experiment CDF at Fermilab

For the next decade, Fermilab Tevatron Collider remains the highest energy frontier of particle physics. With the completion of Main Injector (which will enhance the luminosity) and with the upgrade of the collider detectors (CDF and D0), Tevatron Run II provides the potential for discovery of new phenomena and opportunities for the precision measurements in hadron collider physics. The Collider Detector at Fermilab in Run II (CDF II) is a general-purpose solenoidal detector that combines precision charge particle tracking with fast projective calorimetry and fine-grained muon detection for the study of p anti-p collisions. Precision measurement of the top mass and the W mass are primary goals of CDF II. Search for Higgs and new phenomena beyond the Standard Model will be explored

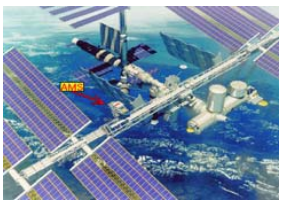
1: Insertion of silicon detector to the CDF II detector.

2: DOIM on Port Card

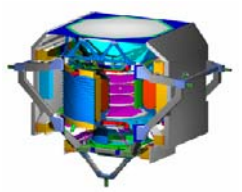
(B) AMS Experiment at International Space Station

The goal of the AMS experiment is to build the first precision magnetic spectrometer to be placed on the International Space Station in 2005 to search for anti-matter and

dark matter in the Universe and to study cosmic ray physics and other exotic phenomenon. A simplified detector successfully operated on board the space shuttle Discovery for 10 days in June 1998, already producing important results. The AS group is leading the Taiwan participation in AMS, which includes the construction of the superconducting magnet, electronics and computing systems, as well as simulation and analysis.



1. AMS at the International Space Station



2. AMS Detector : Schematic Design

(C) Neutrino and Astro-particle Physics Group

The group was started in 1997 with the goal of pursuing an experimental program in neutrino and astro-particle physics in Taiwan. The TEXONO Collaboration, at present 40-member strong, has been built up, under the leadership of the Academia Sinica group, and with the participation of several major research institutes from Mainland China. The efforts represent the first big research collaboration among scientists from Taiwan and Mainland China. The "flagship experiment" is based on scintillating crystal and solid state detectors placed near the core of Kuo-Sheng Nuclear Power Plant II at the northern coast of Taiwan to study various low-energy neutrino interactions. This is the first particle physics experiment performed in Taiwan. World-level results have been achieved in the search of neutrino magnetic moment. Our efforts and achievement have been widely covered by the international press. Various R&D projects are pursued, in further enhancing the detector techniques, in developing methods to measure trace radiopurities, in developing advanced electronic modules and in exploring the feasibilities of future experiments in areas like Dark Matter searches and the investigations of sonoluminescence.

1. Headlines in Taiwan Journal, with the Kuo-Sheng Nuclear Power Plant.

Researchers make headway in neutrino study

By Shyra Lo

After six years of painstaking work, researchers on the TEXONO project, or Taiwan Experiment on Neutrinos, have published the first results of what is admittedly a small experiment compared with those at big international laboratories. Nevertheless, the significance of the contributions for all the Chinese and Taiwanese scientists involved is no less evident.

Neutrinos are one of the more than 20 fundamental particles that make up the universe. Scientists around the world are conducting numerous experiments to learn more about this particle, which remains one of the least understood. Neutrinos are produced in the Earth's atmosphere, the sun, particle accelerators and nuclear power plants.

Physicists believe that neutrino studies will help shed light on questions about the particle's

The Kuo-Sheng Nuclear Power Station, which produces electricity used by millions of households in northern Taiwan, also houses the research facilities of the TEXONO project.

Wong said. The results of international collaborations such as the Super-Kamiokande in Japan and the Sudbury Neutrino Project in Canada gave the Taiwan project what Wong described as a "positive impact."

This is because these earlier experiments have confirmed that the neutrino does have mass and that oscillation does indeed take place. The latter refers to a phenomenon where neutrinos change from one type to another while traveling great distances. Such oscillations would not occur if neutrinos were entirely without mass, as the materials used to believe to be the case.

These experiments can study larger instruments to explore different aspects of the neutrino properties from those pursued by the TEXONO experiment. However, given their findings, we know there is a greater journey ahead and much direction to go.

Wong said

2. TEXONO Collaboration Members.

3. The shielding and control room at the Kuo Sheng Neutrino Laboratory.

(D) LHC-ATLAS at CERN and the GRID Project

The European Laboratory of Particle Physics (CERN) is building the World's largest hadron collider, the Large Hadron Collider (LHC), which is expected to commission in 2006 and will allow us to explore the new frontier of physics at the TeV energy scale. Two general purpose detectors, namely ATLAS and CMS, are being constructed for LHC experiments. The high energy physics group of the Institute joined ATLAS Collaboration in September 1999. The main responsibility of the

Taiwan team in ATLAS is to develop and produce compact opto-packages for the inner detectors (PIXEL and Semi-Conductor Tracker (SCT)), as well as the high-speed (1.6GHz) transmitter and receiver modules for the optical link of the Liquid Argon Calorimeter (LAr). A miniature optopackage (1.6mm in height) which consists of two VCSEL's (Vertical Cavity Surface Emitting Laser) and one Epitaxial Silicon PIN diode has been developed by Taiwan for SCT to readout the 6 million channel silicon micro-strip detector. The SCT opto harness is now in production phase. The final design review (FDR) for the PIXEL optical link was held in February 2003. Our design is well received and become the baseline. The other responsibility for inner detectors is to provide the 12-channel VCSEL and PIN array modules for use in the readout driver (ROD) of both SCT and PIXEL.

IV. Grid Computing

Taiwan formally joined LCG project since September 2002. The Institute is working with the Computing Centre of Academia Sinica (ASCC) building up the LCG infrastructure in Taiwan. Academia Sinica will be the Tier-1 Center of LCG in Asia and the formal non-funded member of EGEE (Enabling Grid for E-SciencE). In the meantime, Academia Sinica acts as first Regional Operation Center and Core Infrastructure Center of EGEE to provide Grid operation and support services for Asia Pacific Area.

Grid computing is expected to be the "next big thing" of information technology and application. It may very well change the way we use computing resources whether it is for commercial、industrial or research purpose. As in the case of World-Wide-Web, the need of high energy physics research is once again leading and guiding the revolution. ASCC and the Institute is working hard to keep Taiwan abreast of the ensuing change. With more than 70 sites joining in the LCG project, Taiwan plays a leading role in Asia. Proof by the Data Challenges in 2004, LCG becomes the first world-wide production quality Grid System for LHC requirements of PetaFLOPS-scale computing in 2008.

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Complexity Research Group

Complex systems are systems consisting of many simple elements which interact with each other nonlinearly. In general, the most interesting aspect of complex systems is the cooperative behavior among the elements mediated by their nonlinear interaction. Such cooperative behavior is manifested in the spatial and/or temporal patterns, which give the systems a variety of structures. In our institute, there are ten faculty members and over ten postdocs and several graduate students working in different areas of complexity and non-linear science. Our studies of nonlinear and complex systems consist of the followings.

I. Basic and Applied Research on Hydrodynamics and Atmospheric Physics

Measurement of strong wind characteristics had been carried out the coastal area of Taiwan. A radar data assimilation system using ensemble Kalman filtering is developed for the fully compressible, non-hydrostatic semi-Lagrangian cloud dynamic model and its performance is investigated. The main sources for the convective-scale meteorological analysis and forecasting are radar data. Once the observations are available during the model integration, the radar data and the model forecasts may be combined to form an optimal analysis. The integration is then continued again until the next observation arrives. In this way, atmospheric state simulated by the model is continually adjusted to fit the new observations so that the prediction errors do not grow up during the integration period. (Bao-Shi Shau, Chung-Yi Tseng)

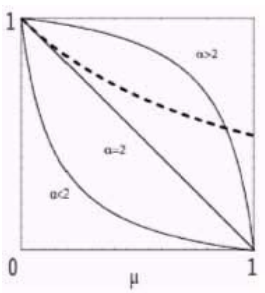
II. Non-linear Phenomena in Complex Systems

Complex fluids, such as polymer and surfactant solutions, electrorheological fluids, and granular fluids, are among the most important materials studied in basic and applied sciences. We investigated phase transitions of binary liquid mixture with polymer and discovered a possible universality class at the critical point. In two-dimensional hopper flow experiments, we are searching for a basic understanding of the jamming phenomenon. On vertically vibrating platforms, we are studying the phase transitions of granular gas as well as the conformations of granular chains. (Kiwing To). Rheology data of protein and DNA solution may reveal the molecular structures as well as the formation mechanism of these biologically important macromolecules and single-molecule measurements have just been started (Chi-Keung Chan). Other nonlinear phenomena we studied include excitable

dynamics in biological systems such as cardiac and neuronal cultures (Chi-Keung Chan); pattern formation in fracture phenomena (Kwan-tai Leung).

III. Statistical and Computational Physics Approach to Complex Systems

Laboratory of Statistical and Computational Physics (LSCP, website: http://www.sinica.edu.tw/~statphys/) at our institute is devoted to frontier research in statistical and computational physics (SCP), applications of SCP to problems in physical, biological, and social sciences, sponsoring meetings in SCP, and promoting education and research of SCP in developing countries. The research topics at LSCP include: equilibrium critical systems, such as the Ising, dimer, and percolation models; non-equilibrium critical systems, such as sand-pile and avalanche models; synchronization in nonlinear coupled systems and analysis of physiological data; models of biological evolution; analytic and numerical studies of macromolecules, polymer, DNA, RNA, and proteins; stochastic dynamic model for stock-stock correlations; universality and scaling in statistical data of literary works. (Chin-Kun Hu, Simon C. Lin)



Exact phase diagram for an asymmetric avalanche process, which shows the critical density of particles ρas a function of parameters α and μ of toppling rules in the model. This figure is taken from Phys. Rev. Lett. 87, 084301(2001)

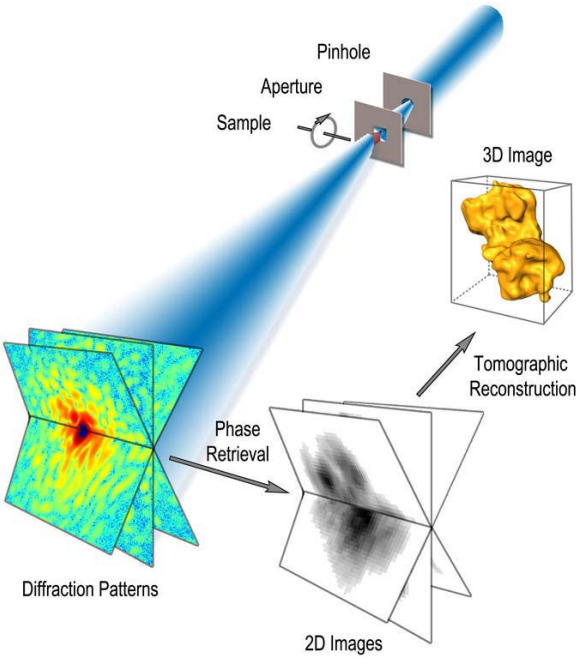
IV. Biology-Inspired Physics

Biological organisms are likely the most complex and the least understood systems that one can imagine, due to their intricate biochemical and physical interactions among macromolecules. Biology is essentially an experimental science with huge amount of data, physicists hope to distill basic principles from them. Because all biological processes operate in a thermal environment, statistical physics is an indispensable tool in studying them. Equipped with such tools, we have been studying theoretically: biological and physiological signals (such as heart beat), development of algorithms and simulations of macromolecules (DNA, RNA and proteins) with parallel computers (Chin-Kun Hu), and collective dynamics of self-propelled particles modeling the behavior of animals and bacteria (Kwan-tai Leung). Experimental studies on synchronized firing of neural net have also been carried out (Chi-Keung Chan).

Experimental setup for synchronous firing of neural net.

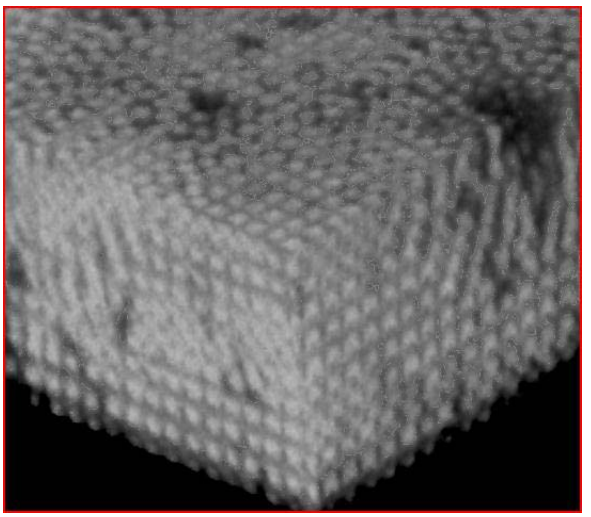
V. New Algorithm for 3D image reconstruction of non-crystalline objects by using x-ray diffraction microscopy

With the advance in nanoscience and nanotechnology, x-ray diffraction microscopy, a newly developed imaging technique, is becoming more and more important in the structural determination of non-periodic micro- or nano-objects. The oversampling technique has been proposed to retrieve the lost phases of the measured intensities. By introducing the concept of optimization with the conventional hybrid input-output (HIO) algorithm, we developed a new algorithm with a much better accuracy in the reconstructed 2D images. We also developed a method to align all the reconstructed 2D images obtained at different angles. The method was demonstrated by carrying out quantitative 3D imaging of a heat-treated GaN particle with each voxel corresponding to $17 \times 17 \times 17$ nm^3. We observed the platelet structure of GaN and the formation of small islands on the surface of the platelets, and successfully captured the internal GaN-Ga_2O_3 core shell structure in three dimensions (Ting-Kuo Lee).



VI. Self-assembly Phenomena in Colloidal Particles

We are interested in the self-assembly phenomena, particularly in colloidal systems. In nature we observe many ordered structure which happens on its own. It is important to understand self-assembly and to explore it since this is the key to the bottom-up approach of nanotechnology. We choose colloidal particles because they are ideal model systems. In many ways it is the analogy of atomic systems but their interaction can be measured directly and they can be observed in real time and real space (Keng-hui Lin).



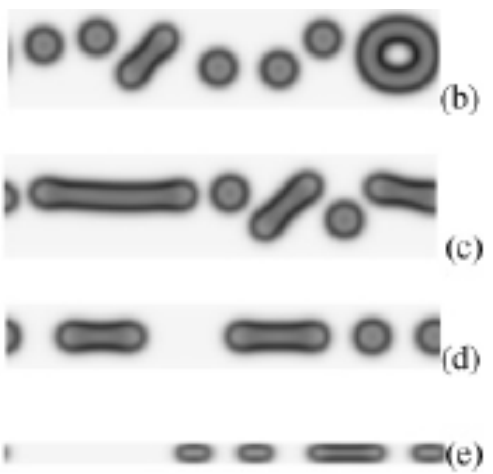
A colloidal crystal

VII. Single-molecule Studies of Biological Macromolecules

Research of biological macromolecules provides golden opportunities to bridge our understandings of polymer physics to many biophysics topics. Through fluorescence microscopy techniques, the dynamics of the biopolymers in solution at the single molecular level can be clearly observed. In addition to the study of physics of various polymeric solutions, the end-grafted DNA brushes have also been constructed and studied at both mesoscopic and single-molecule levels (Wen-Tau Juan).

VIII. Polymer Physics in Highly Confined Systems

The dynamics and conformation of large polymers such as DNA in highly confined systems are of interest to microfluidic applications, nano-material design, and biophysical processes in micron-scale cellular environments. Theoretical and computer modeling of confined polymers have allowed us to investigate the dynamics of large, micron-sized, DNA molecules undergoing flow in microchannels. Coarse-grained simulations predictions of hydrodynamically induced DNA migration away from channel walls are being verified by experiment, and our continuing investigation into temperature and charged ion effects on DNA dynamics could reveal new methods for DNA manipulation in small systems. In addition, self-consistent field theory prediction of phase separation of asymmetric block copolymers due to conformational entropy constraint in parallel slit channel could guide future design of nanoscale polymeric materials (Yeng-Long Chen).



Morphologies of asymmetric block copolymers confined in small slit channels
J. Phys. Chem. B, 110, 22726 (2006).

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III

List of Ongoing Research Projects

List of Ongoing Research Projects

中央研究院物理研究所九十五年度計劃清單一覽表

(2005 年 8 月 ~ 2007 年 7 月)

主持人	計　劃　名　稱	執行期間	計劃編號
余岳仲	高能離子佈值製作單晶薄膜	94/01/01-94/12/31	NSC94-NU-7-001-001
姚永德	圖案化奈米結構之製作及物性研究(3/3)	94/01/01-95/07/31	NSC94-2120-M-001-004
李定國	奈米國家型科技計畫-計畫辦公室運作計畫	94/01/01-95/03/31	NSC94-3113-P-001-004
李世昌	建造AMS太空磁譜儀以搜尋反物質及暗物質(1/3)	94/05/01-95/04/30	NSC94-2745-E-001-001
李世炳	高中科學資優學生培育計畫--踏向科學的第一步(2/2)	94/08/01-96/01/31	NSC94-2514-S-001-001
李湘楠	B物理中的量子色動力學(3/3)	94/08/01-95/07/31	NSC94-2112-M-001-001
葉崇傑	超導之介觀現象及低溫原子陷阱中超流體(3/3)	94/08/01-95/09/30	NSC94-2112-M-001-002
李定國	變分法探討高溫超導體之模型(3/3)	94/08/01-95/10/31	NSC94-2112-M-001-003
陳志強	單分子DNA流力特性之實驗研究(2/3)	94/08/01-95/12/31	NSC94-2112-M-001-009
胡進錕	臨界現象與生物聚合物研究-非線性與相變模型研究(2/3)	94/08/01-95/12/31	NSC94-2112-M-001-014
蔡俊謙	粒子現象學味物理之研究(2/2)	94/08/01-95/07/31	NSC94-2112-M-001-016
梁鈞泰	生物體結隊行為之動力研究(1/2)	94/08/01-95/10/31	NSC94-2112-M-001-021
鄭海揚	重味物理現象學之研究(1/3)	94/08/01-95/10/31	NSC94-2112-M-001-023

主持人	計　劃　名　稱	執行期間	計劃編號
吳建宏	應力張量量子起伏與暴脹宇宙中的能量密度起伏	94/08/01-95/07/31	NSC94-2112-M-001-024
杜其永	二維顆粒管流之堵塞研究	94/08/01-95/10/31	NSC94-2112-M-001-025
曾詣涵	奇異物質之研究	94/08/01-95/10/31	NSC94-2112-M-001-030
章文箴	在SPring-8研究光致向量介子產生中之核物質效應及五夸克粒子的特性(VI)	94/08/01-95/10/31	NSC94-2112-M-001-034
余岳仲	輕中重離子在單元素與化合物薄膜的能量損失機制之研究	94/08/01-95/10/31	NSC94-2112-M-001-036
黃英碩	單原子探針的物理特性研究及應用(2/3)	94/08/01-95/10/31	NSC94-2112-M-001-011
蘇維彬	二維銀島結構中量子態的微擾效應之研究(2/2)	94/08/01-95/07/31	NSC94-2112-M-001-012
吳茂昆	新穎過渡金屬硫屬化合物之物性研究與應用-子計畫一:離子導電度對新穎過渡金屬氧化物金屬絕緣體轉變之影響(2/3)	94/08/01-95/10/31	NSC94-2112-M-001-015
李尚凡	由電子傳輸性質在球型碰撞與擴散領域決定鐵磁性材料的極化率與擴散長度(2/3)	94/08/01-95/07/31	NSC94-2112-M-001-017
李世炳	以數值模擬研究血液循環系統效率指標(1/3)	94/08/01-95/07/31	NSC94-2112-M-001-019
王子敬	台灣微中子實驗--低能區微中子物理及從聲致發光引出高能輻射之研究	94/08/01-95/07/31	NSC94-2112-M-001-028
鄧炳坤	CDF實驗物理研究(子計畫二)-CDF實驗粒子偵測器研製	94/08/01-95/10/31	NSC94-2112-M-001-031
侯書雲	CDF實驗物理研究(總計畫)及(子計畫一)-CDF實驗網格電算數據分析	94/08/01-95/10/31	NSC94-2112-M-001-032
李世昌	參與ATLAS實驗搜尋新物理現象及以精密質譜儀探測宇宙中之反物質及暗物質(IV)	94/08/01-95/10/31	NSC94-2112-M-001-035

主持人	計　劃　名　稱	執行期間	計劃編號
胡宇光	發展高速X光顯微照相術以研究材料與生物中之動態行為(Ⅲ)	94/08/01-95/07/31	NSC94-2112-M-001-039
任盛源	軟磁薄膜之彈性性質研究(1/3)	94/08/01-95/07/31	NSC94-2112-M-001-040
劉鏞	稀釋磁性半導體薄膜,多層膜與奈米結構的研究與應用	94/08/01-95/07/31	NSC94-2112-M-001-041
姚永德	磁性微小結構之製作及其物性研究	94/08/01-95/11/30	NSC94-2112-M-001-043
陳洋元	非費米液體行為系統之研究	94/08/01-95/07/31	NSC94-2112-M-001-044
張嘉升	奈米顆粒在量子化薄膜上之特性與相互作用	94/08/01-95/07/31	NSC94-2112-M-001-046
李世昌	參與研製ATLAS偵測器	94/08/01-95/10/31	NSC94-2119-M-001-004
陳啟東	奈米生物電子元件-生物分子的檢測(3/3)	94/08/01-96/01/31	NSC94-2120-M-001-005
張嘉升	在原子尺度下觀測及操控單一奈米精品與位置和結構有關的性質-子計畫一(3/3)	94/08/01-95/07/31	NSC94-2120-M-001-006
姚永德	奈米科學尖端研究設施之建構(3/3)	94/08/01-95/12/31	NSC94-2120-M-001-010
胡宇光	利用高相干性光源非破壞性分析及成像奈米及生物結構(2/3)	94/08/01-95/10/31	NSC94-2120-M-001-012
陳洋元	奈米材料之新穎物理性質與量子尺寸效應研究(1/3)	94/08/01-95/11/30	NSC94-2120-M-001-014
黃榮鑑	方形射流與橫向流交會之三維流場構造研究(3/3)	94/08/01-96/03/31	NSC94-2611-E-001-001
黃榮鑑	孤立波通過隆起底床引致碎波流場之三維數值研究(1/3)	94/08/01-95/07/31	NSC94-2611-E-001-002

主持人	計　劃　名　稱	執行期間	計劃編號
陳志強	台俄雙邊合作計畫--心肌和神經學科中可激發和振盪系統之同步和控制之研究(1/3)	94/08/01-95/10/31	NSC94-2112-M-001-047
陳啟東	以奈米線場效電晶體及光學感測器探討神經網路功能—電子束微影技術製備奈米線場效電晶體(子計畫二)(1/3)	94/08/01-95/07/31	NSC94-2627-M-001-007
林誠謙	全球網格與e-Science於高能物理之應用	94/08/01-95/10/31	NSC94-2119-M-001-005
林耿慧	微流體元件裡的熱泳現象(1/3)	94/10/01-95/10/30	NSC94-2119-M-001-019
林誠謙	e-Science亞洲中心與亞洲執行委員會之建置	94/10/01-96/03/31	NSC94-3111-P-001-002-Y02
林誠謙	刀鋒式伺服器在尖端科學計算領域的研發—科學計算基礎架構建置及調校準則研發並發展計算材料的環境	94/08/01-95/10/31	NSC94-2745-P-001-003
林誠謙	歐洲地區研究網路建置與維運	94/10/01-96/03/31	NSC94-3111-P-001-003-Y02
胡進錕	94年度第3屆第2年高級中學基礎科學資優人才培育計畫	94/03/01-95/02/28	教育部
胡進錕	94年度第4屆第1年高級中學][基礎科學資優人才培育計畫	94/03/01-95/02/28	教育部
李定國	刀鋒式伺服器在尖端科學計算領域的研發(總計畫)	94/08/01-95/10/30	廣達電腦股份有限公司
林誠謙	刀鋒式伺服器在尖端科學計算領域的研發—科學計算基礎架構建置及調校準則研發並發展計算材料的環境	94/08/01-95/10/30	廣達電腦股份有限公司
林誠謙	Windows高速電腦運算平台計畫	94/07/01-95/08/31	台灣微軟股份有限公司
李尚凡	以鎖相放大器測量微磁結構中磁區壁移動與直流偏壓之關連	94/07/01-95/02/28	94-2815-C-001-003-M
吳茂昆	奈米國家型科技計畫辦公室運作計畫	95/01/01-96/03/31	NSC95-3113-P-001-002

主持人	計　劃　名　稱	執行期間	計劃編號
李湘楠	物理學門(一般組)研究發展及推動計畫	95/01/01-95/12/31	NSC95-2114-M-001-001
李尚凡	磁性奈米結構的點接觸量測(1/3)	95/02/01-96/06/30	NSC95-2112-M-001-020
林誠謙	學術網路國際合作交流活動(第3年)計畫—學術網路國際合作交流活動(第3年)計畫	95/01/01-96/03/31	NSC95-3011-P-001-001
李世昌	建造AMS太空磁譜儀以搜尋反物質及暗物質(2/3)	95/05/01-96/04/30	NSC95-2745-E-001-001
陳志強	單分子DNA流力特性之實驗研究(3/3)	95/08/01-96/07/31	NSC95-2112-M-001-003
胡進錕	臨界現象與生物聚合物研究-非線性與相變模型研究(3/3)	95/08/01-96/07/31	NSC95-2112-M-001-008
李世炳	血液循環系統效率指標之研究—以數值模擬研究血液循環系統效率指標(2/3)	95/08/01-96/07/31	NSC95-2112-M-001-010
梁鈞泰	生物體結隊行為之動力研究(2/2)	95/08/01-96/07/31	NSC95-2112-M-001-011
鄭海揚	重味物理現象學之研究(2/3)	95/08/01-96/07/31	NSC95-2112-M-001-013
陳志強	台俄雙邊合作計畫--心肌和神經學科中可激發和振盪系統之同步和控制之研究(2/3)	95/08/01-96/07/31	NSC95-2112-M-001-016
林耿慧	微流體元件裡的熱泳現象(2/3)	95/08/01-96/07/31	NSC95-2112-M-001-018
杜其永	顆粒鍊實驗研究	95/08/01-98/07/31	NSC95-2112-M-001-030-MY3
曾詣涵	特異核之研究	95/08/01-98/07/31	NSC95-2112-M-001-032-MY3
余岳仲	荷電粒子在單元素與化合物薄膜的能量損失機制之研究(1/2	95/08/01-97/07/31	NSC95-2112-M-001-034-MY2

主持人	計　劃　名　稱	執行期間	計劃編號
章文箴	在日本SPring-8研究非微擾光致向量介子產生及尋找五夸克粒子	95/08/01-98/07/31	NSC95-2112-M-001-046-MY3
李湘楠	超級B工廠的物理	95/08/01-98/07/31	NSC95-2112-M-001-050-MY3
陳彥龍	極小侷域內高分子流體動力學和相變之理論研究	95/08/01-98/07/31	NSC95-2112-M-001-051-MY3
吳建宏	暴脹宇宙的能量密度起伏	95/08/01-98/07/31	NSC95-2112-M-001-052-MY3
李定國	以數值方法研究強關聯電子系統	95/08/01-98/07/31	NSC95-2112-M-001-061-MY3
阮文滔	溶液中高分子之單分子研究	95/08/01-98/07/31	NSC95-2112-M-001-069-MY3
李尚凡	由電子傳輸性質在球型碰撞與擴散領域決定鐵磁性材料的極化率與擴散長度(3/3)	95/08/01-96/07/31	NSC95-2112-M-001-006
黃英碩	單原子探針的物理特性研究及應用(3/3)	95/08/01-96/07/31	NSC95-2112-M-001-009
任盛源	軟磁薄膜之彈性性質研究(2/3)	95/08/01-96/07/31	NSC95-2112-M-001-015
葉崇傑	低溫原子中之多體問題	95/08/01-98/07/31	NSC95-2112-M-001-054-MY3
蘇維彬	掃描穿隧能譜術於電子散射之研究	95/08/01-97/07/31	NSC95-2112-M-001-055-MY2
鄭弘泰	過渡金屬氧化物及奈米系統實驗現象之第一原理計算研究	95/08/01-96/07/31	NSC95-2112-M-001-057
姚永德	磁性結構之磁矩反轉及自旋電子傳輸現象研究	95/08/01-98/07/31	NSC95-2112-M-001-059-MY3
胡宇光	利用相對比X光顯微術研究奈米微粒和生物系統之相互作用及其影響	95/08/01-96/07/31	NSC95-2112-M-001-060

主持人	計　劃　名　稱	執行期間	計劃編號
陳啟東	能量耗散對庫柏電子對相干傳輸的影響	95/08/01-98/07/31	NSC95-2112-M-001-062-MY3
劉鏞	稀釋磁性半導體薄膜與奈米結構的研究	95/08/01-97/07/31	NSC95-2112-M-001-063-MY2
王子敬	台灣微中子實驗-低能區微中子物理的研究及從聲致發光引出高能輻射與其他奇異現象的研究	95/08/01-96/07/31	NSC95-2119-M-001-028
李世昌	參與ATLAS實驗搜尋新物理現象暨以精密質譜儀探測宇宙中之反物質及暗物質(IV)	95/08/01-96/07/31	NSC95-2119-M-001-048
胡宇光	利用高相干性光源非破壞性分析及成像奈米及生物結構(3/3)	95/08/01-96/07/31	NSC95-2120-M-001-001
陳洋元	奈米材料之新穎物理性質與量子尺寸效應研究(2/3)	95/08/01-96/07/31	NSC95-2120-M-001-004
張嘉升	吸附、雜質、及襯底對單一奈米結構的原子重組及物性的影響(1/3)	95/08/01-96/07/31	NSC95-2120-M-001-007
陳啟東	以奈米線場效電晶體及光學感測器探討神經網路功能—電子束微影技術製備奈米線場效電晶體(子計畫二)(2/3)	95/08/01-96/07/31	NSC95-2627-M-001-006
侯書雲	強子對撞實驗物理：CDF實驗與ATLAS實驗之新物理現象及新粒子搜尋—總計畫-強子對撞實驗物理：CDF實驗與ATLAS實驗之新物理現象及新粒子搜尋	95/08/01-96/07/31	NSC95-2739-M-001-025
鄧炳坤	強子對撞實驗物理：CDF實驗與新粒子搜尋—子計畫一-CDF實驗矽偵測器維運暨ATLAS實驗計算網格建構	95/08/01-96/07/31	NSC95-2739-M-001-026
林誠謙	WLCG亞洲維運中心與Taiwan Analsis Facility之建置與維運	95/08/01-96/07/31	NSC95-2112-M-001-070
李尚凡	台灣國際奈米週研討會暨展覽	95/07/01-95/12/31	NSC95-2120-M-001-009
黃榮鑑	孤立波通過隆起底床引致碎波流場之三維數值研究(2/3)	95/08/01-96/07/31	NSC95-2221-E-001-042
陳彥竹	在CDF實驗中對新物理的探求	95/08/01-98/07/31	NSC95-2112-M-001-067-MY3

主持人	計　劃　名　稱	執行期間	計劃編號
吳茂昆	新穎過渡金屬硫屬化合物之物性研究與應用-子計畫一:離子導電度對新穎過渡金屬氧化物金屬—絕緣體轉變之影響(3/3)	95/08/01-96/07/31	NSC95-2745-M-001-010
張嘉升	中央研究院奈米科技核心設施服務計畫(1/3)	95/08/01-96/07/31	NSC95-2120-M-001-008
李世炳	科普活動計畫(C類)—踏向科學的第一步	95/08/01-97/07/31	NSC95-2515-S-001-002-MY2
張嘉升	赴澳洲雪梨ANSTO考察(國外差旅費)	95/08/20-95/11/30	NSC95-2119-M-001-061
胡宇光	分子及奈米生醫影像創新開放核心設施之建構	95/09/01-96/08/31	NSC95-3114-P-001-004-Y02
胡宇光	分子及奈米生醫影像核心設施之建構	95/08/01-96/07/31	NSC95-2120-M-001-010
吳茂昆	2007科學季「台灣科技史」特展規劃計畫	95/11/01-96/07/31	NSC95-2515-S-001-004
李尚凡	測量巨磁阻自旋閥微磁結構中磁區壁移動與電流密度之關連	95/07/01-96/02/28	95-2815-C-001-005-M
胡宇光	利用同步輻射X光合成奈米金並研究其結構和光學性質	95/07/01-96/02/28	95-2815-C-001-006-M
林誠謙	數位典藏網路核心平台計畫--子計畫三：數位典藏異地備份與長期保存系統建置計畫	95/12/01-96/12/31	NSC95-2422-H-001-029
林誠謙	刀鋒式伺服器在尖端科學計算領域的研發—科學計算基礎架構建置及調校準則研發並發展計算材料的環境	95/08/01-96/07/31	NSC95-2745-P-001-004
林誠謙	刀鋒式伺服器在尖端科學計算領域的研發(子計畫)	95/08/01-96/07/31	廣達電腦股份有限公司
李定國	刀鋒式伺服器在尖端科學計算領域的研發(總計畫)	95/08/01-96/07/31	廣達電腦股份有限公司
黃英碩	奈米級像散式量測系統之開發	95/12/01-98/11/30	NSC95-3114-P-001-008-MY3

主持人	計　劃　名　稱	執行期間	計劃編號
胡進錕	95年度第4屆第2年高級中學基礎科學資優人才培育計畫	95/03/01-96/02/28	教育部
于淳	用非侷限自旋閥結構來測量磁壁在次微米與奈米線寬中被脈衝磁場與脈衝電流驅動時的移動率	96/01/01-97/12/31	NSC96-2112-M-001-010-MY2
張嘉升	物理學門(凝態組)研究發展及推動計畫	96/01/01-96/12/31	NSC96-2114-M-001-001
張嘉升	以掃描穿隧顯微術取得半導體摻雜平面分佈資訊	96/01/01-96/12/31	台灣積體電路製造股份有限公司

IV

Publication List of 2006

Chang, Wen-Chen(章文箴)

1. S.S. Adler *et al.* (PHENIX Collaboration), Jet properties from dihadron correlations in p+p collisions at s**(1/2) = 200-GeV. Phys.Rev.D74:072002,2006.
2. S.S. Adler *et al.* (PHENIX Collaboration), Nuclear effects on hadron production in d+Au and p+p collisions at s(NN)**(1/2) = 200-GeV. Phys.Rev.C74:024904,2006.
3. S.S. Adler *et al.* (PHENIX Collaboration) Azimuthal angle correlations for rapidity separated hadron pairs in d + Au Collisions at s(NN)**(1/2) = 200-GeV. Phys.Rev.Lett.96:222301,2006.
4. H. Kohri *et al.* Differential cross section and photon beam asymmetry for the polarized-gamma n ---> K+ Sigma- reaction at E(gamma) = 1.5GeV-2.4GeV. Phys.Rev.Lett.97:082003,2006.
5. S.S. Adler *et al.* (PHENIX Collaboration) Modifications to di-jet hadron pair correlations in Au+Au collisions at s(NN)**(1/2) = 200-GeV. Phys.Rev.Lett.97:052301,2006.
6. S.S. Adler *et al.* (PHENIX Collaboration) Improved measurement of double helicity asymmetry in inclusive midrapidity pi0 production for polarized p+p collisions at s**(1/2) = 200-GeV. Phys.Rev.D73:091102,2006
7. S.S. Adler *et al.* (PHENIX Collaboration) Common suppression pattern of eta and pi0 mesons at high transverse momentum in Au+Au collisions at S(NN)**(1/2) = 200-GeV. Phys.Rev.Lett.96:202301,2006
8. M. Sumihama *et al.*(LEPS Collaboration) The Polarized-gamma p ---> K+ Lambda and polarized-gamma p ---> K+ Sigma0 reactions at forward angles with photon energies from 1.5-GeV to 2.4-GeV. Phys.Rev.C73:035214,2006
9. Y.F. Zhu *et al.*(TEXONO Collaboration) Measurement of the intrinsic radiopurity of Cs-137 / U-235 / U-238 / Th-232 in CsI(Tl) crystal scintillators. Nucl.Instrum.Meth.A557:490-500,2006
10. S.S. Adler *et al.* (PHENIX Collaboration) Jet structure from dihadron correlations in d+Au collisions at s(NN)**(1/2) = 200-GeV. Phys.Rev.C73:054903,2006
11. S.S. Adler *et al.* (PHENIX Collaboration) Nuclear modification of electron spectra and implications for heavy quark energy loss in Au+Au collisions at s(NN)**(1/2) - 200-GeV. Phys.Rev.Lett.96:032301,2006
12. S.S. Adler *et al.* (PHENIX Collaboration) Single electrons from heavy flavor decays in p+p collisions at s**(1/2) = 200-GeV. Phys.Rev.Lett.96:032001,2006

13. S.S. Adler *et al.* (PHENIX Collaboration) Measurement of identified pi0 and inclusive photon v(2) and implication to the direct photon production in s(NN)**1/2 = 200-GeV Au+Au collisions. Phys.Rev.Lett.96:032302,2006
14. S.S. Adler *et al.* (PHENIX Collaboration) J/psi production and nuclear effects for d+Au and p+p collisions at s(NN)**(1/2) = 200-GeV. Phys.Rev.Lett.96:012304,2006

Chang, Chia-Seng (張嘉升)

1. W.B. Su, S.M. Lu, H.T. Shih, C.L. Jiang, C.S. Chang and Tien T. Tsong, *Manifestation of the quantum size effect in transmission resonance*, J. Phys.: Condens. Matter **18**, 6299 (2006).
2. Ming-Chya Wu, Cui-Lian Li, Chin-Kun Hu, Yuan-Chih Chang, Yuan-Hong Liaw, Li-Wei Huang, Chia-Seng Chang, Tien-Tzou Tsong, and Tung Hsu, *Curvature effect on the surface diffusion of silver adatoms on carbon nanotubes: Deposition experiments and numerical simulations*, Phys. Rev. B **74**, 125424 (2006).
3. Ya-Ping Chiu, Li-Wei Huang, Ching-Ming Wei, Chia-Seng Chang*, and Tien-Tzou Tsong, *Magic Numbers of Atoms in Surface-Supported Planar Clusters*, Phys. Rev. Lett. **97**, 165504 (2006).
4. W. B. Su, S. M. Lu, C. L. Jiang, H. T. Shih, C. S. Chang, and Tien T. Tsong, *Stark shift of transmission resonance in scanning tunneling spectroscopy*, Phys. Rev. B **74**, 155330 (2006).

Chen, C. D.(陳啟東)

1. Watson Kuo, C.S. Wu, J.H. Shyu, C.D. Chen "Suppression of Cooper-pair tunneling in superconducting charge boxes in tunable electromagnetic environments", **Phys. Rev. B**, in press.

2. M. C. Lin K. Aravind, C. S. Wu, Y. P. Wu, C. H. Kuan, Watson Kuo and C. D. Chen "Cyclotron Localization in a sub-10nm Silicon Quantum Dot Single Electron Transistor", **Applied Physics Letters**, in press..

3. C. S. Wu, C.F. Lin, Watson Kuo, C. D. Chen, "Coupled single electron transistors as a differential voltage amplifier", **New Journal of Physics**, 8, 300 (2006).

4. Watson Kuo, C. S. Wu, J. H. Shyu and C. D. Chen "Parity effect in a superconducting island in a tunable dissipative environment", **Phys. Rev. B**, 74, 184522 (2006).

5. Pei-Yin Chi, Hung -Yi Lin, Cheng-Hsien Liu, and Chii-Dong Chen, "Generation of nano-scaled DNA patterns through electro-beam induced charge trapping", **Nanotechnology** 17**,** 4854–4858 (2006).

6. Yu-Lun Chueh, Mong-Tzong Ko, Li-Jen Chou, Lih-Juann Chen, Cen-Shawn Wu, and Chii-Dong Chen, "TaSi2 Nanowires: A Potential Field Emitter and Interconnect", **Nano Letters**, 6, 1637-1644 (2006).

7. H. Y. Lin, L. C. Tsai, P. Y. Chi and C. D. Chen "DNA as an Electron-Beam Sensitive Reagent for Nano-Patterning", **Advanced Materials**, 18, 1517 (2006).

8. Horng-Shyang Chen, Dong-Ming Yeh, Yen-Cheng Lu, Cheng-Yen Chen, Chi-Feng Huang, Tsung-Yi Tang, and C. C. Yang, Cen-Shawn Wu, Chii-Dong Chen, "Strain Relaxation and Quantum Confinement in InGaN/GaN Nano-posts", **Nanotechnology**, 17, 1454 (2006).

9. Y. F. Hsiou, Y. J. Tang, C. D. Chen, C. H. Chan, "Coulomb blockade in individual multiwalled carbon nanotubes", **J. of Vac. Sci. Technology B**, 24, 143 (2006)

Chen,C. K.(陳志強)

1. "Growth of cortical neuronal network *in vitro*: Modeling and analysis" P.-Y. Lai, L. C. Jia, and C. K. Chan,Phys. Rev. E 73, 051906 (2006)
2. "Observation of Reentrant Jamming and Condensation of DNA during Gel Eletrophoresis. " C. K. Chan et al., preprint, submitted to journal, (2006)
3. "Probing the Theta Point Transition with Polymer Turbulent Drag Reduction" C. K. Chan et al., preprint, submitted to journal, (2006)
4. " Connectivity Induced Synchronous Firing in Neural Network" International Conference on the Frontiers of Nonlinear and Complex Systems May , 2006 (Hong Kong)
5. "Connectivity Induced Synchronous Firing in Neural Network" DDAP4 The 4th International Conference on Nonlinear Science July, 2006 (Pohang, South Korea)
6. "Connectivity induced Synchronous firing in Neuronal Network" Croucher Advanced study Institute: Opportunities and challenges for Physicists in Quantitative and Systemic Biology Dec, 2006 (Hong Kong)

Chen, Nan-yow(陳南佑)

1. "Effective potentials for folding proteins", **Nan-yow Chen**, Zheng-Yao Su, and Chung-Yu Mou, Phys. Rev. Lett. **96**, **078103**, (2006), cond-mat/**0601533**. This paper has been selected in Virtual Journal of Biological Physics Research Volume **11**, Issue 5 (2006).

Chen, Yeng-Long(陳彥龍)

1. R. Wang, Z. Jiang, Y.-L. Chen, G. Xue, (2006) Surface-induced phase transition of asymmetric diblock copolymer in selective solvents, *J. Phys. Chem. B*, **110**, 22726, 2006.

Chen, Yang-Yuan (陳洋元)

1. C.L. Dong, C. L. Chen, Y.Y. Chen, A. Asokan, J. F. Lee, J,-H. Guo, C.L. ChangElectronic structure of $CeAl_2$ thin films studied by x-ray absorption spectroscopy" **Applied Surface Science**, 252, 5372-5375 (2006)
2. Y. Y. Chen*, P. H. Huang, C. H. Booth, and J. M. Lawrence "Disorder effects on Kondo behavior in $CePt_{2+x}$" **Physica B, 378-380,** 778-779(2006).
3. L. Dong*, Y.Y. Chen, C.L. Chen, J.-H. Guo and C.L. Chang* (2006) **"**Electronic and magnetic properties of $CeAl_2$ nanoparticles" **J. of Magnetism and Magnetic Materials, 304**, e22-e24
4. C.L. Dong, K. Asokan, C.L. Chang, C.L. Chen, P.C. Lee, P.C. Chen, Y.Y. Chen, J.F. Lee and J.-H. Guo (2006) "Variation of electronic structures of $CeAl_2$ thin films with thickness studied by X-ray absorption near-edge structure spectroscopy"**Journal of Electron Spectroscopy and Related Phenomena** 152,1-5 (2006).
5. B. Xiang, C. B. Tsai, C. J. Lee, D. P. Yu, Y. Y. Chen* (2006) Low-temperature specific heat of double wall carbon nanotubes **Solid State Commun,** 138, 516-520
6. S.-W. Han, C.H. Booth*, E.D. Bauer, P.H. Huang, Y.Y. Chen and J.M. Lawrence (2006) "Lattice Disorder and Size-Induced Kondo Behavior in $CeAl_2$ and $CePt_{2+x}$ **Phys. Rev. Lett.** 97, 097204
7. C.C. Yang, M.K. Chung, W. –H. Li, T.S. Chan, R.S. Liu, Y.H. Lien, C.Y. Huang, Y.Y. Chen, Y.D. Yao, and J.W. Lynn "Magnetic instability and oxygen deficiency in Na-doped $TbMnO_3$" **Phys. Rev. B, 74,** 094409 (2006)

Cheng, Hai-Yang (鄭海揚)

1. H. Y. Cheng, C.K. Chua and K.C. Yang "Charmless Hadronic *B* Decays Involving Scalar Mesons: Implications to the Nature of Light Scalar Mesons", Phys. Rev. **D73**, 014017 (2006).
2. H. Y. Cheng and K.C. Yang "Penguin-induced Radiative Baryonic B Decays Revisited", Phys. Lett. **B633**, 533 (2006).
3. H. Y. Cheng, C.K. Chua and S.Y. Tsai "Doubly Charmful Baryonic *B* Decays", Phys. Rev. **D73**, 074015 (2006).
4. H. Y. Cheng "Exclusive Baryonic *B* Decays Circa 2005", Int. J. Mod. Phys. **A21**, 4209 (2006).
5. H. Y. Cheng and C.K. Chua "Production of *P*-wave Charmed Mesons in Hadronic B Decays", Phys. Rev. **D74**, 034020 (2006).
6. H. Y. Cheng, C.K. Chua and K.F. Liu "Scalar Glueball, Scalar Quarkonia, and their Mixing", Phys. Rev. **D74**, 094005 (2006).
7. H. Y. Cheng and C.K. Chua, 2006 "Strong Decays of Charmed Baryons in Heavy Hadron Chiral Perturbation Theory", hep-ph/0610283, accepted by Phys. Rev. D.
8. H. Y. Cheng, 2005 "Final State Interactions in Hadronic *B* Decays", in *Proceedings of the International Conference on QCD and Hadronic Physics*, June 16-20, 2005, Beijing, edited by K.T. Chao, X.D. Ji and C. Liu. Int. J. Mod. Phys. A **21**, 650 (2006).
9. H. Y. Cheng, 2006 "Status of Baryonic *B* Decays", talk presented at the Fist Workshop on Theory, Phenomenology and Experiments in Heavy Flavor Physics, Capri, Italy, May 29-31, 2006. Nucl. Phys. B (Proc. Suppl.) **163**, 68 (2007).
10. H. Y. Cheng, 2006 "Scalar Glueball, Scalar Quarkonia, and their Mixing", in *Proceedings of the XXXIIIth International Conference on High Energy Physics*, July 26-August 2, 2006, Moscow, Russia.

Cheng,Chi-Ho(鄭智豪)

1. Chi-Ho Cheng, "Boundary Condition of Polyelectrolyte Adsorption", Physical Review E 73, 012801 (2006).
2. Chi-Ho Cheng and S.K. Yip, "p-wave Feshbach Resonant Fermi Superfluid", Physical Review B 73, 064517 (2006).
3. Chi-Ho Cheng and S.K. Yip, "Trapped Resonant Fermions above Superfluid Transition Temperature", Accepted by Physical Review B.
4. Chi-Ho Cheng, "Constrained Spin-wave Theory to Quantum Spin

Systems", Submitted to Physical Review B.

5. Chi-Ho Cheng, "Strong Coupling Theory of Polyelectrolyte Adsorption", Submitted to Physical Review Letters.

Cheung, Chi-Yee(張志義)

1. "Controlled quantum secret sharing" Chi-Yee Cheung, Physica Scripta 74 (2006) 459-463.

Chou, Chung-Hsien (周忠憲)

1. "Effective gauge group of pure loop quantum gravity is SO(3): New estimate of the Immirzi parameter" Chung-Hsien Chou, Yi Ling, Chopin Soo, Hoi-Lai Yu Published in Phys.Lett.B637, 12-15,2006

Chou,Chia-Fu 周家復）

1. U.S. Patent 6,986,601, D. Sadler, C.F. Chou, R. Changrani, and F. Zenhausern (2006). “Piezoelectric Mixing Method”.
2. U.S. Patent 6,989,235, L. Chapsky, C.F. Chou, W. Frasch, F. Zenhausern, and H. Gronokin (2006). “Single Molecule Detection of Bioagents Using F1-ATPase Biomolecular Motors”.
3. U.S. Patent filed on 11/28/2006, J. Gu, C.F. Chou, Q. Wei, F. Zenhausern. “Composite substrate sealing methods and resulting devices”.
4. Q. Wei, C.F. Chou, J. Gu, F. Zenhausern (2006). “Microbubble Entrapment and Dissolution in Nanofluidic Channels”, submitted.
5. J. Gu, R. Gupta, C.F. Chou, Q. Wei, F. Zenhausern (2006). “A Simple Composite Cap Sealing of Nanochannels and Integrated Nano/Microfluidic Devices Below 20 nm at Room Temperature”, submitted.
6. C.F. Chou, D. Sadler, S. Lin, R. Changrani, A. Phayre, F. Zenhausern, R. Terbrueggen (2006). “Towards Modular Integration of Cyclic PCR and Electrochemical DNA Sensor for Molecular Diagnostics”, submitted.

Dong, Chung-Li(董崇禮)

1. C. Persson, C. L. Dong, L. Vayssieres, A. Augustsson, T. Schmitt, M. Mattesini, R. Ahuja, J. Nordgren, C. L. Chang, A. Ferreira da Silva, and J.-H. Guo, X-ray absorption and emission spectroscopy of ZnO nanoparticle and highly oriented ZnO microrod arrays, Microelectronics Journal, 37, 686 (2006)
2. C. L. Dong, Y. Y. Chen, C. L. Chen, C. L. Chang, and J.-H. Guo, Electronic and magnetic properties of CeAl2 nanoparticles, Journal of Magnetism and Magnetic Materials, 304, e22 (2006)
3. D.-W. Shin, C. L. Dong, M. Mattesini, A. Augustsson, S. Mao, C. L. Chang, C. Persson, R. Ahuja, J. Nordgren, S. X. Wang, and J.-H. Guo, Size dependnet of electronic structure of copper nanoclusters in SiC matrix, Chemical Physics Letters, 422, 543 (2006).
4. C. L. Dong, K. Asokan, C. L. Chang, C. L. Chen, Y. Y. Chen, J. F. Lee, and J.-H. Guo, Variation of Electronic Structures of CeAl2 Thin Films with Thickness Studied by X-ray absorption near edge structure spectroscopy, J. Electron Spectrosc. Relat. Phenom. 152, 1 (2006)
5. C. L. Dong, C. L. Chen, Y. Y. Chen, K. Asokan, J. F. Lee, J.-H. Guo, and C. L. Chang, X-ray absorption spectroscopy studies of CeAl2 thin films, Applied Surface Science, 252, 5372 (2006)
6. C. L. Dong, M. Mattesini, A. Augustsson, X.G. Wen, W. X. Zhang, S. H. Yang, C. Persson, R. Ahuja, J. Lüning, C. L. Chang and J. –H. Guo, Electronic structure and surface structure of Cu2S nanowires, J. Electron Spectrosc. Relat. Phenom. 151, 64 (2006)

Hou, Suen(侯書雲)

1. “Measurements of exclusive B/s0 decays at the Upsilon(5S)”, Belle Collab., K. Abe et al., arXiv:hep-ex/0610003.
2. “Measurements of time-dependent CP violation in B0 -¿ omega K0(S), f0(980) K0(S), K0(S) pi0 and K+ K- K0(S) decays”, Belle Collab., K. Abe et al., arXiv:hep-ex/0609006.
3. “B0 --> pi+ pi- pi0 time-dependent Dalitz analysis from Belle”, Belle Collab., K. Abe et al., arXiv:hep-ex/0609003.
4. “Measurement of charmless B decays to eta K* and eta rho”, Belle Collab., K. Abe et al., arXiv:hep-ex/0608034.
5. “Time-dependent CP asymmetries in B0 -¿ K0(S) pi0 gamma transitions”, Belle Collab., Y. Ushiroda et al., arXiv:hep-ex/0608017.
6. “Measurement of inclusive D/s, D0 and J/psi rates and determination of the B/s(*) anti-B/s(*) production fraction in b anti-b events at the Upsilon(5S) resonance”,

Belle Collab., A. Drutskoy et al., arXiv:hep-ex/0608015.
7. “Measurement of masses of Xi/c(2645) and Xi/c(2815) baryons”, Belle Collab., K. Abe et al., arXiv:hep-ex/0608012.
8. “Improved measurements of color-suppressed decays anti-B0 -¿ D0 pi0, D0 eta, D0 omega, D*0 pi0, D*0 eta and D*0 omega”, Belle Collab., S. Blyth et al. Phys. Rev. D 74, 092002 (2006) [arXiv:hep-ex/0607029].
9. “Measurement of branching fraction and direct CP asymmetry in B0 -¿ rho0 pi0 decays”, Belle Collab., J. Dragic et al., Phys. Rev. D73, 111105 (2006).
10. “Observation of B+- -¿ chi/c1 pi+- and search for direct CP violation”, Belle Collab., R. Kumar et al. Phys. Rev. D 74, 051103 (2006) [arXiv:hep-ex/0607008].
11. “Observation of a near-threshold D0 anti-D0 pi0 enhancement in B -¿ D0 anti-D0 pi0 K decay”, Belle Collab., G. Gokhroo et al., Phys. Rev. Lett. 97, 162002 (2006) [arXiv:hep-ex/0606055].
12. “Observation of new states decaying into Lambda/c+ K- pi+ and Lambda/c+ K0(S) pi-“, Belle Collab., R. Chistov et al. Phys. Rev. Lett.97, 162001 (2006) [arXiv:hep-ex/0606051].
13. “Study of J/psi -¿ p anti-p, Lambda anti-Lambda and observation of eta/c -¿ Lambda anti-Lambda at Belle”, Belle Collab., C. H. Wu et al., Phys. Rev. Lett. 97, 162003 (2006) [arXiv:hep-ex/0606022].
14. “Search for lepton flavor violating tau- decays with a K0(S) meson”, Belle Collab., Y. Miyazaki et al. Phys. Lett. B 639, 159 (2006) [arXiv:hep-ex/0605025bitem{Krokovny:2006sv}
15. “Resolution of the quadratic ambiguity in the CKM angle phi(1) using time-dependent Dalitz analysis of anti-B0 -¿ D (K0(S) pi+ pi-) h0”, Belle Collab., P. Krokovny et al. Phys. Rev. Lett. 97, 081801 (2006) [arXiv:hep-ex/0605023].
16. “Search for the h/c meson in B+- -¿ h/c K+-“, Belle Collab., Phys. Rev. D 74, 012007 (2006) F. Fang et al., [arXiv:hep-ex/0605007].
17. “Measurement of phi(3) with Dalitz plot analysis of B+ -¿ D(*) K(*)+ decay”, Belle Collab., A. Poluektov et al. Phys. Rev. D 73, 112009 (2006) [arXiv:hep-ex/0604054].
18. “Measurement of D0 $\to$ pi l nu (K l nu) form factors and absolute branching fractions”, Belle Collab., L. Widhalm et al., arXiv:hep-ex/0604049.
19. “Measurements of branching fractions and q**2 distributions for B $\to$ pi l nu and B $\to$ rho l nu decays with B $\to$ D(*) l nu decay tagging”, Belle Collab., T. Hokuue et al. [Belle Collaboration], arXiv:hep-ex/0604024.
20. “Evidence of the purely leptonic decay B- $\to$ tau- anti-nu/tau”, Belle Collab.,

K. Ikado et al., arXiv:hep-ex/0604018.

21. "Measurements of CP violation in $B^0 \to D^{*-} \pi^+$ and $B^0 \to D^- \pi^+$ decays", Belle Collab., F. J. Ronga et al. Phys. Rev. D 73, 092003 (2006) [arXiv:hep-ex/0604013].
22. "Study of $B^\pm \to D_{CP} K^\pm$ and $D^*_{CP} K^\pm$ decays", Belle Collab., K. Abe et al. Phys. Rev. D73, 051106 (2006) arXiv:hep-ex/0601032.
23. "Improved constraints on $D^0 - \bar{D}^0$ mixing in $D^0 \to K^+ \pi^-$ decays at Belle", Belle Collab., L. M. Zhang et al., Phys. Rev. Lett. 96, 151801 (2006) [arXiv:hep-ex/0601029].
24. "Measurement of the branching fraction, polarization, and CP asymmetry for $B^0 \to \rho^+ \rho^-$ decays, and determination of the CKM phase ϕ_2", Belle Collab., A. Somov et al., Phys. Rev. Lett. 96, 171801 (2006) [arXiv:hep-ex/0601024].
25. "Search for lepton and baryon number violating τ^- decays into $\bar{\Lambda}\pi^-$ and $\Lambda\pi^-$", Belle Collab., Y. Miyazaki et al. Phys. Lett. B 632, 51 (2006) [arXiv:hep-ex/0508044].
26. "Measurement of branching fractions for $B \to \chi_{c1(2)} K$ (K*) at Belle", Belle Collab., N. Soni et al. Phys. Lett. B 634, 155 (2006) [arXiv:hep-ex/0508032].
27. "Search for the $\Theta(1540)^+$ pentaquark using kaon secondary interactions at Belle", Belle Collab., K. Abe et al. Phys. Lett. B 632, 173 (2006) [arXiv:hep-ex/0507014].
28. "Charm hadrons from fragmentation and B decays in e^+e^- annihilation at $\sqrt{S}$ = 10.6 GeV", Belle Collab., R. Seuster et al. Phys. Rev. D 73, 032002 (2006) [arXiv:hep-ex/0506068].
29. "Observation of B/s0 anti-B/s0 oscillations", CDF Collab., A. Abulencia et al. arXiv:hep-ex/0609040.
30. "Measurement of the t anti-t production cross section in $p\bar{p}$ collisions at $\sqrt{S}$ =1.96-TeV in the all hadronic decay mode", CDF Collab., A. Abulencia et al. Phys. Rev. D 74, 072005 (2006) [arXiv:hep-ex/0607095].
31. "Measurement of the t anti-t production cross section in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96-TeV using lepton + jets events with jet probability b-tagging", CDF Collab., A. Abulencia et al. arXiv:hep-ex/0607035.
32. "Observation of $B^0_2 \to K^+ K^-$ and measurements of branching fractions of charmless two-body decays of B0 and B/s0 mesons in $\bar{p}p$ collisions at $\sqrt{S}$ = 1.96-TeV", CDF Collab., A. Abulencia et al. arXiv:hep-ex/0607021.

33. “Search for excited and exotic muons in the mu gamma decay channel in p anti-p collisions at $\sqrt{S}$ = 1.96-TeV”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett. 97, 191802 (2006) [arXiv:hep-ex/0606043].
34. “Measurement of the B/s0 anti-B/s0 oscillation frequency”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett.97, 062003 (2006) [AIP Conf. Proc. 870, 116 (2006)] [arXiv:hep-ex/0606027].
35. “Measurement of the t anti-t production cross section in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96-TeV”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett.97, 082004 (2006) [arXiv:hep-ex/0606017].
36. “Search for a neutral Higgs boson decaying to a W boson pair in $p\bar{p}$ collisions at $\sqrt{s}$ =$ 1.96-TeV”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett.97, 081802 (2006) [arXiv:hep-ex/0605124].
37. “Top quark mass measurement from dilepton events at CDF II with the matrix-element method”, CDF Collab., A. Abulencia et al. Phys. Rev. D74, 032009 (2006) [arXiv:hep-ex/0605118].
38. “Measurement of the b jet cross section in events with a Z boson in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96-TeV”, CDF Collab., A. Abulencia et al. Phys. Rev. D 74, 032008 (2006) [arXiv:hep-ex/0605099].
39. “Search for new physics in lepton + photon + X events with 305-pb**(-1) of p anti-p collisions at s**(1/2) = 1.96-TeV”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett. 97, 031801 (2006) [arXiv:hep-ex/0605097].
40. “Measurement of the ratio of branching fractions B(D0 -¿K+ pi-)/B(D0 -¿K- pi+) using the CDF II detector”, CDF Collab., A. Abulencia et al. Phys. Rev. D 74, 031109 (2006) [arXiv:hep-ex/0605027].
41. “Measurement of the $t\bar{t}$ production cross section in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96$ TeV using missing E_T + jets events with secondary vertex b-tagging”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett. 96, 202002 (2006) [arXiv:hep-ex/0603043].
42. “Search for high-mass resonances decaying to $e\mu$ in $p\bar{p}$ collisions at $\sqrt{S}$ =1.96$ TeV”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett.96, 211802 (2006) [arXiv:hep-ex/0603006].
43. “Search for Z' $\rightarrow$ e^+ e^- using dielectron mass and angular distribution”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett. 96, 211801 (2006) [arXiv:hep-ex/0602045].

44. “Observation of $B_s^0 \to \varphi(2S)\phi$ and measurement of ratio of branching fractions B($B_s^0 \to \varphi(2S)\phi$ / B($B_s^0 \to J/\psi\phi$ ”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett.96, 231801 (2006) [arXiv:hep-ex/0602005].
45. “Measurement of the dipion mass spectrum in X(3872) $\to J/\psi\pi^+\pi^-$ decays”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett. 96, 102002 (2006) arXiv:hep-ex/0512074.
46. “A search for scalar bottom quarks from gluino decays in anti-p p collisions at $\sqrt{S}$ = 1.96$ TeV”, CDF Collab., A. Abulencia et al. Phys. Rev. Lett. 96, 171802 (2006) [arXiv:hep-ex/0512072].
47. “Top quark mass measurement from dilepton events at CDF II”, CDF Collab., A. Abulencia et al.}, Phys. Rev. Lett. 96, 152002 (2006) [arXiv:hep-ex/0512070].
48. “Measurement of mass and width of the excited charmed meson states D_1^0 and
甲、D_2^{*0}”, CDF Collab., A. Abulencia et al., Phys. Rev. D 73, 051104 (2006) [arXiv:hep-ex/0512069].
49. “Search for anomalous semileptonic decay of heavy flavor hadrons produced in association with a W boson at CDF II”, CDF Collab., A. Abulencia et al., Phys. Rev. D 73, 051101 (2006) arXiv:hep-ex/0512065.
50. “Measurement of the inclusive jet cross section using the k_T algorithm in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96$ TeV”, CDF Collab., A. Abulencia et al., Phys. Rev. Lett. 96, 122001 (2006) arXiv:hep-ex/0512062.
51. “Search for second-generation scalar leptoquarks in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96$ TeV”, CDF Collab., A. Abulencia et al., Phys. Rev. D 73, 051102 (2006) arXiv:hep-ex/0512055.
52. “Search for H to $b\bar{b}$ produced in association with W bosons in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96$ TeV”, CDF Collab., A. Abulencia et al., Phys. Rev. Lett.96, 081803 (2006) [arXiv:hep-ex/0512051].
53. “Measurement of the helicity of W bosons in top-quark decays”, CDF Collab., A. Abulencia et al.}, Phys. Rev. D 73, 111103 (2006) arXiv:hep-ex/0511023.
54. “earch for charged Higgs bosons from top quark decays in $p\bar{p}$ collisions at

$\sqrt{S}$ =1.96$ TeV", CDF Collab., A. Abulencia et al., Phys. Rev. Lett. 96, 042003 (2006) [arXiv:hep-ex/0510065].

55. "Precision top quark mass measurement in the lepton + jets topology in $p\bar{p}$ collisions at $\sqrt{S}$ =1.96$ TeV", CDF Collab., A. Abulencia et al., Phys. Rev. Lett. 96, 022004 (2006) [arXiv:hep-ex/0510049].
56. "Top quark mass measurement using the template method in the lepton + jets channel at CDF II", CDF Collab., A. Abulencia et al., Phys. Rev. D 73, 032003 (2006) arXiv:hep-ex/0510048.
57. "Direct search for Dirac magnetic monopoles in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96$ TeV", CDF Collab., A. Abulencia et al., Phys. Rev. Lett. 96, 201801 (2006) arXiv:hep-ex/0509015.
58. "Search for neutral MSSM Higgs bosons decaying to tau pairs in $p\bar{p}$ collisions at $\sqrt{S}$ = 1.96$ TeV", CDF Collab., A. Abulencia et al., Phys. Rev. Lett. 96, 011802 (2006) [arXiv:hep-ex/0508051].
59. "Search for W and Z bosons in the reaction $p\bar{p} \rightarrow$ 2 jets + γ at $\sqrt{S}$ = 1.8$ TeV", CDF Collab., D. Acosta et al., Phys. Rev. D73, 012001 (2006) [arXiv:hep-ex/0507051].
60. "A search for flaring very-high-energy cosmic gamma-ray sources with the L3+C muon spectrometer", L3 Collab., P. Achard et al., Astropart. Phys. 25, 298 (2006).
61. "Analysis of the pi+ pi- pi+ pi- and pi+ pi0 pi- pi0 final states in quasi-real two-photon collisions at LEP", L3 Collab., P. Achard et al., Phys. Lett. B 638, 128 (2006) arXiv:hep-ex/0605021.
62. "Measurement of hadron and lepton-pair production in e+ e- collisions at s**(1/2) = 192-GeV - 208-GeV at LEP", L3 Collab., P. Achard et al., arXiv:hep-ex/0603022.
63. "Measurement of the mass and the width of the W boson at LEP", L3 Collab., P. Achard et al., Eur. Phys. J. C 45, 569 (2006) [arXiv:hep-ex/0511049].

Ho, Tung-Min(何侗民)

1. "Multiple neutral and singly ionized magnesium donors in silicon" L. T. Ho, Physica B, 376-377(2006) 154-156

Hsieh, Chi-Min(謝志敏)

1. Yang, W. C., Hwang R.R, and Hsieh C.M (2006). Interaction of nonlinear progressive waves with two serial arranged submerged obstacles. *Journal of Engineering Mechanics*, ASCE, (EI&SCI) (NSC-94-2611-E-001-001) (in press)

2. Yang, W.C., Hwang R.R, and Hsieh C.M (2006). A numerical study on progressive waves over impermeable undulated beds. *Proceedings of 16th International Offshore and Polar Engineering Conference* (EI), San Francisco, California, USA, pp. 370-376.

3. Tseng, I. F., Hsieh C. M., Tseng C.C., Cheng L.T. and Chen C. Y. (2006)，Breaking criterion on internal solitary wave propagation，第三十屆全國力學會議論文研討會，彰化大葉大學，F1-2，第 1-8 頁。

4. 謝志敏，楊文昌，黃榮鑑，許泰文 (2006)，波浪通過雙列潛堤之變形研究，第三十屆全國力學會議論文研討會，彰化大葉大學，B5-1 第 1-8 頁。

5. 謝志敏，楊文昌，黃榮鑑 (2006)，應用 RANS 模擬斜波上之溢波型碎波，第二十八屆海洋工程研討會，高雄，第 141~146 頁。

6. 謝志敏，楊文昌，彭逸凡，黃榮鑑 (2006)，斜坡上孤立波的傳播與破碎，第二十八屆海洋工程研討會，高雄，第 193~198 頁。

7. Yang, W. C., C.-M. Hsieh, and R. Hwang (2006)，Coupling an embedding approach for wave over complex submerged structure and topography，第十三屆全國計算流體力學會議研討會，台北，CFD-0506 第 1-8 頁。

Hu, Chin-Kun (胡進錕)

1. Mai Suan Li, **C.-K. Hu**, D. K. Klimov, and D. Thirumalai. Multi step wise refolding of immunoglobulin domain I27 upon force quench depends on initial conditions, Proc. Natl.Acad. Sci. USA 103, 93-98 (2006).
2. D. B. Saakian and **C.-K. Hu**. Exact solution of the Eigen model with general fitness functions and degradation rates, Proc. Natl. Acad. Sci. USA 103, 4935-4939 (2006).
3. A.E. Allahverdyan, Zh.S. Gevorkian, **C.-K. Hu**, and Th.M. Nieuwenhuizen. Adhesion induced DNA naturation, Phys. Rev. Lett. 96, 098302 (2006).
4. N. Sh. Izmailian, K. B Oganesyan, M.-C. Wu and **C.-K. Hu**. Finite-size corrections and scaling for the triangular lattice dimer model with periodic boundary conditions, Phys. Rev. E. 73, 016128 (2006).

5. P. M. Gade and **C.-K. Hu**. Scaling and universality in transition to synchronous chaos with local-global interactions, Phys. Rev. E 73, 036212 (2006).
6. D. B. Saakian, E. Munoz, **C.-K. Hu** and M. W. Deem. Quasispecies theory for multiple-peak fitness landscapes, Phys. Rev. E. 73, 041913 (2006).
7. M.-C. Wu and **C.-K. Hu**. Empirical mode decomposition and cardiorespiratory synchrogram approach to cardiorespiratory synchronization, Phys. Rev. E 73, 051917(2006).
8. B. C. Bag and **C.-K. Hu**. Escape through an unstable limit cycle: resonant activation, Phys. Rev. E 73, 061107 (2006).
9. M.-C. Wu, C.-L. Li, **C.-K. Hu**, Y.-C. Chang, Y.-H. Liaw, L.-W. Huang, C.-S. Chang, T. T. Tsong, and T. Hsu. Curvature effect on the surface diffusion of silver adatoms on carbon nanotubes, Phys. Rev. B 74, 125424 (2006).
10. Maksim Kouza, Mai Suan Li, Edward P. O'Brien, **C.-K. Hu**, and D. Thirumalai. Effect of finite size on cooperativity and rates of protein folding, J. Phys. Chem. A 110, 671 (2006).
11. R. E. Amritkar and **C.-K. Hu**, Synchronized state of coupled dynamics on time-varying net-works, Chaos 16, 015117 (2006).
12. F. Eisenmenger, U. H.E. Hansmann, S. Hayryan, and **C.-K. Hu**. An enhanced version of SMMP - Open-source software package for simulation of proteins, Computer Phys. Commu.174, 422 (2006).
13. J. Dai, **C.-K. Hu**, X.-Sh. Chu, D.-R. He, Unpredictability of iteration destination in an integrate-and-¯re circuit, Chin. Phys. Lett. 23, 2023 (2006).
14. Syamal Kumar Dana and **C.-K. Hu**. Spiking and bursting in Josephson junction, IEEE Transations on Circuits and Systems II Express Brief, 53, 1031 (2006).
15. C.-J. Fu, B.-H. Wang, C.-Y. Yin, T. Zhou, and K. Gao, P. M. Hui, **C.-K. Hu**, Analytical Studies on a Modified Nagel-Schreckenberg Model with the Fukui-Ishibashi Acceleration Rule, Chaos Solitons & Fractals 31, 372 (2007).
16. C.-H. Lin, Y.-C. Tsai, and **C.-K. Hu**. Wrapping conformations of a semiflexible polymer on the curved surface, Phys. Rev. E, in press.
17. R. G. Ghulghazaryan, S. Hayryan and **C.-K. Hu**. E±cient combination of Wang-Landau and transition matrix Monte Carlo methods for protein simulations, J. Comp. Chem., in press(2006).
18. Mai Suan Li, Maksim Kouza and **C.-K. Hu**. Refolding upon force quench and pathways of mechanical and thermal unfolding of ubiquitin, Biophysical J., in press (2007).
19. B. K. Singh, M. Gambhir and **C.-K. Hu**. Quasi-cycles and sensitive dependence on seed values in a class of self-evolving maps, Chaos Solitons & Fractals, in press (2007).

20. D. B. Saakian and **C.-K. Hu**. Phase diagrams and dynamics for diploid biological evolution models, Phys. Rev. E, submitted.
21. J. Dai, **C.-K. Hu**, X.-S. Chu, and D.-R. He. A riddled attraction basin and its induced crisis in an integrate-and-fire circuit, Phys. Rev. E, submitted.
22. N. Sh. Izmailian, V. B. Priezzhev, and **C.-K. Hu**. Self-organized criticality in an immune system, Phys. Rev. E, submitted.
23. E. SH. Mamasakhlisov, Shura Hayryan, V. F. Morozov, C.-K. Hu. RNA folding in the presence of counterions, Phys. Rev. E, submitted.
24. B. C. Bag and **C.-K. Hu**. Escape through an unstable limit cycle driven by multiplicative colored non-Gaussian and additive white Gaussian noises, Phys. Rev. E, submitted.
25. Y. S. Mamasakhlisov, S. Hayryan, and **C.-K. Hu**. Random sequences with power-law correla-tions exhibit protein-like behavior, J. Chem. Phys., submitted.
26. M.-C. Wu, M. S. Li, M. Kouza, W.-J. Ma, and **C.-K. Hu**. A new geometrical constraint on native protein structures, Proteins, submitted.
27. Hong-Yu Hu, Ming-Chya Wu, Huey-Jen Fang, Michael D. Forrest, **Chin-Kun Hu**, Tian Yow Tsong, and Hueih Min Chen. The Role of Tryptophan in Staphylococcal Nuclease Stability, Biophysical J., submitted.
28. Chun-Ling Chang, Wen-Jong Ma, Chien-Chih Chen, Chi-Ning Chen, Guey-Kuen Yu, and **C.-K. Hu**. Patterns of spatial correlations for earthquakes in Taiwan, submitted for publication.

Hwang, Ing-Shouh(黃英碩)

1. Shao-Kang Hung, En-Te Hwu, Ing-Shouh Hwang, Li-Chen Fu, Post-Fitting Control Scheme for Periodic Piezo-Scanner Driving , Japanese Journal of Applied Physics 45, 3B, 1917-1921 (2006).
2. E.-T. Hwu, K.-Y. Huang, S.-K. Hung, and I.-S. Hwang, Measurement of the Cantilever Displacement Using a CD/DVD Pickup Head , Japanese Journal of Applied Physics 45, 3B, 2368-2371 (2006).
3. H.-S. Kuo, I.-S. Hwang, T.-Y. Fu, Y.-C. Lin, C.-C. Chang, and T. T. Tsong, Preparation of Single-Atom Tips and Their Field Emission Behaviors , e-Journal of Surface Science and Nanotechnology 4, 233-238 (2006).
4. Rong-Li Lo , Chun-Ming Chang, Ing-Shouh Hwang, and Tien T. Tsong, Observation of single oxygen atoms decomposed from water molecules on Si(111)-7x7 surface , Physical Review B 73, 075427 (2006).
5. Ing-Shouh Hwang and Tien T. Tsong, Comment on Direct Identification of Critical Clusters in Chemical Vapor Deposition , Physical Review Letters 97,

089601 (2006)

6. Hong-Shi Kuo, Ing-Shouh Hwang, Tsu-Yi Fu, Yu-Chun Lin, Che-Cheng Chang, and Tien T. Tsong, Noble Metal/W(111) Single-Atom Tips and their Field Electron and Ion Emission Characteristics , Japanese Journal of Applied Physics 45, 8972 (2006).
7. T.Itagaki, E.Rokuta, H.-S. Kuo, K.Nomura, T.Ishikawa, B.-L. Cho, I.-S. Hwang, T.T.Tsong, and C.Oshima, Stabilities in field electron emissions from noble-metal covered W nanotips: Apex structure dependence to be published in Surface and Interface Analysis.
8. Chih-Wen Yang, Ing-Shouh Hwang,Yen Fu Chen, Chia Seng Chang and Din Ping Tsai, Imaging of soft matters with tapping-mode AFM and NC-AFM , to be published in Nanotechnology.

Hwu, Yeu-Kuang(胡宇光)

1. Jih-Pai Lin*, Andrew C. Scott, Chia-Wei Li, Hung-Jen Wu, William I. Ausich, Yuan-Long Zhao, **Yeu-Kuang Hwu**: "Silicified egg clusters from a Middle Cambrian Burgess Shale–type deposit, Guizhou, south China", Geology **34,** no. 12, p. 1037–1040 (December 2006).

2. Koh SB, Suh SI, Lee DH, Kim AR, Oh CH, Yoon JS, Weon BM, Seol SK, Pyun AR, Je JH, **Hwu Y**, Margaritondo G. "Phase contrast radiography of Lewy bodies in Parkinson disease", Neuroimage 32(2):566-9 (2006 August 15).

3. Jun-Yuan Chen, David J. Bottjer, Eric H. Davidson, Stephen Q. Dornbos, Xiang Gao, Yong-Hua Yang, Chia-Wei Li, Gang Li, Xio-Qiang Wang, Ding-Chang Xian, Hung-Jen Wu, Yeu-Kuang Hwu, & Paul Tafforeau: "Phosphatized Polar-lobe-Forming Embryos from the Precambrian of Southwest China", Science, **312**, 1644 (2006) (June 16, 2006)

4. C. J. Sun, Y. Z. Zhou, J. S. Chen, G. M. Chow, G. H. Fecher, H. J. Lin, **Y. K. Hwu**: "Field dependence of spin and orbital moments of Fe in L10 FePt magnetic thin films", Journal of Magnetism and Magnetic Materials **303**, e247–e250(2006).

5. Chong-Cook Kim, Changhai Wang, Yung-Chin Yang, **Yeu-Kuang Hwu**, Seung-Kwon Seol, Yong-Bum Kwon, Chih-Hsiung Chen, Huey-Wen Liou, Hong-Ming Lin, Giorgio Margaritondo, Jung-Ho Je: "X-ray synthesis of

nickel–gold composite nanoparticles", Materials Chemistry and Physics **100**, (Dec. 10, 2006) 292–295

6. Yung-Chin Yang, Chang-Hai Wang, **Yeu-Kuang Hwu**, Jung-Ho Je: "Synchrotron X-ray synthesis of colloidal gold particles for drug delivery", Materials Chemistry and Physics **100**, (Nov. 10, 2006) 72-76.

7. C. J. Sun, G. M. Chow, Y. Zhao, **Y. K. Hwu**, J. P. Wang: "Study of effects of annealing on nanostructured Co–C thin films by X-ray absorption spectroscopy", Journal of Magnetism and Magnetic Materials **303**, e383–e386 (2006).

8. B. M. Weon, J. H. Je, **Y. Hwu** and G. Margaritondo: "Phase contrast x-ray imaging", International Journal of Nanotechnology (Invited Review Paper), **3**(2/3), 280-297 (2006).

9. C. J. Sun, G. M. Chow, S.-W. Han, J. P. Wang, **Y. K. Hwu**, and J. H. Je: "Investigation of phase miscibility of CoCrPt thin films using anomalous x-ray scattering", Virtual Journal of Nanoscale Science & Technology, 122904 (2006)

10. Kim JW, **Hwu Y**, Je JH, Oh CW, Cheon BW, Kim HH, Suh SY, Rha SW, Park CG, Oh DJ, Seo HS: "In vivo real-time vessel Imaging and ex vivo 3D reconstruction of atherosclerotic plaque" JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY, **47**(4), 330A-331A Suppl (2006)

11. C. J. SUN, G. M. CHOW, G. H. FECHER1, J. S. CHEN2, H.-J. LIN3 and **Y. HWU**: "Spin and Orbital Magnetic Moments of FePt Thin Films", Jpn. J. Appl. Phys **45**, No. 4A, 2539–2541(2006)

12. C. J. Sun, G. M. Chow, S.-W. Han, J. P. Wang, **Y. K. Hwu** and J. H. Je: "Investigation of phase miscibility of CoCrPt thin films using anomalous x-ray scattering and extended x-ray absorption fine structure", Appl. Phys. Lett. **88**, 122508 (2006).

13. V. Derycke, P. Fonteneau, **Y. K. Hwu**, P. Soukiassian "From K atom pairs to K atomic chains: A semiconducting 2x3 to metallic 2x1 transition on the β-SiC(100) *c*(4x2) surface" Appl. Phys. Lett., **88**, 022105 (2006).

14. Tong Y, Zhang G, Li Y, Tan M, Wang W, Chen J, **Hwu Y**, Hsu PC, Je JH, Margaritondo G, Song W, Jiang R, Jiang Z. "Synchrotron microradiography study on acute lung injury of mouse caused by PM(2.5) aerosols", Eur. J. Radiol. 58 (2), 266-72 (2006).

15. International Symposium on the Methodological Study of Phase Contrast Hard X-Ray Imaging of Nanobiological and Medical Samples with Synchrotron Radiation, "Micro- and Nano-radiology", Beijing, June 5 – 9, 2006.
16. Swiss Light Source TOMCAT beamline inauguration ceremony, Swiss Light Source, Villigan, Switzerland, June 7, 2006

Jan, Ming-Yi(詹明宜)

1. Chao PT, Jan MY, Hsiu H, Hsu TL, Wang WK, Wang Lin YY. (2006) Evaluating microcirculation by pulsatile Laser Doppler signal. *Physics in Medicine and Biology* 51:845-854. (SCI)
2. Hsiu H, Jan MY, Wang WK, Wang Lin YY. (2006) Effects of double-HR-frequency mechanical stimulation on blood pressure waveform of rats. *Physiol. Meas*, 27 131-144. (SCI)

Jen, Shieh-Uang(任盛源)

1. S. U. Jen*, Y. T. Chen, J. M. Wu, W. C. Chen, W. C. Cheng, and Y. D. Yao, "The straining effect on tunneling resistance of Co/AlO_x/Co/IrMn junctions", Appl. Phys. Lett. **89**, 222510(2006). (SCI)
2. Y. T. Chen, S. U. Jen*, Y. D. Yao, J. M. Wu, and A. C. Sung, "Interfacial effects on magnetostriction of CoFeB/AlO_x/Co junction", Appl. Phys. Lett. **88**, 222509(2006). (SCI)
3. Y. T. Chen, S. U. Jen*, Y. D. Yao, J. M. Wu, C. C. Lee, T. L. Tsai, and Y. C. Chang, "Magnetic and electrical properties of amorphous CoFeB films", J. Appl. Phys. **99**, 053701(2006). (SCI)
4. H. Y. Wang*, S. U. Jen, and J. Z. Yu, "Many-body Green's function theory of ferromagnetic films with arbitrarily arranged single-ion anisotropies", Phys. Rev. B **73**, 094414(2006). (SCI)
5. Y. T. Chen*, S. U. Jen, Y. D. Yao, J. M. Wu, G. H. Hwang, T. L. Tsai, Y. C. Chang, and A. C. Sun, "Magnetic, structural and electrical properties of ordered and disordered $Co_{50}Fe_{50}$ films", J. Magn. Magn. Mater. **304**, e71(2006). (SCI)
6. Y. T. Chen, S. U. Jen*, Y. D. Yao, J. M. Wu, C. C. Lee, and A. C. Sun, "Magnetic properties of face-centered cubic Co films", IEEE Trans. **MAG-42**, 278(2006). (SCI)

Jeng, Horng-Tay(鄭弘泰)

1. **Horng-Tay Jeng**, G. Y. Guo, and D. J. Huang, "Charge-orbital ordering and low-temperature structure of magnetite: GGA+U investigations", **Phys. Rev. B** 74, 195115 **(2006).**
2. **Horng-Tay Jeng,** Shi-Hsin Lin, and Chen-Shiung Hsue, "Orbital Ordering and Jahn-Teller Distortion in Perovskite Ruthenate SrRuO3", **Phys. Rev. Lett.** 97, 67002 **(2006).**
3. D. J. Huang, H.-J. Lin, J. Okamoto, K. S. Chao, **H.-T. Jeng,** G. Y. Guo, C.-H. Hsu, C.-M. Huang, D. C. Ling, W. B. Wu, C. S. Yang, and C. T.Chen, "Evidence for the Orbital-Ordering Mechanism of the Verwey Transition in Magnetite", **Phys. Rev. Lett.** 96, 96401 **(2006).**
4. H. L. Liu, K. S. Lu, M. X. Kuo, L. Uba, S. Uba, L. M. Wang, S. L. Cheng, J. G. Lin, and **H. T. Jeng,** "Magneto-optical properties of La0.7Sr0.3MnO3 thin films with perpendicular magnetic anisotropy", **J. Appl. Phys.** 99, 43908 **(2006).**

Kuo,Hong-Shi(郭鴻曦)

1. Hong-Shi Kuo, Ing-Shouh Hwang, Tsu-Yi Fu, Yu-Chun Lin, Che-Cheng Chang,and Tien T. Tsong, “Noble Metal/W(111) Single-Atom Tips and their Field Electron and Ion Emission Characteristics”, Japanese Journal of Applied Physics, Vol. 45, 8972-8983 (2006).
2. T. Itagaki, E. Rokuta, H. S. Kuo, K. Nomura, T. Ishikawa, B. L. Cho, I. S.Hwang, T. T. Tsong, C. Oshima, “Stability in field electron emission from noble-metal covered W nanotips: Apex structure dependence”, Surface and Interface Analysis, Accepted on Feb. 11, 2006.
3. E. Rokuta, T. Itagaki, T. Ishikawa, B. L. Cho, H. S. Kuo, T. T. Tsong, C. Oshima, “Single-atom coherent field electron emitters for practical application to electron microscopy: Buildup controllability, self-repairing function and demountable characteristic”, Applied Surface Science, Vol. 252, 3686-3691(2006).
4. Hong-Shi Kuo, Ing-Shouh Hwang, Tsu-Yi Fu, Yu-Chun Lin, Che-Cheng Chang, and Tien T. Tsong, “Preparation of Single-Atom Tips and Their Field Emission Behaviors”, e-Journal of Surface Science and Nanotechnology, Vol. 4, 233 (2006).
5. Hong-Shi Kuo, Ing-Shouh Hwang, Tsu-Yi Fu, Yu-Chun Lin, Tien T. Tsong, “ New Type of Gas Field Ion Source”, The 16th International Microscopy Congress, The First Place of Post Award, Sept. 3-8, 2006, Sapporo, Japan.

6. Hong-Shi Kuo, 野村健一, 六田英治, 坂桓考洋, Tien T. Tsong, 大島忠平, "Field Ion/Electron Emission through the Faceted Nb Tip", 日本第 53 回應用物理學會演講會, Mar. 22-26, 2006, 武藏工業大學, 東京, 日本.

Lee, Seokcheon (李碩天)

1. Title: *Constraints on the coupled quintessence from cosmic microwave background anisotropy and matter power spectrum * Authors: *Seokcheon Lee </find/astro-ph/1/au:+Lee_S/0/1/0/all/0/1>, Guo-Chin Liu </find/astro-ph/1/au:+Liu_G/0/1/0/all/0/1>, Kin-Wang Ng </find/astro-ph/1/au:+Ng_K/0/1/0/all/0/1> *Phys.Rev. D73 (2006) 083516 ArXiv : astro-ph/0601333
2. Title: *Coupled Quintessence and CMB* Authors: *Seokcheon Lee </find/astro-ph/1/au:+Lee_S/0/1/0/all/0/1> *the ICGA7 conference proceedings published by World Scientific ArXiv : astro-ph/0604602
3. Title: *Coupling of quintessence to pseudoscalar of electromagnetism and CMB polarization *Authors: *Guo-Chin Liu </find/astro-ph/1/au:+Liu_G/0/1/0/all/0/1>, Seokcheon Lee </find/astro-ph/1/au:+Lee_S/0/1/0/all/0/1>, Kin-Wang Ng </find/astro-ph/1/au:+Ng_K/0/1/0/all/0/1> *submitted to PRL ArXiv : astro-ph/0606248

Lee, Shang-Fan(李尚凡)

1. Chia-Ching Chang, Shang-Fan Lee, Kein-Wen Sun, Chien-Chang Ho, Yu-Ting Chen, Cheng-Hung Chang, Lou-Sing Kan. 2006. "Mn,Cd-metallothionein-2: A room temperature magnetic protein". Biochemical and Biophysical Research Communications **340**, 1134-1138. (SCI:3.000)
2. Chyi-Yang Sheu, Shang-Fan Lee, and Kwang-Hwa Lii. 2006. "Ionic Liquid of Choline Chloride/Malonic Acid as a Solvent in Synthesis of Open-Framework Iron Oxalatophosphates". *Inorg. Chem.* (Communication) **45**, 1891-1893. (SCI:1.826)
3. Yi-Chun Chen, Yeong-Der Yao, Shang-Fan Lee, Yu-An Lin, Dong-Cheng Chen, and Yung Liou. 2006. "Current detection of vortex motion in patterned S-shape wires with constrictions" J. Appl. Phys. **99**, 08G306. (SCI:2.498)
4. C. Yu, Y. S. Chen, Y. D. Yao, K. W. Cheng, S. F. Lee, K. T. Wu, and Y. Liou. 2006. "Magnetization reversal study in submicron half-ring patterned wires with different corner structures". J. Appl. Phys. **99**, 08G309. (SCI:2.498)

5. Y. S. Chen, K.W. Cheng, C. Yu, S. F. Lee, D. C. Chen, S. H. Wu, M. T. Lin, Y. Liou, and Y. D.Yao. 2006. "Vortex domain walls depinning by polarized current in submicron half-ring wires". J. Appl. Phys. **99**, 08G516. (SCI:2.498)
6. S. Y. Huang, S. F. Lee, C. Y. Yu, S. Y. Hsu, and Y. D. Yao. 2006. "Analysis of diffusive interface resistance for measurements with perpendicular current in Fe/Nb multilayers". J. Appl. Phys. **99**, 08M507. (SCI:2.498)
7. C. C. Yang, S. F. Lee, Y. D. Yao, W. -H. Li, K. H. Lii, and J. W. Lynn. 2006. "Magnetic Structures of $[Co_3(pyz)(HPO_4)_2F_2]$, a Fluorinated Cobalt Phosphate with a Pillared Layer Structutre". Physica B **378-380**, 1140-1141. (SCI: 0.796)
8. Yuan-Ron Ma, Chai-Chang Tsai, Shang Fan Lee, Kai-Wen Cheng, Yung Liou and Yeong Der Yao. 2006. "Magnetic properties of large-area one-dimensional WO_2 and MoO_2 nanorods". J. Magn. Magn. Mat. **304**, e13-e15. (SCI:0.985)
9. S. Y. Huang, S. F. Lee, Jun-Jih Liang, C. Y. Yu, K. L. You, T. W. Chiang, S. Y. Hsu, and Y. D. Yao. 2006. "Properties of superconductivity for decoupled ferromagnet/superconductor trilayers and multilayers in Fe/Nb system". J. Magn. Magn. Mat. **304**, e81-e83. (SCI:0.985)
10. Dung-Shing Hung, Chen S. Tsai, Chin-Chung Yu, Yung Liou, Shang-Fan Lee, Po-Chieh Chiang, Chih-Sung Ho and Yeong-Der Yao. 2006. "Microwave switching behaviors of Fe/Ag/Fe/Ag epitaxial films" J. Magn. Magn. Mat. **304**, e118-e120. (SCI:0.985)
11. J. L. Tsai, D. C. Chen, T. Y. Chen, K. W. Cheng, Y. D. Yao, S. F. Lee and Y. Liou. 2006. "Controlled domain wall motion by current into patterned-U $Ni_{80}Fe_{20}$ wires". J. Magn. Magn. Mat. **304**, e192-e195. (SCI:0.985)
12. J. L. Tsai, T. Y. Chen, K. W. Cheng, S. F. Lee and Y. D. Yao. 2006. "Magnetoresistance and domain wall motion in horseshoe $Ni_{80}Fe_{20}$ wires". J. Magn. Magn. Mat. **304**, e328-e330. (SCI:0.985)
13. C. Y. Chou, Y. D. Yao, P. C. Kuo, S. F. Lee and J. J. Chou. 2006. "Microstructure and magnetic properties of Co/Os/Co and Fe/Os/Fe thin films". J. Magn. Magn. Mat. **304**, e349-e352. (SCI:0.985)
14. S. Y. Yang, W. L. Kuang, Yung Liou, W. S. Tse, S. F. Lee, and Y. D. Yao. 2006. "Reentrant Effect on the Transport Properties of $La_{0.7}Sr_{0.3}MnO_3$ Films". Jpn. J. Appl. Phys. **45**, pp. 5754-5756. (SCI:1.096)
15. Chia-Ching Chang, Kien Wen Sun, Shang-Fan Lee, and Lou-Sing Kan. "Self-assembled Molecular Magnets on Patterned Silicon Substrates: Bridging Bio-sensors with Nanoelectronics". Accepted in Biomaterials. (SCI:4.698)
16. L. J. Chang, A. L. Chen, K. W. Cheng, C. Yu, S. F. Lee, Y. Liou, and Y. D. Yao. "Influence of IrMn Exchange Bias Layer on the Magnetic Properties of Half-Ring NiFe Micron Structures". Accepted in J. Appl. Phys. (SCI:2.498)

17. Yi-Chun Chen, Dong-Shing Hung, Yeong-Der Yao, Shang-Fan Lee, Huan-Pei Ji, and Chwen Yu. “FMR study of thickness-dependent magnetization precession in $Ni_{80}Fe_{20}$ films” Accepted in J. Appl. Phys. (SCI:2.498)
18. S. F. Lee, T. C. Tsai, G. S. Chang, C. Y. Sheu, and K. H. Lii. “Magnetic Properties of Iron Oxalatophosphates with Layer and Framework Structures” Submitted to J. Appl. Phys. (SCI:2.498)
19. K. W. Cheng, C. Yu, Y. S. Chen, D. C. Chen, W. C. Keng, S. F. Lee, Y. Liou, J. H. Huang, and Y. D.Yao. “Domain wall injection study in spin valve system with different geometry reservoir”. Submitted to J. Appl. Phys.
20. S. Y. Huang, S. F. Lee*, S. Y. Hsu, and Y. D. Yao. “Interface resistance and transparency in the ferromagnet/superconductor Co/Nb_xTi_{1-x} multilayers with x = 1, 0.6, and 0.4.” Submitted to Phys. Rev. B.

Lee, Shih-Chang(李世昌)

1. TEXONO Collaboration “**A Search of Neutrino Magnetic Moments with a High-Purity Germanium Detector at the Kuo-Sheng Nuclear Power Station”** to appear in *Phys. Rev.* D.
2. ATLAS Collaboration “**The barrel modules of the ATLAS semiconductor tracker**“ *NIM* **A568**, 642 (2006).

Lee, Ting-Kuo(李定國)

1. Precise phase retrieval from exactly oversampled diffraction intensity, to appear in Phys. Rev. B, (Changyong Song, Damien Ramunno-Johnson, Yoshinori Nishino, Yoshiki Kohmura, Tetsuya Ishikawa, Chien-Chun Chen, T. K. Lee and Jianwei Miao).
2. Three-dimensional GaN-Ga2O3 core shell structure revealed by x-ray diffraction microscopy, Phys. Rev. Lett.97, 215503 (2006), (Jianwei Miao, Chien-Chun Chen, Changyong Song, Yoshinori Nishino, Yoshiki Kohmura, Tetsuya Ishikawa, Damien Ramunno-Johnson, T. K. Lee, Subhash H. Risbud).
3. Field-induced supersolid phase in spin dimmer XXZ systems, to appear in JMMM, (K. K. Ng and T. K. Lee).
4. Exchange-correlation energy in molecules: a variational quantum Monte Carlo study, Phys. Rev. A 74, 032507 (2006) (C. R. Hsing, M. Y. Chou and T. K.Lee).
5. Spectral weights, d-wave pairing amplitudes, and particle-hole tunneling asymmetry of a strongly correlated superconductor, Phys. Rev. B74,

092503(2006), (C. P. Chou, T.K. Lee and C. M. Ho).

6. Supersolid phase in spin dimmer XXZ systems under magnetic field, Phys. Rev. Lett. 97, 127204 (2006), (K. K. Ng and T. K. Lee).
7. Low energy physical properties of high Tc superconducting Cu-oxides – a comparison between plain vanilla RVB theory and experiments, Phys. Rev. B73, 224513 (2006), (Kai-Yu Yang, C. T. Shih, C. P. Chou, S. M. Huang, T. K. Lee, T. Xiang and F. C. Zhang).
8. Spectra of the high Tc cuprates understood by variational studies of the t-J type models, J. Phys. & Chem. of Solids 67, 150-153 (2006) (T.K. Lee, C.T. Shih and C.M. Ho).
9. Numerical study of magnetic field induced ordering in BaCuSi2O6 and related systems, Phys. Rev. B73, 014433 (2006) (K. K. Ng and T. K. Lee).
10. Comparative analysis of specific heat of YNi2B2C using nodal and two-gap models, Phys. Rev. B73, 012502 (2006) (C. L. Huang, J.Y. Lin, C. P. Sun, T. K. Lee, J. D. Kim, E. M. Choi, S. I. Lee and H. D. Yang).

Leung, K.-t. (梁鈞泰)

1. Rotating states of self-propelling particles in two dimensions, H.-Y. Chen and K.-t. Leung, Phys. Rev. E. {\bf 73}, 056107 (2006).
2. Flocking states of self-propelling particles in free space, K.-t. Leung and H.-Y. Chen, Int. J. Mod. Phys. B (to appear, 2007).

Li, C.-L.(李翠莲)

1. M.-C. Wu, **C.-L. Li**, C.-K. Hu, Y.-C. Chang, Y.-H. Liaw, L.-W. Huang, C.-S. Chang, T.-T. Tsong, and T. Hsu, *Curvature effect on the surface diffusion of silver adatoms on carbon nanotubes*, submitted to Phys. Rev. B (2006), under review.

Li, Hsiang-Nan(李湘楠)

1. H.N. Li and S. Mishima (2006) Implication of the B -> rho rho data on the B -> pi pi puzzle. Phys. Rev. D73 (2006) 114014.
2. Y.Y. Charng, T. Kurimoto, H.N. Li (2006) Gluonic contribution to B -> \eta^{(\prime)} form factors. Phys. Rev. D74 (2006) 074024.
3. H.N. Li and S. Mishima (2006) Penguin-dominated B -> PV decays in NLO perturbative QCD. Phys. Rev. D74 (2006) 094020.
4. H.N. Li and S. Mishima (2006) Penguin pollution in the B^0 -> J/psi K_S

decay. To appear in JHEP.

5. H.N. Li (2006) Puzzles in B physics. Pramana 67 (2006) 755-762, Proceedings of the 9th Workshop on High Energy Physics Phenomenology (Bhubaneswar, Orissa, India, Jan. 3-14, 2006).

Li, Sai-Ping(李世炳)

1. C.I. Chou and S.P. Li, "Taming the Gerrymander: Statistical Physics Approach to Political Districting Problem", Physica A369(2006)299.
2. S.C. Wang et.al.,"Prediction of Bird Flu A(H5N1) Outbreaks in Taiwan by Online Auction: Experimental Results ", New Mathematics and Natural Computation 2(2006)271.
3. S.C. Wang et.al., "Statistical Properties of an experimental political futures market", (accepted for publication in Quantitative Finance, 2007).
4. S.P. Li,"Statistical Physics Approach to Districting Problems", (to be published in Int. J. Mod. Phys. B).
5. S.P. Li et.al.,"Spin Systems and Political Districting Problem", (to be published in Journal of Magnetism and Magnetic Materials).

Lin, Pao-An (林保安)

1. P. A . Lin, H. H. Hung, R.L.Lo, M. K. Wu, and C. C. Chi, LT24 conference proceeding volume 850,p477.(2006)
2. P. A. Lin, R. L. Lo, C. C. Chi, J. Appl. Phys. (99), p083506 (2006)

Lin, Simon C.(林誠謙)

1. Hurng-Chun Lee, Jean Salzemann, Nicolas Jacq, Hsin-Yen Chen, Li-Yung Ho, Ivan Merelli, Luciano Milanesi, Vincent Breton, Simon C. Lin, and Ying-Ta Wu, 2006 Grid-Enabled High-Throughput *In Silico* Screening Against Influenza A Neuraminidase.
2. Tsong-Ming Liaw, Ming-Chang Huang, Simon C. Lin, Feng-Yin Li, 2006 Partition functions and finite-size scalings of Ising model on helical tori. Physical Rev. E, Vol. 73, p. 055101.
3. Simon C. Lin, "Computing Infrastructure for Research in Asia", International ICFA Workshop on HEP Networking, Grid and Digital Divide Issues for Global e-Science, Krakow, Poland, 9 Oct. 2006.

4. Simon C. Lin, “High Energy Physics Computing in Taiwan”, Conference on Computational Physics Conference, Gyeongju, Korea, 29 Aug. 2006.
5. Simon C. Lin, “TWGrid：the Grid & e-Science Global Infrastructure in Taiwan”, OSG Consortium Meeting, Seattle, U.S.A., 22 Aug. 2006
6. Simon C. Lin, “Grid Activities in Taiwan”, International Conference on Computing in High Energy and Nuclear Physics, Mumbai, India, 16 Feb. 2006.

Liou,Yung(劉鏞)

1. T. –H. Chen, T. J. Wu, J. Y. Chen and Y. Liou, “Effects of metal-doped indium-tin-oxide buffer layers in organic light-emitting devices”, J. Appl. Phys. 99, 114515 (2006).
2. Y. –C. Chen, Y. D. Yao, S. F. Lee, Y. A. Lin, D. C. Chen and Y. Liou, “Current detection of vortex motion in patterned S-shape wires with constrictions”, J. Appl. Phys. 99, 08G306 (2006).
3. C. Yu, Y. S. Chen, Y. D. Yao, K. W. Cheng, S. F. Lee, K. T. Wu and Y. Liou, “Magnetization reversal study in submicron half-ring patterned wires with different corner structures”, J. Appl. Phys. 99, 08G309 (2006).
4. Y. S. Chen, K. W. Cheng, C. Yu, S. F. Lee, D. C. Chen. S. H. Wu, M. T. Lin, Y. Liou, K. T. Wu and Y. D. Yao, “Vortex domain wall depinning by polarized current in submicron half-ring wires”, J. Appl. Phys. 99, 08G516 (2006).
5. J. S. Chen, Y. R. Ma, Y. Liou and Y. D. Yao, “Investigation of tip-induced magnetic ripples on $La_{0.7}Sr_{0.3}MnO_3$ surface”, J. Appl. Phys. 99, 08B702 (2006).
6. Y. S. Chen, K. W. Cheng, C. Yu, S. F. Lee, Y. Liou, J. H. Hsu and Y. D. Yao, “Magnetic reversal for different shaped cornersin sub-micron half-ring wires by mean phase analyses magnetic force microscopy”, J. Mag. Mag. Mater. In press (2006).
7. D. H. Wei, K. L. You, Y. D. Yao, D. P. Chiang, Y. Liou,D. S. Chin and C. C. Yu, “Grain size refining and microstructure of FePt/MgO nanogranular thin films”, J. Mag. Mag. Mater. In press (2006).
8. D. H. Wei, K. L. You, Y. D. Yao, Y. Liou, T. S. Chin and C. C. Yu, “Magnetic properties of Fe/Pt films by symmetrical insertion of Ag”, J. Mag. Mag. Mater. 304, e78 (2006).
9. J. L. Tsai, D. C. Chen, T. Y. Chen, K. W. Cheng, Y. D. Yao, S. F. Lee and Y. Liou, “Controlled domain wall motion by current into patterned-U $Ni_{80}Fe_{20}$ wires”, J. Mag. Mag. Mater. 303, e192 (2006).
10. D. H. Wei, K. L. You, Y. D. Yao, Y. Liou, T. S. Chin and C. C. Yu, “Effects of SiO2 inserted layers on the structure and magnetic properties of Fe/Pt (001) films”.

J. Mag. Mag. Mater. 304, e231 (2006).
11. D. H. Wei, T. S. Chin, K. L. You, C. C. Yu, Y. Liou and Y. D. Yao, “Enhanced of L_{10} ordered FePt by Pt buffer layer”, J. Mag. Mag. Mater. 303, e265 (2006).

Lu,Chi-Ken(陸紀亙)

1. Chi-Ken Lu, Hsin-Fei Meng, and Pin Han, Population inversion in p-doped quantum well with reduced photon energy, Phys. Rev. B 74, 035328 (2006).
2. Chi-Ken Lu, Shu-Ting Pi, and Hsin-Fei Meng, Effect of defect-enhanced molecular oxygen adsorption on the imbalance of hole versus electron mobility in conjugated polymers, submitted to Physical Review Letters.
3. Chi-Ken Lu and Hsin-Fei Meng, Hole doping by molecular oxygen in organic semiconductors, submitted to Physical Review B.

Ng,K.-W. (吳建宏)

1. Constraints on the coupled quintessence from cosmic microwave background anisotropy and matter power spectrum, S. Lee, G.-C. Liu, and K.-W. Ng, Phys. Rev. D {\bf 73}, 083516 (2006).
2. Effect on cosmic microwave background polarization of coupling of quintessence to pseudoscalar formed from the electromagnetic field and its dual, S. Lee, G.-C. Liu, and K.-W. Ng, Phys. Rev. Lett. {\bf 97}, 161303 (2006).
3. Statistical properties of cosmic microwave background anisotropies, K.-W. Ng, in {\it Cosmic Polarization}, edited by R. Fabbri (Research Signpost, India, 2006).
4. Cosmological constant from gauge fields on extra dimensions, H.-T. Cho, C.-L. Ho, and K.-W. Ng, Phys. Lett. B in press.

Ng, Kwai Kong,(吳桂光)

1. K.K. Ng and T.K. Lee, Numerical study of magnetic field induced ordering in BaCuSi-2O6 and related systems, Phys. Rev. B, 73, 014433 (2006).
2. K.K. Ng and T.K. Lee, Supersolid phase in dimer XXZ model, condmat/0604570 (submitted to PRL).

Odagiri, K.(小田切宏輔)

1. K. Odagiri, "Regge-cascade hadronization" arXiv:hep-ph/0606315

Rao, Sistla Muralidhara （史牧笛)

1. Magnetic field effect on entropic disordering in spinel spin glass Ga0:8Fe0:2NiCrO$_4$, J. K. Srivastava, J. L. Dormann, S. M. Rao and W. Trutmann, Modern Physics Letters B, 19, (2005) 114.
2. Growth of big single crystals of a new magnetic superconducting double perovskites Ba2PrRu1-xCuxO6, S. M. Rao, M. K. Wu, J. K. Srivastava, B. H. Mok, T. W. Chou, C. Y. Lu, , M. C. Ling H. L Liu and Y. C. Liao, Cryst. Res. Technol. 41, (2006) 129.
3. Growth of single crystals of the new double perovskites $Ba_2HoRu_{1-x}Cu_xO_6$ from high temperature solutions, S.M. Rao, M.K. Wu, J.K. Srivastava, Y.H. Liu, N.Y. Yen, Y.C. Liao, Journal of Crystal Growth 290 (2006) 490–493.
4. Growth of big single crystals of $Sr_2YRu_{1-x}Cu_xO_6$ from high temperature solutions, S. M. Rao, M. K. Wu, J. K Srivastava, B. H. Mok, N. Y. Yen, H. Y. Lin, H. Y. Tang, M. C. Ling and H. L. Liu. Cryst. Res. Technol. 41, (2006) 859.
5. Optical properties of $Sr_2Y(Ru_{1-x}Cu_x)O_6$, H.L. Liu, J.L. Her, C.C. Chen, S.M. Rao, M.K. Wu, W.F. Hsueh, C.C. Chi, F.Z. Chien, Journal of Physics and Chemistry of Solids 67 (2006) 302.
6. Inelastic light scattering studies of single-crystalline $Sr_2YRu_{1-x}Cu_xO_6$ M. C. Ling, H. L. Liu, and S. M. Rao, Presented at the Physical Society of ROC annual meeting, Koushang, 2006.
7. Magnetic and superconducting properties of single crystals of $Sr_2HoRu_{1-x}Cu_xO_6$ grown from high temperature solutions" by S. M. Rao, M. K. Wu, J. K. Srivastava, K. J. Wang, Y. Y. Chen, C. B. Tsai, H. L. Liu, M. C. Ling, N. Y. Yen and D. C. Ling, Appl. Phys. Lett. 889 (2006) 232509.
8. The electronic structure of Ruthenium-based double perovskite single crystal studied by X-ray absorption spectroscopy, C. L. Chen, J. L. Chen, Y. S. Liu, C. L. Chang, M. K. Wu and S. M. D. Rao, to be presented at the Solid State Physics Symposium, Bhopal (India) Dec., 2006.
9. Magnetic and superconducting properties of single crystals of $Sr_2HoRu_{1-x}Cu_xO_6$ grown from high temperature solutions, S. M. Rao, M. K. Wu, J. K. Srivastava, K. J. Wang, Y. Y. Chen, C. B. Tsai, M. C. Ling, H. L. Liu, N. Y. Yen and Y. C. Liao, to be presented at the Solid State Physics Symposium, Bhopal (India) Dec., 2006.
10. Effect of Pb on the $Sr_2YRu_{1-x}Cu_xO_6$ crystals grown from PbO-PbF_2 solutions at high temperatures, S. M. Rao, M. K. Wu, K. J. Wang, N. Y. Yen, M. C. Ling, H. L. Liu and C. L. Chen (submitted).

Shiue,Jessie(薛韻馨)

1. J. Shiue, M. J. Matthewson, P. R. Stupak, and V.V. Rondinella, “Effects of silica nanoparticles addition in the secondary coating of dual-coated optical fiber”, Acta Mater. 54 2631-2636, (2006).

Su, W. B.(蘇維彬)

1. W. B. Su, S. M. Lu, H. T. Shih, C. L. Jiang, C. S. Chang, and Tien T. Tsong,"Manifestation of quantum size effect in transmission resonance" J. Phys. :Condens. Matter 18, 6299 (2006).
2. S. M. Lu, H. T. Shih, C. L. Jiang, W. B. Su, C. S. Chang, and Tien T. Tsong,"Determining the Film Thickness and Probing the Interface Structure with Characteristic Scanning Tunneling Spectroscopy" Chin. J. Phys. 44, 309 (2006).
3. W. B. Su, S. M. Lu, C. L. Jiang, H. T. Shih, C. S. Chang, and Tien T. Tsong,"Stark Shift of Transmission Resonance in Scanning Tunneling Spectroscopy" Phys. Rev. B 74, 155330 (2006).
4. H. W. Chang, F. T. Yuan, Y. D. Yao, W. Y. Cheng, W. B. Su, C. S. Chang, C. W. Lee, W. C. Cheng, " Step edge growth of Co nanoislands on Cu(111) surface" J. Appl. Phys. 100, 084304 (2006).
5. W. B. Su, S. M. Lu, C. L. Lin, H. T. Shih, C. L. Jiang, C. S. Chang, and Tien T. Tsong, "Information about electron transmission superposing with Gundlach oscillation in scanning tunneling spectroscopy" Phys. Rev. B (submitted).
6. S. M Lu, M. C. Yang, W. B. Su, C. L. Jiang, C. S. Chang, and Tien T. Tsong, "Strength modulation of quantum-well states in Pb islands with periodic distortions on Si(111)" Phys. Rev. B (submitted).

Teng, Ping-Kun（鄧炳坤）

1. The CDF Collaboration, Measurement of the tt-bar Production Cross Section in p anti-p Collisions at s**(1/2) = 1.96 TeV, Phys. Rev. Lett. 97, 082004 (2006).
2. The CDF Collaboration, Search for a Neutral Higgs Boson Decaying to a W Boson Pair in p anti-p Collisions at s**(1/2) = 1.96 TeV, Phys. Rev. Lett. 97, 081802 (2006).
3. The CDF Collaboration, Search for Z' --> e+ e- Using Dielectron Mass and Angular Distribution, Phys. Rev. Lett. 96, 211801 (2006)
4. The CDF Collaboration, Top Quark Mass Measurement from Dilepton Events at CDF II, Phys. Rev. Lett. 96, 152002 (2006).
5. The CDF Collaboration, Measurement of the Di-pion Mass Spectrum in X(3872) --> j/psi pi++ pi+- Decays, Phys. Rev. Lett. 96, 102002 (2006).

6. The CDF Collaboration, Search for Charged Higgs Bosons from Top Quark Decays in p anti-p Collisions at s**(1/2) = 1.96 TeV, Phys. Rev. Lett. 96, 042003 (2006).
7. The CDF Collaboration, Precision Top Quark Mass Measurement in the Lepton + Jets Topology in ppbar Collisions at sqrt s = 1.96 TeV, Phys. Rev. Lett. 96, 022004 (2006).
8. The CDF Collaboration, Measurement of the Top Quark Mass with the Dynamical Likelihood Method using Lepton plus Jets Events with b-tags in ppbar Collisions at sqrt s = 1.96 TeV, Phys. Rev. D 73, 092002 (2006).
9. The CDF Collaboration, Search for Anomalous Decay of Heavy Flavor Hadrons Produced in Association with a W Boson at CDF II , Phys. Rev. D 73, 051101 (2006).
10. The CDF Collaboration, Top Quark Mass Measurement Using the Template Method in the Lepton + Jets Channel at CDF II, Phys. Rev. D 72, 032003 (2006).

Teraguchi, Shunsuke (寺口俊介)

1. "Reformulation of Boundary String Field Theory in terms of Boundary State." Shunsuke Teraguchi (Taiwan, Inst. Phys.) . Oct 2006. 13pp. e-Print Archive: hep-th/0610171
2. "Drag force, jet quenching, and AdS/QCD." Eiji Nakano (Taiwan, Natl. Taiwan U.) , Shunsuke Teraguchi (Taiwan, Inst. Phys.) , Wen-Yu Wen (Taiwan, Natl. Taiwan U.) . Aug 2006. 12pp.e-Print Archive: hep-ph/0608274
3. "Twist field as three string interaction vertex in light cone string" field theory. Isao Kishimoto (KEK, Tsukuba) , Sanefumi Moriyama (Nagoya U.) , Shunsuke Teraguchi (NCTS, Taipei) . KEK-TH-1075, Mar 2006. 19pp. Published in Nucl.Phys.B744:221-237,2006. e-Print Archive: hep-th/0603068

Tseng, Chung-Yi(曾忠一)

1. 曾忠一: 大氣科學中的反問題. 國立編譯館主編出版, 全二冊, 1288 頁, 2006 年 4 月.

Tsong , Tien T. (鄭天佐)

1. R-L Lo, C-M Chang, I-S Hwang and T. T. Tsong, "Observation of Single Oxygen Atoms Decomposed from Water Molecules on a Si(111)-7x7 Surface", Phys. Rev. B**73**, 075427-1-6 (2006).

2. E. Rokuta, T. Itagaki, T. Ishikawa, B. L. Cho, H. S. Kuo, T. T. Tsong and C. Oshima, “Single-Atom Coherent Field Electron Emitters for Practical Electron Microscopy: Buildup Controllability, Self-Repairing Function and Demountable Charateristic”, Appl. Surf. Sci. **252**, 3686-3691 (2006).
3. M. S. Ho, C. C. Su and T. T. Tsong, “Dynamical Study of Single Silver Atoms on Si(111)-7x7 Surfaces”, Jpn J. Appl. Phys. Part 1, **45**, 2382-2385 (2006).
4. I-S Hwang and T. T. Tsong, “Comment on ‘Direct Identification of Critical Clusters in Chemical Vapor Deposition’”, Phys. Rev. Lett. **97**, 089601 (2006).
5. Y-P Chiu, L-W Huang, C-M Wei, C-S Chang and T. T. Tsong, “Magic Number of Atoms in Surface Supported Planar Clusters”, Phys. Rev. Lett. **97**, 165504 1-4 (2006).
6. M-C Wu, C-L Li, C-K Hu, Y-C Chang, Y-H Liaw, L-W Huang, C-S Chang, T. T. Tsong and T. Hsu “Curvature Effect on the Surface Diffusion of Silver Adatoms on Carbon Nanotubes: Deposition Experiments and Numerical Simulations”, Phys. Rev. B **74**, 125424 1-8 (2006).
7. H-S Kuo, I-S Hwang, T-Y Fu, Y-C Lin, C-C Chang and T. T. Tsong, “Noble Metal/W(111) Single Atom Tips and Their Field Electron and Ion Emission Characteristics”, Jpn J. Appl. Phys. **45**, 8972-8983 (2006).
8. T. T. Tsong, “Fifty Years of Seeing Atoms”, Physics Today **59**, 31-37 (March, 2006).

Tsong, Tian Yow (鄭天佑)

1. Rozenbaum, V. M., Yang, D.-Y., Lin, S. H. and Tsong, T. Y. (2006). Energy Losses in A Flashing Ratchet with Different Potential Well Shape. Physica A. 363, 211-216.
2. Makhnovskii, Y. A., Rozenbaum, V. M., Yang, D.-Y., Lin, S. H. and Tsong, T. Y. (2006). Reciprocating Nanoengine. Eur. Phys. J. B. 52, 501-505.
3. Tomita, M., Fukuda, T., Ozu, A., Kimura, K. I., Tsong, T. Y. And Yoshimura, T. (2006). Antigen-Based Immunofluorescence Analysis of B-Cell Targeting: Advanced Technology for the Generation of Novel Monoclonal Antibodies with High Efficiency and Selectivity. Hybridoma. 25, 283-292.
4. Tsong, T. Y. and Chang, C. H. (2007). A Markovian Engine for Biological Energy Transducer: The Catalytic Wheel. BioSystems. In press.
5. Hu, H.-Y., Wu, M.-C., Fang, H.-T., Forrest, M. D., Hu, C.-K., Tsong, T.Y. and Chen, H.-M. (XXXX). The Role of Tryptophan in Staphylococcal Nuclease Stability. Submitted.

6. Chang, C. H. and Tsong, T. Y. (XXXX). A Two-State Protein Oscillator for Biological Signal Sensing and Energy Transduction by Brownian Ratchet Mechanism. Submitted.

Wei, Zheng-Tao(魏正濤)

1. Factorization and polarization in two charmed-meson B decays, Chuan-Hung Chen, Chao-Qiang Geng and Zheng-Tao Wei, Eur.Phys.J.C46:367-377, 2006.

Wong, Henry Tsz-King (王子敬)

1. " Measurement of the Intrinsic Radiopurity of ^{137}Cs /^{235}U / ^{238}U / ^{232}Th in CsI(Tl) Crystal Scintillators" ,Y.F.~Zhu et al., TEXONO Coll., Nucl. Instrum. Methods {\bf A 557}, 490 (2006).
2. "The TEXONO Research Program in Low Energy Neutrino and Astroparticle Physics" ,V. Singh and H.T. Wong, Phys. Atom. Nucl. {\bf 69},1956 (2006).
3. "Research Program towards Observation of Neutrino-Nucleus Coherent Scattering" , H.T. Wong et al., J. Phys. Conf. Series {\bf 39}, 266 (2006).
4. "Neutrino Physics and Astrophysics: Highlights" ,H.T.~Wong,hep-ex/0510001, and in {\it Procs. of On Frontiers of Basic Science: Towards New Physics, Hanoi, Vietnam, 2005},74 (2006).
5. "Search of Neutrino Magnetic Moments with a High-Purity Germanium Detector at the Kuo-Sheng Nuclear Power Station" , H.T.~Wong et al., TEXONO Coll., Phys. Rev. {\bf D}, in press (2007).
6. "Observation of Fluorescence Emissionsfrom Single-Bubble Sonoluminescence in Dilute Sulphuric Acid doped with Quinine" , J.Q.~Lu et al., physics/0509031, Ultrasonics, in press (2007).
7. "Measurement of Trace ^{129}I Concentrations in CsI Powder and Organic Liquid Scintillator with Accelerator Mass Spectrometry" , K.J.~Dong et al., nucl-ex/0512003,Nucl. Instrum. Methods {\bf B}, in press (2007).
8. "Search of Axions at the Kuo-Sheng Nuclear Power Station with a High-Purity Germanium Detector" , H.M.~Chang et al., TEXONO Coll., hep-ex/0609001,submitted to Phys. Rev. D (2007).

Wu, Ming-Chya(吳明佳）

1. **M.-C. Wu**, M.-C. Huang, H.-C. Yu, and T. C. Chiang, *Phase distribution and phase correlation of financial time series*, Phys. Rev. E 73, 016118 (2006).

2. N. Sh. Izmailian, K. B. Oganesyan, **M.-C. Wu**, and C.-K. Hu, *Finite-size corrections and scaling for the triangular lattice dimer model with periodic boundary conditions*, Phys. Rev. E 73, 016128 (2006).
3. **M.-C. Wu**, *Exact finite-size scaling functions for the interfacial tensions of the Ising model on planar lattices*, Phys. Rev. E 73, 046135 (2006).
4. **M.-C. Wu** and C.-K. Hu, *Empirical mode decomposition and synchrogram approach to cardiorespiratory synchronization*, Phys. Rev. E 73, 051917 (2006).
5. **M.-C. Wu**, C.-L. Li, C.-K. Hu, Y.-C. Chang, Y.-H. Liaw, L.-W. Huang, C.-S. Chang, T.-T. Tsong, and T. Hsu, *Curvature effect on the surface diffusion of silver adatoms on carbon nanotubes: Deposition experiments and numerical simulations*, Phys. Rev. B 74, 125424(2006).
6. **M.-C. Wu**, *Phase correlation of foreign exchange time series*, Physica A 375, 633-642 (2007).
7. **M.-C. Wu**, *Phase statistics approach to time series analysis*, J. Korean Phys. Soc. 50, (2007), in press.
8. **M.-C. Wu**, M. S. Li, M. Kouza, W.-J. Ma, and C.-K. Hu, *A new geometrical constraint on native protein structures*, PROTEINS: Structure, Function, and Bioinformatics, submitted for publication (2006).
9. H.-Y. Hu, **M.-C. Wu**, H.-J. Fang, M. D. Forrest, C.-K. Hu, T.-Y. Tsong, and H.-M. Chen, *The role of tryptophan in staphylococcal nuclease stability*, Biophys. J., submitted for publication (2006).
10. J. Busa, E. Hayryan, S. Hayryan, C.-K. Hu, J. Skrivanek, and **M.-C. Wu**, *Cavities enveloping triangulation and its applications*, J. Comp. Chem., submitted for publication (2006).
11. T. C. Chiang, H.-C. Yu, and **M.-C. Wu**, *Statistical Properties, Dynamic Conditional Correlation, Scaling Analysis of High Frequency Intraday Stock Returns: Evidence from Dow-Jones and NASDAQ Indices*, Quantitative Finance, under review.
12. **M.-C. Wu**, C.-K. Hu, H.-M. Chen, and T.-Y. Tsong, *Local hydrophobicity in protein folding: Theoretical model and experimental test with staphylococcal nuclease and its mutants*, preprint.

Wu. M. K.(吳茂昆)

1. Chen SY, Chen IG, **Wu MK**, 2006, “Effects of nano scale Y2O3 additions on Sm-Ba-Cu-O materials”, JAPANESE JOURNAL OF APPLIED PHYSICS PART 1-REGULAR PAPERS BRIEF COMMUNICATIONS & REVIEW PAPERS 45 (11): 8662-8665 NOV

2. Rao SM, **Wu MK**, Srivastava JK, Mok BH, Yen NY, Lin HY, Tang HY, Ling MC, Liu HL, "Growth of big single crystals of Sr2YRu1-xCuxO6 from high temperature solutions", CRYSTAL RESEARCH AND TECHNOLOGY 41 (9): 859-864 SEP
3. Tang HY, Lin HY, Wang MJ, Liao MY, Hsu FC, Mok BH, Liu JL, Beasley MT, Sheu HS, **Wu MK**, 2006, " Low temperature synthesis of bilayer hydrated cesium cobalt oxide", JOURNAL OF SOLID STATE CHEMISTRY 179 (8): 2728-2731 AUG
4. Chen SY, Liao YC, Chen IG, **Wu MK**, 2006, "Concentration effect on high field pinning and transport behaviors in nano-Y2BaCuO5 doped Sm-Ba-Cu-O superconductor" JOURNAL OF APPLIED PHYSICS 99 (8): Art. No. 08M508 APR 15
5. Rao SM, **Wu MK**, Srivastava JK, Liu YH, Yen NY, Liao YC, 2006, " Growth of single crystals of the new double perovskite Ba2HoRu1-xCuxO6 from high temperature solutions" JOURNAL OF CRYSTAL GROWTH 290 (2): 490-493 MAY 1
6. Liu HL, Her JL, Chen CC, Rao SM, **Wu MK**, Hsueh WF, Chi CC, Chien FZ, 2006, "Optical properties of Sr2Y(Ru1-xCux)O-6 ", JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS 67 (1-3): 302-304 JAN-MAR 2006
7. Rao SM, **Wu MK**, Srivastava JK, Mok BH, Chou TW, Lu CY, Ling MC, Liu HL, Liao YC, 2006, "Growth of big single crystals of a new magnetic superconducting double perovskite Ba2PrRu1-xCuxO6", CRYSTAL RESEARCH AND TECHNOLOGY 41 (2): 123-129.
8. S. M. Rao, K. J. Wang, N. Y. Yen, Y. Y. Chen, C. B. Tsai, and S. Neeleshwar,M. K. Wu, J. K. Srivastava, M. C. Ling and H. L. Liu, D. C. Ling, 2006, "Magnetic and superconducting properties of single crystals of Sr2HoRu1−xCuxO6 grown from high temperature solutions", APPLIED PHYSICS LETTERS 89, 232509 2006

Yao, Y. D.(姚永德)

1. Effect of substitution of refractory elements for Fe on the magnetic properties of melt-spun $Pr_{9.5}Fe_{80.5}B_{10}$ nanocomposites, H. W. Chang, C. H. Chiu, C. W. Chang, C. H. Chen, W. C. Chang, Y. D. Yao, and A. C. Sun, J. Alloys Comp. **407**, 53 (2006).
2. Magnetic and electrical properties of amorphous CoFeB films, S. U. Jen, Y. D. Yao, Y. T. Chen, J. M. Wu, C. C. Lee, T. L. Tsai, and Y. C. Chang, J. Appl. Phys. **99**, 053701 (2006).
3. Microscopic interfacial structures and magnetic properties of ultrathin Co/Si(111) films, J. S. Tsay, T. Y. Fu, M. H. Lin, C. S. Yang, and Y. D. Yao, Appl. Phys. Lett. **88**, 102506 (2006).

4. Magnetic properties of face-centered cubic Co films, Y. T. Chen, S. U. Jen, Y. D.Yao, J. M. Wu, C. C. Lee, and A. C. Sun, IEEE Trans. Magn. **42**, 278 (2006).392. Interfacial effects on magnetostriction of CoFeB/AlO_x/Co junction, Y. T. Chen, S. U. Jen, Y. D. Yao, J. M. Wu, and A. C. Sun, Appl. Phys. Lett. **88**, 222509 (2006).
5. Magnetic properties and microstructure of TbFeCoAg amorphous thin films, C. Y. Chou, P. C. Kuo, Y. D. Yao, Y. H. Fang, N. W. Cheng, S. C. Chen, and A. C. Sun, Jap. J. Appl. Phys. **45**, 4021 (2006).
6. Effect of Ti substitution on the magnetic properties, microstructure, and aftereffect of melt spun PrFeB nanocomposites, H. W. Chang, C. H. Chiu, C. W. Chang, W. C. Chang, A. C. Sun, and Y. D. Yao, Scrip. Mater. **55**, 529 (2006).
7. Perovskite nanoparticles: Preparation by reactive milling and magnetic Characteristics, N.X. Phuc, H. M. Nguyen, D.H. Manh, L.T. Hung, L.T.C. Tuong, L.V. Hong, Y. D. Yao, J. Magn. Magn. Mater. **304**, 133 (2006).
8. Magnetization reversal and microstructure of $[(Nd_2Fe_{14}B)_x/Nb]_n$ films, J. L. Tsai, T. S. Chin, Y. D. Yao, and H. Kronmuller, J. Appl. Phys. **99**, 053901 (2006).
9. Effects of an Os layer on the magnetic properties of CoFe/IrMn, T. Y. Peng, C. K.Lo, S. Y. Chen, and Y. D. Yao, J. Appl. Phys. **99**, 08C907 (2006).
10. Impedance behavior of spin-valve transistor, T. Y. Peng, S. Y. Chen, L. C. Hsieh, C. K. Lo, Y. W. Huang, W. C. Chien, and Y. D. Yao, J. Appl. Phys. **99**, 08H710 (2006).
11. Analysis of the performance of permanent magnetic stepping motor with trapezoid stator tooth, C. P. Liu, Y. C. Li, K. H. Liu, K. T. Wu, and Y. D. Yao, J. Appl. Phys. **99**, 08R316 (2006).
12. Development of micromagnetic bearing motors with suppressed magnetic coupling effect for small form factor optical drives, C. C. Wang, Y. D. Yao, and S. J. Wang, J. Appl. Phys. **99**, 08R302 (2006).
13. Analysis of diffusive interface resistance for measurements with perpendicular current in Fe/Nb multilayers, S. Y. Huang, S. F. Lee and C. Y. Yu, S. Y. Hsu,and Y. D. Yao, J. Appl. Phys. **99**, 08M507 (2006).
14. Investigation of tip-induced magnetic ripples on $La_{0.7}Sr_{0.3}MnO_3$ surface, J. S.Chen, Y. R. Ma, Y. Liou, and Y. D. Yao, J. Appl. Phys. **99**, 08B702 (2006).
15. Improvement of energy product in exchange coupled $Fe_{49-x}Co_xPt_{51}$ (x=0.0,0.7,1.3,2.2) thin films, F. T. Yuan, S. N. Hsiao, W. M. Liao, S. K. Chen Y. D. Yao, J. Appl Phys. **99**, 08E915 (2006).
16. Current detection of vortex motion in patterned S-shape wires with constrictions Y. C. Chen, Y. D. Yao, S. F. Lee, Y.A. Lin, D. C. Chen, and Y. Liou, J. Appl. Phys., **99**, 08G306 (2006).
17. Magnetization reversal study in submicron half-ring patterned wires with differentcorner structures, C. Yu, Y. S. Chen, Y. D. Yao, K. W. Cheng, S. F. Lee, K. T. Wu, and Y. Liou, J. Appl. Phys. **99**, 08G309 (2006).
18. Vortex domain wall depinning by polarized current in submicron half-ring wires, Y. S. Chen, K. W. Cheng, C. Yu, S. F. Lee, D. C. Chen, S. H. Wu, M. T. Lin, Y.Liou, K. T. Wu, and Y. D. Yao, J. Appl. Phys. **99**, 08G516 (2006).
19. Magnetic properties of ultrathin Co/Ge(111) film with oxygen surfactant, H. W.Chang, J. S. Tsay, Y. L. Chiou, K. T. Huang, W. Y. Chan, and Y. D. Yao, J. Appl. Phys. **99**, 08J705 (2006).
20. Microfabrication and magnetoelectric properties of amorphous magnetic-tunnel-

junctions with Co–Fe–B/Al–O/Co–Fe–B hardcore structure, X.F. Han, X.Q.Zhang, Z.M. Zeng, F.F. Li, L.X. Jiang, R. Sharif, Y.D. Yao, J. Magn. Magn. Mater. **304**, 83 (2006).
21. Magnetoresistance study and interlayer coupling of CoFe/Os/CoFe thin films S.Y. Chen, Y.D. Yao, and J.M. Wu, J. Magn. Magn. Mater. **304**, e37 (2006).
22. Quantitative analysis of magnetization reversal in patterned strip wire by magnetic force microscopy, D.C. Chen, D.P. Chiang, Y.D. Yao, J. Magn. Magn. Mater. **304**, 23 (2006).
23. Epitaxial layer of MgO (0 0 1) grown on Si(0 0 1)wafer by e-beam evaporationM.D. Lee, C.K. Lo, T.Y. Peng, K.L. Yau, S.Y. Chen, Y.D. Yao, J. Magn. Magn. Mater. **304**, e44 (2006).
24. The effect of Os interlayers on the thermal stability of magnetic CoFe/OsMn filmsT. Y. Peng, C.K. Lo, S. Y. Chen, and Y.D. Yao, J. Magn. Magn. Mater. **304**, e50 (2006).
25. Compositional determination of oxygen-exposed Co/Ge(1 1 1) film: Surfactant Effect, C.W. Lai, Y.L. Chiou, H.W. Chang, W.Y. Chan, K.J. Hwang, J.S. Tsay, and Y. D. Yao, J. Magn. Magn. Mater. **304**, e75 (2006)
26. Magnetic properties of Fe/Pt films by symmetrical insertion of Ag, D. H. Wei, K.L. You, Y.D. Yao, Y. Liou, T.S. Chin, C.C. Yu, J. Magn. Magn. Mater. **304**, e78 (2006).
27. Microstructure and morphology of MgO thin film with different magnetic underlayers, C.Y. Chou, Y.D. Yao, P.C. Kuo, K.W. Cheng, C. Yu, J. Magn. Magn. **304**, e103 (2006).
28. Effects of SiO2 inserted layers on the Structure and magnetic properties of FePt (001) films, D.H. Wei, K.L. You, Y.D. Yao, Y. Liou, T.S. Chin, C.C. Yu, J. Magn. Magn. Mater. **304**, e231 (2006).
29. Conjugation of g-Fe2O3 nanoparticles with single strand oligonucleotides C.W. Lee, K.T. Huang, P.K. Wei, Y.D. Yao,_J. Magn. Magn. Mater. **304**, e412 (2006).
30. Magnetic, structural and electrical properties of ordered and disordered Co50Fe50 films, Y.T. Chen, S.U. Jen, Y.D. Yao, J.M. Wu, G.H. Hwang, T. L. Tsai, Y. C. Chang, and A.C. Sun, J. Magn. Magn. Mater. **304**, e71 (2006)
31. Magneto-current study in a silicon base spin valve transistor, L. C. Hsieh, Y. W.Huang, C.K. Lo, Y.D. Yao, and D.R. Huang, J. Magn. Magn. Mater. **304**, e270 (2006).
32. Spin-valve transistor with a NP junction, Y.W. Huang, C.K. Lo, and Y.D. Yao, J. Magn. Magn. Mater. **304**, e279 (2006).
33. High-temperature magnetoresistance study of a magnetic tunnel junction, D. C. Chen, Y.D. Yao, C.M. Chen, J. Hung, Y. S. Chen, W.H. Wang, W. C. Chen, and M.J. Kao, J. Magn. Magn. Mater. **304**, e297 (2006).
34. Microstructure and magnetic properties of Co/Os/Co and Fe/Os/Fe thin films, C.Y. Chou, Y. D. Yao, P.C. Kuo, S.F. Lee, and J.J. Chou, J. Magn. Magn. Mater. **304**, e349 (2006).
35. Magnetic properties of large-area one-dimensional WO2 and MoO2 nanorods Y. R. Ma, C. C. Tsai, S. F. Lee, K. W. Cheng, Y. Liou, and Y. D. Yao, J. Magn. Magn. Mater. **304**, e13 (2006).
36. Effect of oxygen exposure on the magnetic properties of ultrathin Co/Ge(1 1 1) films, J.S. Tsay, H.W. Chang, Y.L. Chiou, K.T. Huang, W.Y. Chan, Y.D. Yao, J. Magn. Magn. Mater. **304**, e68 (2006).
37. Properties of superconductivity for decoupled ferromagnet/superconductor trilayers and multilayers in Fe/Nb system, S.Y. Huang, S.F. Lee, J. J. Liang, C. Y

Yu. K. L. You, T. W. Chiang, S.Y. Hsu, and Y.D. Yao, J. Magn. Magn. Mater. **304**, 81 (2006).

38. Buffer effects of Ag layers on magneto-optical Co/Ge(1 0 0) ultrathin films C.W. Su, J. S. Tsay, Y.D. Yao, J. Magn. Magn. Mater. **304**, e41 (2006).
39. Microwave switching behaviors of Fe/Ag/Fe/Ag epitaxial films, D. S. Hung, C. S. Tsai, C. C. Yu, Y. Liou, S. F. Lee, P. C. Chiang, C. S. Ho, Y. D. Yao, J. Magn. Magn. Mater. **304**, e118 (2006).
40. Influences of the interfacial state between Co and a Si substrate on the magnetic properties of Co/Si(1 1 1) films, T.Y. Fu, J.S. Tsay, M.H. Lin, Y.D. Yao, J. Magn. Magn. Mater. **304**, e128 (2006).
41. Magnetic properties and phase evolution of direct-quenched (Co40Fe22Nb6Zr2 B30)98M2 (M=Cr, Cu, Sn, Dy, Pr, and Ta) ribbons with crystallization treatmentsC. Hsu, J. K. Nieh, H. W. Chang, C.M. Tseng, W.C. Chang, and Y. D. Yao, J. Magn. Magn. Mater. **304**, e210 (2006).
42. Comparison on the phase evolution and magnetic properties of direct-quenched Pr8.5Fe79.5M2B10 (M=Cr, Nb, Ti, V, and Zr) ribbons, H. W. Chang, C. H. chiu, C.W. Chang, C.H. Chen, W.C. Chang, A.C. Sun, and Y.D. Yao, J. Magn. Magn. Mater. **304**, e216 (2006).
43. Magnetoresistance and domain wall motion in horseshoe Ni80Fe20 wires, J. L. Tsai, T.Y. Chen, K. W. Cheng, S. F. Lee, and Y.D. Yao, J. Magn. Magn. Mater. **304**, e328 (2006).
44. Low-temperature electrical resistivity study of deformed Inconel alloy 600, F. S.Chan, Y. D. Yao, and S. H. Wang, J. Magn. Magn. Mater. **304**, e464 (2006).
45. Microwave-induced combustion synthesis of Li0.5Fe2.5−*x*Al*x*O4 powder and their characterization, Y. P. Fu, Y. D. Yao, and C. S. Hsu, J. Alloys & Comp. **421**, 136 (2006).
46. Micro-Magnetic Suspension Motor Design for Miniature Optical Drive, C. C. Wang, Y. D. Yao, C. S. Liu and L. Y. Cheng, Jap. J. Appl. Phys. **45**, 5801 (2006).
47. High-field magnetization process in novel TbFeCo/YFeCo magnetostrictive spring magnet type multilayers, N. H. Duc, D. T. H. Giang, V. N. Thuc, Y. D. Yao, J. Alloys & Comp. **408**, 37 (2006).
48. Grain size refining and microstructure of FePt/MgO nanogranular thin films, D. H. Wei, K. L. You, Y. D. Yao, D. P. Chiang, Y. Liou, T. S. Chin, and C. C. Yu, J. Magn. Magn. Mater. in press (2006)
49. Characterization of a Nano-Oxide Layer in a Pseudo Spin Valve by Complex Magneto-Impedance Spectroscopy, W. C. Chien, T. Y. Peng, L. C. Hsieh, C. K. Lo, and Y. D. Yao, IEEE Trans. Magn. **42**, 2624 (2006).
50. The exchange-biasing in the Si(100)/Ta/Co/IrMn/Ta system, Y. T. Chen, S. U. Jen, Y.D.Yao, and J.M. Wu, J. Magn. Magn. Mater. in press (2006).
51. Microstructure and magnetoresistance of MgO thin film with CoFeB and CoFeC underlayers, C. Y. Chou, Y. D. Yao, P. C. Kuo, K. W. Cheng, C. Yu, J. Magn. Magn. Mater. in press (2006).
52. High Frequency Impedance Inverse in MTJ Junction, L. C. Hsieh, Y. W. Huang, X. F. Han, Z. M. Zeng, W. C. Chien, T. Y. Peng, C. K. Lo, and Y. D.Yao, J. Magn. Magn. Mater. in press (2006).
53. Enhancement and inverse behaviors of magneto impedance in a magneto tunneling junction by driving frequency, W. C. Chien, C. K. Lo, L. C. Hsieh, Y. D. Yao, X. F. Han, Z. M. Zeng, T. Y. Peng, and P. Lin, Appl. Phys. Lett. **89**,

202515 (2006).

54. Impedance Study in Ta(0.6nm)/NOL/Co(3nm)/Cu(5nm)/Co(1nm)/NiFe(3 nm)/ substrate Pseudo Spin Valve, W. C. Chien, L. C. Hsieh, T. Y. Peng, C. K. Lo, and Y. D. Yao, J. Magn. Magn. Mater. in press (2006).
55. Step edge growth of Co nanoislands on Cu(111) surface, H. W. Chang, F.T. Yuan, Y.D. Yao, W.Y. Cheng, W.B. Su, C.S. Chang, C.W. Lee, and W.C. Cheng, J. Appl. Phys. **100**, 084304 (2006).
56. Magnetic instability and oxygen deficiency in Na-doped $TbMnO_3$, C. C. Yang, M. K. Chung, W. H. Li, T. S. Chan, R. S. Liu, Y. H. Lien, C. Y. Huang, Y. Y. Chen, Y. D. Yao, and J. W. Lynn, Phys. Rev. B accepted (2006).
57. Magnetoresistance and interlayer coupling studies in FePt/Os/FePt thin films, S. Y. Chen, Y. D. Yao, and J. M. Wu, J. Magn. Magn. Mater. in press (2006).
58. Coercivity enhancement of ultrathin Co/Ge(111) films by Co/O interfacial Anisotropy, H. W. Chang, J. S. Tsay, Y. L. Chiou, K. T. Huang, W. Y. Chan, and Y. D. Yao, J. Magn. Magn. Mater. in press (2006).
59. Performance of Claw-Poled PM stepping motor, C. P. Liu, G. R. Jeng, W. C. Chen, M. C. Tsai, K. T. Wu, and Y. D. Yao, J. Magn. Magn. Mater. in press (2006).
60. Effect of Oxygen Concentration on Characteristics of NiO_x based Resistance Random Access Memory, M. D. Lee, C. H. Ho, C. K. Lo, T. Y. Peng, and Y. D. Yao, IEEE Tran. Magn., accepted (2006).
61. Observation of Effective Permittivity of Water-dispersible FePt Nanoparticles atMicrowave Frequencies, D. S. Hung, P. C. Chiang , L. W. Wang, C. S. Ho, and Y. D.Yao, IEEE Tran. Magn., accepted (2006).
62. Effect of an Os buffer layer on structure and exchange bias properties of CoFe/IrMn fabricated on Si(100) and Si(111) substrate, T. Y. Peng, C. K. Lo, S. W. Chen, and Y. D. Yao, IEEE Tran. Magn., accepted (2006).
63. Ordering Enhancement of FePt Thin Films by Introducing Mo layers, S. N. Hsiao S. K. Chen, F. T. Yuan, H. W. Huang, C. W. Hsu, Y. D. Yao, and H. Y. Lee, IEEE Tran. Magn., accepted (2006).
64. The straining effect on tunneling resistance of $C0/AlO_x/Co/IrMn$ junctions, S. U. Jen, Y. T. Chen, J. M. Wu, W. C. Chen, W. C. Cheng, and Y. D. Yao, Appl. Phys. Lett., 89, 222510 (2006).

Yip, Sungkit (葉崇傑)

1. C.-H. Cheng and S. K. Yip, “Pairing Symmetry in the anisotropic Fermi superfluid under a p-wave Feshbach resonance”, Phys. Rev. B, 73, 064517 (2006)
2. C. H. Pao, S. T. Wu and S. K. Yip, "Superfluid Stability in BEC-BCS cross-over", Phys. Rev. B, 73, 132506 (2006)
3. C. H. Pao and S. K. Yip, “Asymmetric Superfluid in a Harmonic Trap”, J. Phys.: Condens. Matt. 18, 5567 (2006)
4. T. Isoshima and S. K. Yip, “Effect of Quadratic Zeeman Energy on the Vortex of Spinor Bose-Einstein Condensates”, J. Phys. Soc. Japan, 75, 074605 (2006)

Yu ,Yueh-Chung(余岳仲)

1. Y.C. Yu, J.Y. Hsu, J.H. Liang, and K.M. Chen, 2006, “Energy loss straggling of energetic ^{3}He and ^{6}Li ions into polymer foils”, Nucl. Instr. Meth in Phys. Research B249, 47-50. (SCI)
2. H. Chou, S.J. Sun, M.N. Ou, T.C. Wu, H.L. Kao, G.L. Huang, L. Horng, C.C. Chi, D.C. Yan, ,M.T. Hong, and Y.C. Yu, 2006, “ Anisotropic magnetoresistance and magnetic properties in $La_{0.67}Ca_{0.33}MnO_3$ thin films by RF sputtering”, Thin Solid Film 515, 2567-2572.
3. Y.C. Yu, C.H. Chen, H. Niu, J.Y. Hsu and T.N. Yang, 2006, “Crystal-ion-slicing lithium niobate film performing by 250 keV ^{4}He ion implantation,” to be published in Nucl. Instr. Meth in Phys. Research B.
4. J.Y. Hsu, J.H. Liang, Y.C. Yu, and K.M. Chen, 2006, “Stopping forces of ^{3}He and ^{6}Li ions with MeV energies in polycarbonate, polyethylene terephthalate, and polypropylene foils,” to be published in Nucl. Instr. Meth in Phys. Research B.
5. Y.C. Yu, J.Y. Hsu, and K.M. Chen, 2006, “Energy loss of ^{14}N, ^{31}P, and ^{75}As with MeV energies in polycarbonate and polyethylene terephthalate,” submitted to Nucl. Instr. Meth in Phys. Research B.
6. J.Y. Hsu, Y.C. Yu, and K.M. Chen, 2006, “The stopping forces of small cluster-ions of Li, B and C with MeV energies in carbon foils,” submitted to Nucl. Instr. Meth in Phys. Research B.
7. C.H. Chen, H. Niu, C.Y. Cheng, H.H. Hsieh, Y.C. Yu and S.C. Wu, 2006, “Local structure of Mn implanted in gallium arsenide”, submitted to Nucl. Instr. Meth in Phys. Research B.
8. F.L. Wen, Y.-L. Lo and Y.C. Yu, 2006, “The Surface Modification of SKD-61 Steel by Ion Implantation Technique”, submitted to J. Vac. Sci. Technol. B.

Zhao,Jiawei (趙家偉)

1. L3 合作組, 2006, Measurement of the Mass and Width of the W boson at LEP, European Physical Journal C, Vol.45, 569-587
2. COMPASS 合作組，2006， Gluon polarization in the nucleon from quasi-real photoproduction of high-pT hadron pairs, Physics Letter B, 633, 25-32

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Academic Activities

Attendance in International Conference
中研院物理所九十五年度出席國際會議表
（2006年1月 ~ 2006年12月）

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
第九屆高能物理現象學研討會	95.01.03-95.01.14	印度	李湘楠	本院
Strong Correlations in Ultra-Cold Fermi Systems	95.01.15-95.01.20	美國	葉崇傑	國科會
21st APAN Meeting	95.01.22-95.01.26	日本東京	林誠謙	國科會
參與AMS會議	95.01.29-95.02.05	瑞士日內瓦	李世昌	國科會
SRB Workshop	95.02.02-95.02.03	美國聖地牙哥	翁維瓏	國科會
SRB Workshop	95.02.02-95.02.03	美國聖地牙哥	林惠民	國科會
第一屆太平洋奈米及尖端材料學術研討會	95.02.02-95.02.04	日本東京	黃英碩	本院
表面奈米結構會議	95.02.07-95.02.11	韓國首爾	張嘉升	國科會
1st South East Asia Grid Forum」及「EGEE tutorial	95.02.08-95.02.10	新加坡	張智強	國科會
表面奈米結構會議	95.02.08-95.02.11	韓國首爾	黃英碩	本院
Service Challenge 4及Computing in High Energy and Nuclear Physics	95.02.10-95.02.17	印度孟買	陳信言	國科會
Service Challenge 4及Computing in High Energy and Nuclear Physics	95.02.10-95.02.17	印度孟買	施宏良	國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
Global Grid Forum 16	95.02.13-95.02.16	希臘雅典	邱士軍	國科會
Computing in High Energy and Nuclear Physics	95.02.13-95.02.17	印度孟買	林誠謙	國科會
Tohoku COE symposium	95.02.16-95.02.18	日本仙台	李定國	對方支付
Biophysical Society Annual Meeting	95.02.18-95.02.24	美國鹽湖城	鄭天佑	本所
參與AMS會議	95.02.19-95.02.25	瑞士日內瓦	李世昌	國科會
EGEE USER FORUM	95.03.01-95.03.03	瑞士日內瓦	吳盈達	國科會
EGEE USER FORUM	95.03.01-95.03.08	瑞士CERN	林誠謙	國科會
第四屆奈米高科技發展會議	95.03.02-95.03.04	日本名古屋	鄭天佐	本所
2006年二世谷冬季學校研討會	95.03.05-95.03.08	日本札幌	李湘楠	國科會
2006年二世谷冬季學校會議	95.03.05-95.03.08	日本札幌	張維甫	本所
2006年台印雙邊會議	95.03.08-95.03.19	印度新德里	陳啟東	國科會
美國物理年會	95.03.11-95.03.18	美國巴爾地摩	方崇開	主題
美國物理年會	95.03.11-95.03.19	美國巴爾的摩	楊弘敦	本院

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
美國物理年會	95.03.11-95.03.19	美國巴爾的摩	何侗民	本院
2006美國物理年會	95.03.12-95.03.17	美國	林耿慧	本院
2006美國物理年會	95.03.12-95.03.17	美國巴爾的摩	姚永德	本院
2006美國物理年會	95.03.12-95.03.17	美國巴爾的摩	張嘉升	本院
2006美國物理年會	95.03.12-95.03.17	美國巴爾的摩	陳洋元	本院
2006美國物理年會	95.03.12-95.03.17	美國巴爾的摩	陳彥龍	本院
美國物理學會2006春季會議	95.03.13-95.03.17	美國	葉崇傑	國科會
美國物理年會	95.03.13-95.03.17	美國巴爾地摩	周家復	本院
2006 APS March Meeting	95.03.13-95.03.17	美國	李定國	本院
春季物理年會	95.03.22-95.03.26	日本東京	郭鴻曦	對方支付
Pacific Rim Applications and Grid Middleware Assembly 」(PRAGMA 10)	95.03.26-95.03.28	澳洲湯士維爾	翁維瓏	國科會
Pacific Rim Applications and Grid Middleware Assembly 」(PRAGMA 10)	95.03.26-95.03.28	澳洲湯士維爾	陳信言	國科會
The 61th Annual Meeting of the physical Society of Japan	95.03.27-95.03.30	日本松山	磯島知也	本所

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
第十七屆亞太物理學會聯合會理事會	95.04.02-95.04.05	日本大阪	鄭天佐	本所
「LHC OPN Meeting」、「GDB Meeting」及「GDB Storage Workshop」」會議	95.04.04-95.04.06	義大利羅馬	卿笛	國科會
Eleventh meeting of the Governing Board (GB12) of the Global Biodiversity Information Facility	95.04.04-95.04.07	南非開普敦	賴昆祺	國科會
Grid tutorial for users and system administrators	95.04.04-95.04.07	北京	林惠民	國科會
「LHC OPN Meeting」、「GDB Meeting」、「GDB Storage Workshop」及「EGEE – EGEE II Transition meeting」會議	95.04.04-95.04.13	義大利羅馬, 瑞士日內瓦	張智強	國科會
第4屆味物理和CP破壞國際會議	95.04.08-95.04.14	加拿大溫哥華	蔡俊謙	本所+國科會
ATLAS實驗物理分析工具導纜及研討會	95.04.14-95.04.21	日本東京	鄧炳坤	本院
第四屆重味物理和CP破壞研討會	95.04.19-95.04.23	中國江蘇	鄭海揚	本院
參與AMS會議	95.04.23-95.04.29	瑞士日內瓦	李世昌	國科會
Spring 2006 Internet2 Member Meeting	95.04.24-95.04.26	美國阿靈頓	洪銓鴻	國科會
第95屆統計力學會議	95.05.06-95.05.09	美國	胡進錕	本院
2006IEEE國際磁性會議	95.05.06-95.05.14	美國聖地牙哥	簡維志	本所
2006 BioNano conference	95.05.07-95.05.11	美國	周家復	本院

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
2006國際磁性會議	95.05.07-95.05.14	美國聖地牙哥	陳啟亮	主題
2006 IEEE國際磁性會議	95.05.08-95.05.12	美國聖地牙哥	姚永德	國科會
ICON meeting	95.05.09-95.05.10	美國休士頓	李定國	國科會
Global Grid Forum 17	95.05.09-95.05.13	日本東京	林誠謙	國科會
Global Grid Forum 17	95.05.10-95.05.12	日本東京	翁維瓏	國科會
Global Grid Forum 17	95.05.10-95.05.12	日本東京	邱士軍	國科會
參與AMS會議	95.05.10-95.05.13	瑞士日內瓦	李世昌	國科會
EGEE CIC-on-duty meeting (COD-8)及EGEE All ROC Managers Meeting (ARM-7)	95.05.15-95.05.17	波蘭克拉科(Krakow)	蔡明宏	國科會
Second Internaitonal Nanotechnology Conerence on Communication and Coopeation	95.05.15-95.05.18	美國華盛頓	李定國	本院+國科會
EGEE-II PMB	95.05.19	瑞士日內瓦	林誠謙	國科會
非線性及複雜系統國際會議	95.05.24-95.05.26	香港	余海禮	本院
非線性及複雜系統國際會議	95.05.24-95.05.26	香港	吳建宏	國科會
非線性及複雜系統國際會議	95.05.24-95.05.26	香港	李世炳	國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
非線性及複雜系統前沿研究國際會議	95.05.24-95.05.26	香港	胡進錕	國科會
非線性及複雜系統前沿國際會議	95.05.24-95.05.26	香港	張志義	本院
International Conference on the Frontiers of Nonlinear and Complex Systems	95.05.24-95.05.26	香港	梁鈞泰	國科會
International Conference on the Frontiers of Nonlinear and Complex Systems	95.05.24-95.05.26	香港	陳志強	國科會
北京同步輻射X光對比成像術	95.05.27-95.06.09	中國北京	胡宇光	本院
The 16th (2006) Annual Unternational Offshore and Polar Engineering Conference	95.05.28-95.06.02	美國舊金山	楊文昌	本所
第九屆粒子與原子核會議（CIPANP 2006）	95.05.28-96.06.05	波多黎各	林興德	本所
第一屆重味物理的理論：現象學及實驗研討會	95.05.29-95.05.31	義大利卡布里島	鄭海揚	本院
EIPBM會議	95.05.31-95.06.02	美國巴爾地摩	周家復	本院
北京同步輻射X光對比成像術對奈米生物醫學試件之研究國際研討會	95.06.04-95.06.08	中國北京	羅宗男	國科會
北京同步輻射X光對比成像術對奈米生物醫學試件之研究國際研討會	95.06.04-95.06.08	中國北京	曾邦彥劉啟人	本所
HealthGrid 2006	95.06.06-95.06.09	西班牙瓦倫西亞(Valencia)	李宏春	國科會
Grid Deployment Board (GDB)」LCG Review、Management Board、Overview Board等會議	95.06.06-95.06.12	瑞士日內瓦	林誠謙	國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
EUChinaGRID 1st Workshop	95.06.12-95.06.14	大陸北京(Beijing)	張智強	國科會
Tier 2 Workshop、Tier 2 tutorial等會議	95.06.12-95.06.16	瑞士日內瓦	陳信言	國科會
2006年微中子物理國際會議	95.06.13-96.06.19	美國	王子敬	國科會
2006單一生物分子研討會	95.06.17-95.07.29	美國	周家復	本院
Euro-Southeast Asia ICT Forum 2006 (EUSEA 2006)	95.06.19-95.06.22	新加坡	林誠謙	國科會
WLCG-OSG-EGEE Operations workshop、Service Challenge Technical Meeting、OSCT-1等會議	95.06.19-95.06.22	瑞士日內瓦	蔡明宏	國科會
WLCG-OSG-EGEE Operations workshop、Service Challenge Technical Meeting、OSCT-1等會議	95.06.19-95.06.22	瑞士日內瓦	施宏良	國科會
Euro-Southeast Asia ICT Forum 2006 (EUSEA 2006)	95.06.19-95.06.23	新加坡	張智強	國科會
Euro-Southeast Asia ICT Forum 2006 (EUSEA 2006)	95.06.19-95.06.23	新加坡	何立勇	國科會
The International Symposium on Anomalous Quantum Materials 2006 and The 5-thAsia-Pacific Workshop	95.06.23-95.06.27	日本Okinawa	李定國	國科會
The International Symposium on Anomalous Quantum Materials 2006 and The 5-th Asia-Pacific Workshop	95.06.23-95.06.27	日本沖繩	周崇斌	本所
「ICANN」會議	95.06.24-95.06.30	摩洛哥馬拉喀什	劉靜怡	國科會
第二屆台韓資訊儲存研討會	95.07.04-95.07.07	韓國首爾	姚永德	本院

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
參與ATLAS會議	95.07.08-95.07.17	瑞典斯德哥爾摩	李世昌	國科會
The 8th International Conference o Materials and Mechanisms of Superconductivity and High Temperature Superconductors	95.07.09-95.07.14	德國 Dresden	吳茂昆	本院
Network Tools and Applications in Biology	95.07.10-95.07.13	義大利撒丁尼亞	李宏春	國科會
亞太第四屆動力系統會議	95.07.11-95.07.15	韓國埔項	胡進錕	國科會
第四屆非線性科學國際研討會	95.07.11-95.07.16	韓國浦項	吳明佳	本所
Dynamics Days Asia Pacific 4	95.07.12-95.07.14	韓國	陳志強	本院
Dynamics Days Asia Pacific 4	95.07.12-95.07.14	Pohang, Korea	周佑陞	國科會
過渡元素固態化合物國際研討會	95.07.15-95.07.20	波蘭Kracow	李尚凡	本院
第九屆原子力顯微儀國際研討會	95.07.16-95.07.20	日本	黃英碩	本院
ASME'S 2006 Fluids Eng-Summer	95.07.17-95.07.20	美國	黃榮鑑	國科會
第廿二屆亞太先進網路會議	95.07.17-95.07.21	新加坡	林誠謙	國科會
第廿二屆亞太先進網路會議	95.07.17-95.07.21	新加坡	趙涵捷	國科會
第廿二屆亞太先進網路會議	95.07.17-95.07.21	新加坡	許瑞明	國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
第廿二屆亞太先進網路會議	95.07.17-95.07.21	新加坡	劉德隆	國科會
第廿二屆亞太先進網路會議	95.07.17-95.07.21	新加坡	陳信言	國科會
第廿二屆亞太先進網路會議	95.07.17-95.07.21	新加坡	翁維瓏	國科會
第廿二屆亞太先進網路會議	95.07.17-95.07.21	新加坡	洪銓鴻	國科會
第廿二屆亞太先進網路會議	95.07.17-95.07.21	新加坡	沈一慧	國科會
第二十二屆國際在固體中的原子碰撞會議	95.07.19-95.07.27	德國	許智祐	本所
第22屆國際在固體中的原子碰撞會議	95.07.21-95.07.26	德國柏林	余岳仲	本院
參與AMS會議	95.07.22-95.07.29	瑞士日內瓦	李世昌	本院主題
宇宙非高氏性研討會	95.07.22-95.07.30	義大利	吳建宏	本院
Gordon Research Conference	95.07.23-95.07.28	英國牛津	杜其永	國科會
第33屆國際高能物理會議	95.07.24-95.08.04	俄羅斯莫斯科	李浩斌	本所
第33屆國際高能物理會議	95.07.26-95.08.02	莫斯科	鄭海揚	本院
第33屆國際高能物理會議	95.07.26-95.08.02	莫斯科	鄭海揚	本院

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
Sixteenth Symposium on Thermophysical Properties	95.07.30-95.08.04	美國Boulder	陳洋元	本院+國科會
第一屆非線性及複雜系統資訊及能量傳輸會議	95.08.01-95.08.04	新加坡	胡進錕	國科會
Key Approached to Dark Energy	95.08.06-95.0815	巴塞隆納西班牙	李碩天	本所
第15屆國際水理學會亞太分會研討會	95.08.07-95.08.10	印度Chennai	蕭葆義	本院
International Conference on Nanophysics	95.08.08-95.08.12	越南河內	吳茂昆	國科會
PNC 2006 Annual Conference in Conjunction with PRDLA and ECAI	95.08.14-95.08.20	韓國首爾	林誠謙	國科會
PNC 2006 Annual Conference in Conjunction with PRDLA and ECAI	95.08.15-95.08.18	韓國首爾	沈一慧	國科會
PNC 2006 Annual Conference in Conjunction with PRDLA and ECAI	95.08.16-95.08.18	韓國首爾	賴守全	國科會
PNC 2007 Annual Conference in Conjunction with PRDLA and ECAI	95.08.16-95.08.18	韓國首爾	許蒼嶺	國科會
Advances in Tissue Engineering 2006 Worskhop	95.08.16-95.08.19	美國休斯頓	林耿慧	本院
高磁場研究會議	95.08.17-95.08.19	日本仙台	陳洋元	本院+國科會
2006中國顆粒學年會	95.08.18-95.08.22	中國北京	胡宇光	國科會
國際磁學會議	95.08.19-95.08.26	日本京都	張晃暐	本所

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
2006國際磁性會議	95.08.19-95.08.26	日本京都	簡維志	本所
2006國際磁性會議	95.08.19-95.08.26	日本京都	陳元宗	本所
2006國際磁性會議	95.08.19-95.08.26	日本京都	陳士元	本所
International Conference on Magnetism	95.08.20-95.08.24	日本京都	李定國	本院主題
第十九屆加速器在研究與工業應用國際會議	95.08.20-95.08.25	美國	余岳仲	本院
國際磁學會議	95.08.20-95.08.25	日本京都	姚永德	本院
國際磁性會議	95.08.20-95.08.25	日本京都	陳洋元	本院+國科會
第17屆國際磁學會議	95.08.20-95.08.25	日本京都	鄒忠毅	本所＋主題
第十九屆加速器在研究與工業應用國際會議	95.08.20-95.08.25	美國德州佛沃斯市	許智祐	無須補助
The 17th International Conference on Magnetism	95.08.20-95.08.26	日本京都	周崇斌	國科會
OSG Consortium Meeting	95.08.21-95.08.23	美國西雅圖	林誠謙	國科會
第 18 屆物理之數體問題國際會議	95.08.21-95.08.26	巴西 Santos	曾詣涵	本院
2006數學模型及計算物理國際會議	95.08.24-95.09.01	斯洛伐克	胡進錕	本院+國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
國際量子基礎及技術會議	95.08.25-95.08.28	中國浙江大學	張志義	本院
澳大利亞生物技術策略研討會	95.08.25-95.08.31	澳洲墨爾本	吳茂昆	本院+國科會
台澳生物技術策略研討會	95.08.25-95.09.01	澳洲墨爾本	胡宇光	國科會
國際應用超導會議	95.08.27-95.09.01	美國西雅圖	林保安	本所
Conference on Computational Physics 2006	95.08.29-95.09.01	南韓慶州	林誠謙	國科會
2006亞洲量子資訊會議	95.09.01-95.09.04	中國北京	張志義	本院
TWAS第十七屆會員大會	95.09.01-95.09.07	巴西里約熱內盧	吳茂昆	本院+國科會
第十六屆顯微術大會	95.09.02-95.09.08	北海道	徐統	本所+國科會
第16屆國際顯微術大會	95.09.02-95.09.09	北海道札晃	張淵智	本所
第16屆國際顯微術大會	95.09.02-95.09.09	日本北海道札晃	胡恩德	本所
第16屆國際顯微術大會	95.09.02-95.09.09	日本北海道札晃	楊志文	本所
第16屆顯微術大會	95.09.03-95.09.08	日本北海道札晃	張嘉升	本院
第16屆顯微術大會	95.09.03-95.09.08	日本北海道札晃	郭鴻義	本院

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
第16屆顯微術大會	95.09.03-95.09.08	日本北海道札晃	黃英碩	本院
第十六屆國際顯微鏡會議	95.09.03-95.09.08	日本札幌	陳詩芸	國科會另案補助
第十六屆國際電子顯微鏡會議	95.09.03-95.09.08	日本札幌	陳詩芸	國科會
第16屆顯微術大會	95.09.03-95.09.08	北海道	鄭天佐	本所
微中子與暗物質國際會議	95.09.03-95.09.09	法國巴黎	王子敬	本院
歐洲表面科學會議	95.09.03-95.09.09	法國巴黎	邱雅萍	本所
參與AMS會議	95.09.05-95.09.10	瑞士日內瓦	李世昌	國科會
第13屆國際流體流科技研討會	95.09.06-95.09.09	匈牙利布達佩斯	蕭葆義	本院
6th Annual Global LambdaGrid Workshop(GLIF Meeting)	95.09.07-95.09.13	日本東京	劉德隆	國科會
第232屆美國化學學會	95.09.10-95.09.14	美國舊金山	林榮信	主題
Grid World / GGF18	95.09.11-95.09.14	美國華盛頓特區	翁維瓏	國科會
Grid World / GGF18	95.09.11-95.09.14	美國華盛頓特區	林惠民	國科會
Grid World / GGF18會議	95.09.11-95.09.14	美國華盛頓特區	吳宗穎	國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
Grid World / GGF18會議	95.09.11-95.09.15	美國華盛頓特區	潘怡倫	國科會
第17屆國際自旋物理研討會	95.09.11-95.10.20	日本京都	陳家益	本所+國科會
第三十一屆國際紅外線與毫米波會議及第十四屆國際太赫電子會議	95.09.18-95.09.22	中國上海	何侗民	本院
參與AMS會議	95.09.19-95.09.21	瑞士日內瓦	李世昌	國科會
EGEE'06 Conference	95.09.25-95.09.29	瑞士日內瓦	林誠謙	國科會
EGEE'06 Conference會議	95.09.25-95.09.29	瑞士日內瓦	蔡明宏	國科會
EGEE'06 Conference會議	95.09.25-95.09.29	瑞士日內瓦	廖舒婷	國科會
EGEE'06 Conference會議	95.09.25-95.09.29	瑞士日內瓦	李宏春	國科會
高能物理 2006年國際夏季課程	95.09.25-95.09.30	土耳其 Mugla	王子敬	本院
EGEE'06 Conference會議	95.09.25-95.09.30	瑞士日內瓦	邱士軍	國科會
EGEE'06 Conference會議	95.09.25-95.09.30	瑞士日內瓦	嚴漢偉	國科會
EGEE'06 Conference會議	95.09.25-95.09.30	瑞士日內瓦	沈一慧	國科會
Gelato ICE會議	95.10.01-95.10.04	新加坡	翁維瓏	國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
Gelato ICE會議	95.10.01-95.10.04	新加坡	高成炎	國科會
Gelato ICE會議	95.10.01-95.10.05	新加坡	黃維誠	國科會
第17屆國際自旋物理研討會	95.10.01-95.10.07	日本京都	章文箴	國科會
Pre Grid Deployment Board (GDB)」、「Grid Deployment Board (GDB)」	95.10.03-95.10.04	瑞士日內瓦	林誠謙	國科會
英國-台灣奈米科學技術座談會	95.10.05-95.10.10	英國倫敦	吳茂昆	國科會
International ICFA Workshop on HEP Networking, Grid and Digital Divide Issues for Global e-Science	95.10.09-95.10.11	波蘭克拉科	林誠謙	本院
Conference on Laser Physics-2006	95.10.11-95.10.13	亞美尼亞	何魯亭	國科會
2nd APGrid PMA Meeting	95.10.15-95.10.15	日本大阪	蔡明宏	國科會
2nd APGrid PMA Meeting	95.10.15-95.10.15	日本大阪	簡禎儀	國科會
PRAGMA11會議	95.10.15-95.10.18	日本大阪	萬一怒	國科會
PRAGMA11會議	95.10.15-95.10.18	日本大阪	林芳邦	國科會
PRAGMA11會議	95.10.15-95.10.18	日本大阪	陳信言	國科會
PRAGMA 11會議	95.10.15-95.10.18	日本大阪	謝鐿暲	國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
「戈登研究會議- 生物界面科學」會議	95.10.22-95.10.27	瑞士Les Diablerets	周家復	本院
英國奈米論壇	95.10.22-95.10.28	英國倫敦及牛津	吳茂昆	國科會
菲律賓物理年會	95.10.25-95.10.26	菲律賓Dovor	鄭天佐	本所
高能物理學會第七屆學術年會	95.10.28-95.11.01	中國桂林	李湘楠	國科會
Joint Meeting of Pacific Region Particle Physics Communities	95.10.29-95.11.03	美國夏威夷	侯書雲	國科會
DPF＆JPS Joint Meeting	95.10.30-95.11.03	美國夏威夷	林誠謙	國科會
亞洲奈米論壇	95.10.31-95.11.04	香港	吳茂昆	國科會
第三屆北京質譜儀(BES)黃皮書定稿會議	95.11.04-95.11.05	中國北京	鄭海揚	本院
赴東京出席「uTAS2006」會議	95.11.05-95.11.09	日本東京	周家復	本院
第九屆第一原理電子結構計算亞洲會議	95.11.06-95.11.08	韓國首爾	鄭弘泰	本院
Noncommutative Geometry and Quantum Spacetime in Physics.21st Nishinomiya-Yukawa Memorial Symposium on Theoretical Physics會議	95.11.11-95.11.15	日本京都	寺口俊介	本所
Noncommutative Geometry and Quantum Spacetime in Physics.22st Nishinomiya-Yukawa Memorial Symposium on Theoretical Physics會議	95.11.11-95.11.16	日本京都	蔡尚宇	本所
Super Computing 2006 (SC06)會議	95.11.11-95.11.17	美國坦帕市	陳信言	國科會

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
Super Computing 2006 (SC06)會議	95.11.11-95.11.17	美國坦帕市	邱士軍	國科會
Super Computing 2006 (SC07)會議	95.11.11-95.11.17	美國坦帕市	李宏春	國科會
Super Computing 2006會議	95.11.11-95.11.17	美國坦帕市	楊竹星	國科會
Super Computing 2006會議	95.11.11-95.11.17	美國坦帕市	陳勝賢	國科會
AICHE Annual Meeting 2006	95.11.12-95.11.17	美國舊金山	陳彥龍	本院+國科會
The 19th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (QM2006)	95.11.13-95.11.19	中國上海	章文箴	本院
亞太物理學會理事會	95.11.15-95.11.18	韓國浦項	鄭天佐	本所
第三屆杭州國際模擬物理研討會	95.11.16-95.11.18	中國杭州市	胡進錕	本院+國科會
The 8th APCTP General Council Meeting	95.11.17-95.11.19	韓國浦項	李定國	對方
前往歐洲粒子物理研究中心(CERN)參與AMS會議	95.11.19-95.11.23	瑞士日內瓦	李世昌	本院
李政道先生從事物理研究六十年學術思想研討會及CCAST學術顧問委員會	95.11.23-95.11.24	中國北京	李定國	本院
李政道先生從事物理研究六十年學術思想研討會	95.11.24-95.11.24	中國北京	吳茂昆	本院
李政道先生從事物理研究六十年學術思想研討會	95.11.24-95.11.26	中國北京	鄭海揚	本院

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
WLCG Tier2 Workshop in Asia	95.12.01-95.12.02	印度孟買	林誠謙	國科會
WLCG Tier2 Workshop in Asia	95.12.01-95.12.04	印度孟買	蔡明宏	國科會
WLCG Tier2 Workshop in Asia	95.12.01-95.12.04	印度孟買	施宏良	國科會
WLCG Tier2 Workshop in Asia	95.12.01-95.12.04	印度孟買	黃珮華	國科會
WLCG Tier2 Workshop in Asia	95.12.01-95.12.04	印度孟買	葉平	國科會
WLCG Tier2 Workshop in Asia	95.12.01-95.12.04	印度孟買	嚴漢偉	國科會
ICANN會議	95.12.02-95.12.07	巴西聖保羅	姜國輝	國科會
Fall 2006 Internet 2 Member Meeting	95.12.04-95.12.07	美國芝加哥	陳信言	國科會
Fall 2006 Internet 2 Member Meeting	95.12.04-95.12.07	美國芝加哥	洪銓鴻	國科會
Fall 2006 Internet 2 Member Meeting	95.12.04-95.12.07	美國芝加哥	張毓麟	國科會
Fall 2006 Internet 2 Member Meeting	95.12.04-95.12.07	美國芝加哥	古立其	國科會
Opportunities and challenges for Physicists in Quantitative an Systems Biology	95.12.04-95.12.09	香港	陳志強	本院
Opportunities and Challenges for Physicists in Quantitative and Systems Biology	95.12.04-95.12.09	香港中文大學	魏光男	本所

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
Opportunities and Challenges for Physicists in Quantitative and Systems Biology	95.12.04-95.12.09	香港中文大學	徐殊凡	本所
「Pre Grid Deployment Board (GDB)」、「Grid Deployment Board (GDB)」等會議	95.12.05-95.12.06	瑞士日內瓦	林誠謙	國科會
Joint scientific conference(1st IWOFM-3rd IWONN 2006)	95.12.06-95.12.09	越南Halong city	姚永德	國科會
第五屆海峽兩岸奈米科學與技術研討會	95.12.08-95.12.12	香港	吳茂昆	國科會
International Symposium on the Recent Progress in Quantitative and systems Bioloby	95.12.09-95.12.11	香港	陳志強	本院
International Synposium on the Recent Progress in Quantitative and Systems Biology	95.12.09-95.12.11	香港	魏光男	本所
International Synposium on the Recent Progress in Quantitative and Systems Biology	95.12.09-95.12.11	香港	徐殊凡	本所
第四屆CKM么正三角形國際會議	95.12.12-95.12.16	日本名古屋	鄭海揚	國科會
第四屆CKM么正三角形國際會議	95.12.12-95.12.16	日本名古屋	張有毅	本所
International String Meeting (ISM06)會議	95.12.12-95.12.19	Toshali Sands, Puri, India	寺口俊介	本所
EGEE-III Workshop	95.12.13-95.12.14	瑞士日內瓦	林誠謙	國科會
Hong Kong Forum of Condensed Matter Physics: Past, Present and Future	95.12.18-95.12.20	香港	李定國	本院
International Conference on Bioinformatics, InCoB-2006	95.12.18-95.12.20	印度	巴克	本所

會 議 名 稱	會議期間	舉辦地點	出席人員	經費來源
Hong Kong Forum of Condensed Matter Physics: Past, Present and Future會議	95.12.18-95.12.20	香港	周崇斌	本所
凝態物理之過去、現在與未來會議	95.12.18-95.12.20	香港	鄭智豪	本所
2006越南奈米科技學術研討會	95.12.18-95.12.22	越南，胡志明市	張嘉升	本院
亞太表面科學會議	95.12.19-95.12.21	香港	鄭天佐	對方支付

Institute Sponsored Meetings

本所協辦會議

研討會名稱	會議期間	地點	主辦人
軟物質和生命物質之冬季學校 Soft Matter & Biophysics Winter School 2006	95.01.21 - 95.01.22	國立成功大學 理論中心	陳志強
第八屆台灣統計物理國際會議 StatPhys-Taiwan-2006 The 8th Taiwan International Symposium on Statistical Physics	95.06.21 - 95.06.26	中研院物理所	胡進錕
第五屆全球華人物理學大會 The 5th. Jolin Meeting of Chinese Physicists Worldwide (OCPA 5) - International Conference on Physics Education and Frontier Physics	95.06.24 - 95.06.30	集思國際會議中心台大館	吳茂昆
2006中大生物物理營 NCU Biophysics Camp For Students	95.10.28 - 95.10.29	中央大學 生物物理所	陳志強

Seminars
中央研究院物理研究所九十五年度演講一覽表
(2006 January ~ December)

演講題目	演講者	所屬機構	日期
Biophysical analysis of neural correlats to C. elegans thermotaxis	林耿慧	中央研究院物理研究所	95.01.02
近代物理發展的兩條線索：哲學與技術	林敏聰	台灣大學物理系	95.01.03
Nanotechnology and Environment, Health and Safety	Andrew Maynard	Woodrow Wilson International Center for Scholars, USA	95.01.04
Small region values for the four favored quasilocal expressions and classical pseudotensors	蘇樓來	國立中央大學	95.01.06
Unzipping of DNA with correlated base sequence	吳明佳	中央研究院物理研究所	95.01.09
Lecture on Low Temperature Physics	小林俊一	日本東京農工大學	95.01.10
The physics in atomic Bose-Fermi mixtures	包健華	國立中正大學物理系	95.01.10
Lecture on Low Temperature Physics	小林俊一	日本東京農工大學	95.01.11
Modeling of cardiac tissue	O. I. Kanakov	Nizhny Novgorod University, Russia	95.01.18
How does the brain make a deicision: A model of threshold-crossing detection in neural networks	Chung-Chuan Lo	Brandeis University	95.01.25

演講題目	演講者	所屬機構	日期
Localization of energy in nonlinear Hamiltonian lattices	O.I. Kanakov	Nizhny Novgorod University, Russia	95.01.25
COMPUTING AT THE NANOSCALE	Stanley Williams	HP Senior Fellow	95.02.13
記憶體的最新發展及其展望	何家驊	旺宏電子	95.02.13
Statistical mechanical approach for the liquid structure, phase behavior, and compressibility of polymer-colloid systems.	Yenglong Chen	中央研究院物理研究所	95.02.20
Phenotypic Differences with the Epigenetic Perspective	Sun-Chong Wang	CAMH, Univ. of Toronto	95.02.22
Domain-Wall Solutions and Quantum Field Theory Correspondence	Wen-Yu Wen	National Taiwan Normal University	95.02.24
Theoretical Study of the Domains of Phase-Diagram in Microgel System	Kuo-li Wu	Dept. of Physics, National Central University	95.02.27
Simulations of Oscillated Granular Media	Jennifer Kreft	Department of Physics, University of Texas - Austin	95.03.02
Noise and Fluctuations in Human Cardiovascular Physiology	Prof. Yamamoto	University of Tokyo	95.03.03
Infinite symmetry in the high energy limit	Pei-Ming Ho	National Taiwan University	95.03.03
Soft Chemistry Routes to Nanomaterials	C.N.R.Rao	印度總理科技顧問委員會主席	95.03.06

演講題目	演講者	所屬機構	日期
Phase Coexistence in Shaken Granular Media (Goetzendorfer, et al., PRL 95,135704 (2005).	Jennifer Kreft	Department of Physics,University of Texas - Austin	95.03.06
Lecture on Low Temperature Physics	小林俊一	日本東京農工大學	95.03.06
Lecture on Low Temperature Physics	小林俊一	日本東京農工大學	95.03.07
統計物理在跨領域之應用：相變、病毒、蛋白質、股市、地震及英國歷史劇	胡進錕	中央研究院物理研究所	95.03.08
Non-local matching condition and scale-invariant spectrum in bouncing cosmology	Feng-Li Lin	National Taiwan Normal University	95.03.10
Electroweak symmetry breaking and precision data	Qi-Shu Yan	KEK	95.03.15
Accelerating Expansion from Inhomogeneities?	Je-An Gu	National Taiwan University	95.03.17
Science, a brief history, methods and achievements	鄭天佐	中央研究院物理研究所	95.03.22
Relations of Actin and DNA structures between charged objects and environments	江宏仁	University of Tokyo	95.03.24
A variational Monte Carlo study for low-lying excitations of a strongly correlated superconducting state	Seiji Yunoki	SISSA/ISAS	95.03.24
Self-organization of block copolymers in thin films via solvent treatment	Yongzhong Chen	中央研究院物理研究所	95.03.27

演講題目	演講者	所屬機構	日期
Inclusive & Exclusive B-Decays in the Soft-Collinear Effective Theory	Iain Stewart	MIT	95.03.30
Interactions in Thin Films: Liquid Foam Films, Polyelectrolyte films and Soft Cushioned Biomimetic Membranes	Narayan Mishra	中央研究院物理研究所	95.04.03
Photon-in/Photon-out Soft-X-ray Spectroscopy in Nanoscience	Jinghua Guo	Lawrence Berkeley National Laboratory	95.04.04
Noise and Fluctuations in Physiology - Research Perspective at the Educational Physiology Lab of TODAI	Zbigniew Struzik	Graduate School of Education, The University of Tokyo, JAPAN	95.04.06
Lepton flavour violating Higgs boson decays in SUSY SU(5) with large tan beta	Jonathan Parry	Chung Yuan Christian University	95.04.07
Observations of Reentrant Jamming and Condensation of DNA during Gel Electrophoresis	Fan-Tso Chien	中央研究院物理研究所	95.04.10
Surfaces and interfaces of organic semiconductors	Chih-I Wu	台灣大學	95.04.12
NSPO\'s Space Science Program	陳秋榮	國家太空中心NSPO首席科學家	95.04.12
The numerical simulations of lattice QCD near the chiral limit using the overlap fermion	Kenji Ogawa	National Taiwan University	95.04.14
Constructing quantitative models from qualitative experimental results	Chao-Ping Hsu	Institute of Chemistry, AS	95.04.17
Magnetization Processes of Patterned Permalloy Nanostructures	Zung-Hang Wei	National Tsing Hua University	95.04.17

演講題目	演講者	所屬機構	日期
Sulfide and L-cysteine adsorption at the Cu(100)-liquid interface investigated by means of EC-STM	T. Mangen	Taiwan Normal University	95.04.17
Proten Secondary Structure Prediction	許聞廉	the Institute of Information, Academia Sinica	95.04.18
Novel structure and transport properties of quasicrystals	林水田	國立成功大學物理系	95.04.19
Nucleation Rate, Interfacial Energy, and Kinetic Excess	David. T. Wu	Department of Mechanical Engineering, Yale University	95.04.20
The Starting Point of Life	Mark C. Lee	NASA Headquarters	95.04.20
Plasticity of neuron-glia signaling	戈鹋平	中國科學院 神經科學研究所	95.04.21
Shear viscosity to entropy density ratio below the QCD critical temperature	Eiji Nakano	National Taiwan University	95.04.21
Field Emission through the Single-Atom Tips	郭鴻曦	中央研究院物理研究所	95.04.24
Fermion Mass Fitting in SO(10) SUSY GUTs	Charanjit Singh Aulakh	Department of Physics, Panjab University	95.04.26
液晶兆赫光學最近的進展	潘犀靈	國立交通大學光電系	95.04.26
Fourth Generation b\' and t\' Decays and CP Violation.	Wei-Shu Hou	National Taiwan University	95.04.28

演講題目	演講者	所屬機構	日期
flocking behavior in biology - some recent results in Science and Nature	梁鈞泰	中央研究院物理研究所	95.05.01
Possible liquid-liquid transition of gallium confined under nanoconfinement	田聰	國立成功大學物理系	95.05.03
Low-energy phenomenologies of FCNC Z\'	Cheng-Wei Chiang	National Central University	95.05.05
Discrete Space-time Symmetries	何小剛	國立台灣大學物理系	95.05.10
What can we learn from Neutrino Physics ?	Yong-Yeon Keum	National Taiwan University	95.05.12
晶格模型研究、時間序列分析，及生物分子的統計性質	吳明佳	中央研究院物理研究所	95.05.15
Precision Astronomy	賀曾樸	中研院天文所ASIAA	95.05.17
Electronic transport and quantum phase transitions of quantum dots in Kondo regime	Chung-Hou Chung	University Karlsruhe, Germany	95.05.18
On Emergence of Space and Gravity in IIB Matrix Model	Dan Tomino	National Taiwan Normal University	95.05.19
Observation of Fragile-to-Strong Dynamic Crossover in Protein Hydration Water and Its Relation to the Glass Transition of Protein	Sow-Hsin Chen	Massachusetts Institute of Technology	95.05.22
Using Web as a Platform in Developing Seamlessly Integrated World Digital Library for Global Use: The Case of Global Memory Net	Ching-Chih Chen	Simmons College, Boston	95.05.23

演講題目	演講者	所屬機構	日期
Standard Model, our findings at Tevatron	侯書雲	中央研究院物理研究所	95.05.24
Zero-norm states and high-energy symmetries of string theory	Jenchi Lee	National Chiao Tung University	95.05.26
Self-organization of uniform nano-sized silica	Chung-yuan Mou	National Taiwan University	95.05.29
The Quest for Superheavy Elements	Felix Liang	Physics Division, Oak Ridge National Lab	95.05.30
Approaches to viscous fingering: phenomenological and deterministic ways to describe unstable interfacial growth	Matt Thrasher	UT Austin	95.06.05
Quantum Engineering of Nanostructures: Electronics and Photonics	C.K. Shih	Department of Physics, University of Texas at Austin	95.06.06
Berry’s Phase Physics in Solids	Wei-Li Lee	Johns Hopkins University	95.06.06
Pentaquark and Large N QCD	Thomas. D. Cohen	Department of Physics, Univ of Maryland, College Park	95.06.07
The SMA Profect;recent scientific results and future	大橋永芳	中研院天文所ASIAA	95.06.07
Engineering viruses for gene therapy: directed evolution of a retroviral vector with improved stability	Halong N. Vu	University of Illinois, U.S.A	95.06.09
Curvature effect on the surface diffusion of silver adatoms on carbon nanotubes	吳明佳	中央研究院物理研究所	95.06.12

演講題目	演講者	所屬機構	日期
New Physics in b--s bar(s) s	Soumitra Nandi	Department of Physics, Univ of Calcutta	95.06.14
Networks and Optimization Problems	黎璧賢	中央大學物理系及生物物理所	95.06.14
Mechanisms of ventricular tachyarrhythmia in isolated rabbit hearts	Tsu-Juey Wu	National Yang-Ming University	95.06.16
2006 NCTS June Workshop on Critical Phenomena and Complex Systems	胡進錕	中央研究院物理研究所	95.06.16
Recent First-Principles Studies of Strongly Correlated Systems: Gapless CDW, orbital ordering, and local pairing?	Wei Ku	Physics Department, BNL; Physics & Astronomy SUNY Stony Brook	95.06.21
The absence of theta_23 degeneracy at very-long-baseline neutrino oscillations	Guey-Lin Lin	National Chiao Tung University	95.06.23
Fluctuation Theorem and Jarzynski Equality: new developments in nonequilibrium process	Zhangchun Tu	Tamkang university	95.06.26
Atomic Scale Coupling of Electromagnetic Radiation to Single Molecules	Wilson Ho	University of California, Irvine	95.06.29
Coherent and Stochastic Motions in Convective Thermal Turbulence	Keqing Xia	Chinese University of Hong Kong	95.07.14
Quantum size effect of Thin Metal Films	蘇維彬	中央研究院物理研究所	95.07.26
相對論探討中的新發現與量子動力論的新出發	蕭世富	美國道先科技研發公司	95.08.16

演講題目	演講者	所屬機構	日期
Understanding the Dynamics of Physiologic Control Systems	Chung-Kang Peng	Medical School, Harvard University, USA	95.08.21
Collision of solitary waves in granular alignments	Edgar Avalos	Dept. of Physics, National Central University	95.09.11
Stacking heterogeneity: A model for the sequence dependent melting cooperativity of duplex DNA	Arsen Grigoryan	中央研究院物理研究所	95.09.18
Solitons in supersymmetric gauge theories: moduli matrix approach	Norisuke Sakai	Tokyo Institute of Technology	95.09.21
New Measurements of Top Quark Properties from CDF.	Wolfgang Wagner	Universitaet Karlsruhe, Germany	95.09.22
Study of Inverse Magneto Impedance of PSV and MTJ	C. K. Lo	Electrical and Optical Lab., Industrial Technology Research Institute	95.09.25
Opening up new worlds to optical characterization methods. The interface of nanoparticles and redox-active proteins in lipid bilayers	Andreas Erbe	University of Leeds	95.09.25
Nanoscience and Nanotechnology in Vietnam	Nguyen Quang Liem	Vietnamese Academy of Science and Technology	95.09.27
A manifestly covariant Hamiltonian formalism	Jim Nester	國立中央大學	95.09.29
Search of Axions at the Kuo-Sheng Nuclear Power Station with a High-Purity Germanium Detector	Hsi-Ming Chang	National Taiwan University	95.09.29
Searches for Supersymmetry and Higgs at Proton Colliders	王嵩銘	中央研究院物理研究所	95.10.03

演講題目	演講者	所屬機構	日期
Magic Numbers of Atoms in Surface-Supported Planar Clusters	邱雅萍	中山大學	95.10.11
Optical mapping of ventricular arrhythmia	S.-F. Lin	Department of Medicine, UCLA	95.10.12
Phenomenology of the light pseudoscalar Higgs boson in NMSSM	Kingman Cheung	National Tsing Hua University	95.10.13
Surface-induced Order in Nematic Liquid Crystal	Lau,Yuk-Gyn	中央研究院物理研究所	95.10.16
Scientists as Writers	高涌泉	台灣大學物理系	95.10.17
BEC-BCS crossover and QCD viscosity in effective field theory	Jiunn-Wei Chen	National Taiwan University	95.10.20
Temperature change using fluidization of an oscillated granular layer	Jennifer Kreft	中央研究院物理研究所	95.10.23
Top charge determination in top dilepton channel	Jaroslav Antos	Institute of Experimental Physics, SAS	95.10.25
Network Biology of Essential Genes	Hsuan-Cheng Huang	National Yang-Ming University	95.10.27
Interactions and dynamics of charged colloidal particles at aqueous	Wei Chen	中央研究院物理研究所	95.10.30
Nucleation and Growth of CVD Zirconia Films for High-k Gate Dielectrics	Bridget Roger	AVS	95.10.30

演講題目	演講者	所屬機構	日期
Hybrid film fabricated by ion beam sputtering	徐進成	輔仁大學物理系	95.10.30
Symmetry in String Theory and String/D-brane Scattering Amplitudes	Yi Yang	National Center for Theoretical Science	95.11.03
Microstreaming for biomedical applications - making use of tiny bubbles	J.-C. Tsai	Northwestern University	95.11.06
The Publication policy of "Science"	Dr. Osborne	Editor of Science	95.11.06
Solar System Minnows--X-ray Occultation by Small Trans-Neptunian Objects	張祥光	國立清華大學物理學系	95.11.08
Phenomenology of a Noncommutative Spacetime	Xavier Calmet	Brussel University	95.11.10
Gravitino/Axino dark matter and Affleck-Dine baryogenesis	Osamu Seto	University of Sussex	95.11.10
Mimicking leaflet asymmetries and lateral heterogeneities in plasma membranes: A supported lipid bilayer study	Wen-Chen Lin	UCSD	95.11.13
Electron Correlation and Electron-Phonon Interaction in High Temperature Superconductors	Naoto Nagaosa	Dept. of Applied Physics, Univ. of Tokyo	95.11.13
The 2D electronic structures of atomically uniform thin films\"	唐述中	清華大學物理系	95.11.15
Superconducting Phase Slips in Nanostructured YBa2Cu307-	John Wei	Kosice Technology University	95.11.15

演講題目	演講者	所屬機構	日期
Adhesion of multi-component membranes and strings	Mesfin Asfan	中央大學物理系	95.11.20
The role of Chern-Simons functionl in the dynamics of canonical vacuum GR	Laszlo Szabados	Hungarian Academy of Sciences	95.11.22
Daya Bay theta13 neutrino oscillation experiment	熊怡	台灣大學物理系	95.11.22
Spinning string, spin chain, and integrability	Wen-Yu Wen	National Taiwan University	95.11.24
Transgenic Technologies Designed for Molecular Brain Imaging	Ann-Shyn Chiang	國立清華大學	95.11.27
Electron-electron interaction and decoherence in metallic wires	Gilles Montambaux	Laboratoire de Physique des Solides, Universite´ Paris Sud, France	95.11.27
Torsion and the Description of the Gravitational Interaction	J. G. Pereira	Instituto de Fisica Teorica Universidade Estadual Paulista	95.11.29
Two-Peak and Three-Peak Optimal Complex Networks	Andre Valente	National Institute of Health, USA	95.12.04
Quantum computation in semiconductor nanostructures	Sankar Das Sarma	Univ. of Maryland	95.12.05
Cracking a micro-bubble by another micro-bubble	伊林	中央大學物理系	95.12.06
Single-File diffusion in quasi one dimensional systems	Alessandro Taloni	University of CamerinoAlessandro	95.12.07

演講題目	演講者	所屬機構	日期
AMANDA/IceCube Experiments and the Search for Extraterrestrial Point Sources of High Energy Neutrinos.	You-Ren Wang	中央研究院物理研究所	95.12.08
新型DNA操縱技術在單分子DNA機械性質之研究 New DNA	邱祈翰	Department of Engineering Science, National Cheng Kung University	95.12.08
Transient dynamics in cell polarization	郭青齡	California Institute of Technology	95.12.11
Free Energy Surfaces from Jarzynski\'s Equality	Ching-Hwa Kiang	Department of Physics & Astronomy, Rice University	95.12.13
Spin transport and spin-related charge transport	X. C. Xie	Oklahoma State University	95.12.13
What we learn from RHIC?	Wen-Chen Chang	中央研究院物理研究所	95.12.15
Some Adventures in Mathematical Biology	Michael W. Deem	Rice University, USA	95.12.18
Studies of Protein-Protein Interactions at Membrane Interfaces: A Correlated Atomic Force and Fluorescence Approach	James Shaw	University of Toronto	95.12.18
Taiwan Asteroseismology Telescope Network	周定一	國立清華大學物理學系	95.12.19
Spin structure of the nucleon: recent results from COMPASS	Stephane Platchkov	DAPNIA Laboratory, CEA Saclay, France	95.12.22
Searching for CP Violation	陳泉宏	成功大學物理系	95.12.26

演講題目	演講者	所屬機構	日期
Low Scale Gravity Mediation	Toshifumi Yamashita	SISSA	95.12.27
Nanotube Phonoic	Chih-Wei Chang	UC-Berkely	95.12.27
Doubly Charged Higgs Bosons at Hadron Colliders	Andrew Akeroyd	National Center for Theoretcal Sciences (South)	95.12.29

Visiting Scholars

中央研究院物理所九十五年度訪問學人表

(2006 年 1 月- 2006 年 12 月)

訪 問 學 人	所 屬 機 構	訪 問 期 間
Yevgeni Mamasakh	亞美尼亞 Yerevan State Univ.	2004.12.15 - 2006.02.15
鄧立詩	土耳其 Middle East Tech. Univ.	2005.06.01 - 2006.08.31
黃翰雄	中國原子能科學研究所	2005.10.01 - 2006.02.23
路家棋	中國南京大學	2005.12.04 - 2006.12.03
高鐘	美國 University of Oklahoma	2005.12.23 - 2006.01.06
梁宗嶽	美國德拉瓦州大學	2005.12.29 - 2006.01.28
林宏一	台南大學自然科學教育學系	2006.01.01 - 2006.04.30
顏東茂	美國康乃爾大學	2006.01.02 - 2006.01.02
何健民	美國 Wichita State Univ.	2006.01.02 - 2006.01.15
Olga V. Drugova	Nizhny Novgorod State Medical Academy	2006.01.04 - 2006.02.03
Grigory V. Osipov	Nizhny Novgorod State Medical Academy	2006.01.04 - 2006.02.03
Syamal Kumar Dana	India Institute of Chemical Biology	2006.01.08 - 2006.02.04
小林俊一	日本東京農工大學	2006.01.09 - 2006.01.12
Kazutomu Shiokawa	日本 RIKEN	2006.01.09 - 2006.01.12
李大興	東華大學物理系	2006.01.09 - 2006.02.24
于 挺	美國 University of Rochester	2006.01.10 - 2006.01.14
胡比樂	美國 University of Maryland	2006.01.10 - 2006.01.17
Takashi Nakano	日本 Osaka University	2006.01.11 - 2006.01.14
Tomoaki Hotta	日本 Osaka University	2006.01.11 - 2006.01.14
Masaru Yosoi	日本 Osaka University	2006.01.11 - 2006.01.15
Jurgen Kurths	Potsdam University	2006.01.11 - 2006.01.18
馬紅孺	中國上海交通大學	2006.01.11 - 2006.01.28
蔡麗珠	台北科技大學分子科學與工程系	2006.01.11 - 2006.02.15
Naoki Kawashima	日本 Tokyo University	2006.01.12 - 2006.01.17
Iksoo Chang	韓國 Pusan National University	2006.01.14 - 2006.01.16
王尚勇	淡江大學物理系	2006.01.15 - 2006.02.14
曹慶堂	淡江大學物理系	2006.01.15 - 2006.02.15
周家復	美國 Univ. of Arizona	2006.01.15 - 2006.03.15

訪問學人	所屬機構	訪問期間
黎璧賢	中央大學物理系	2006.01.16 - 2006.02.15
湯兆崙	中正大學物理系	2006.01.20 - 2006.02.20
童若軒	中國上海師範大學	2006.02.10 - 2006.02.24
Jennifer Kreft	美國德州大學奧斯汀分校	2006.03.01 - 2006.03.09
小林俊一	日本東京農工大學	2006.03.05 - 2006.03.09
朱佩平	中國科學院高能物理研究所	2006.03.08 - 2006.03.24
Iain Stewart	美國 Massachusetts Institute of Technology	2006.03.29 - 2006.03.31
Yuko Okamoto	日本 Nagoya Univeersity	2006.03.29 - 2006.04.02
Zbigniew Struzik	日本 University of Tokyo	2006.03.29 - 2006.04.09
李金	中國 中科院 高能物理所	2006.04.01 - 2006.05.15
戈鵬平	中國科學院神經科學研究所	2006.04.15 - 2006.04.29
方彬彬	北京清華大學	2006.04.19 - 2006.09.19
Charanjit Singh Aulakh	Panjab University, Chandigarh	2006.04.24 - 2006.05.10
Sean Hayward	美國 Pennsylvenia State Univ	2006.05.01 - 2006.05.31
劉克非	美國 University of Kentucky	2006.05.01 - 2006.07.31
Choi Hyoung Jin	Inha Univ	2006.05.03 - 2006.05.08
Dang Mau Chien	(LNT) Vietnam National University	2006.05.08 - 2006.05.14
胡比樂	美國馬里蘭大學	2006.05.13 - 2006.05.22
何健民	美國 Wichita State Univ.	2006.05.18 - 2006.06.18
Soo-Bong Kim	Seoul National University, Korea	2006.05.22 - 2006.05.27
Wei-Li Lee	美國 John Hopkins Univ	2006.06.01 - 2006.06.08
Soumitra Nandi	Univ. of Calcutta	2006.06.01 - 2006.06.16
王孫崇	加拿大 Univ. of Toranto	2006.06.01 - 2006.08.31
Thomas D. Cohen	美國 Univ. of Maryland	2006.06.04 - 2006.06.10
Yevgeni Mamasakh	亞美尼亞 Yerevan State Univ.	2006.06.10 - 2006.08.10
Ravindra E. Amntkar	印度 Physics Research Lab., Ahmedabad	2006.06.12 - 2006.07.11
汪秉宏	中國科技大學物理系	2006.06.15 - 2006.07.10
王尚勇	淡江大學物理系	2006.06.15 - 2006.09.14
曹慶堂	淡江大學物理系	2006.06.15 - 2006.09.15

訪問學人	所屬機構	訪問期間
A. Zee	美國 Institute of Theoretical Physics, University of California	2006.06.19 - 2006.06.30
黎璧賢	中央大學物理系	2006.06.19 - 2006.09.18
李大興	東華大學物理系	2006.06.19 - 2006.09.19
郭永綱	東華大學物理系	2006.06.20 - 2006.09.20
陳宣毅	中央大學物理系	2006.06.20 - 2006.09.20
Peter Young	美國 Univ. of California, Santa Cruz	2006.06.21 - 2006.07.01
崔章琪	美國 IBM	2006.06.25 - 2006.07.01
梁宗嶽	美國 Univ. of Delaware	2006.07.01 - 2006.07.31
王昌仁	東海大學物理系	2006.07.01 - 2006.09.15
蔡麗珠	台北科技大學分子科學與工程系	2006.07.01 - 2006.09.15
湯兆崙	中正大學物理系	2006.07.01 - 2006.09.15
鄒忠毅	文化大學物理系	2006.07.01 - 2006.09.15
蔡志申	台灣師範大學物理系	2006.07.01 - 2006.09.15
張經霖	淡江大學物理系	2006.07.01 - 2006.09.30
馬遠榮	東華大學物理系	2006.07.01 - 2006.09.30
傅彥培	東華大學材料系	2006.07.01 - 2006.09.30
楊重光	台北科技大學	2006.07.01 - 2006.09.30
林英志	高雄應用科技大學	2006.07.01 - 2006.12.31
李金	中科院 高能物理所	2006.07.08 - 2006.08.21
Rokuta Eiji	日本早稻田大學	2006.07.18 - 2006.07.21
David B. Saakian	亞美尼亞 Yerevan Physics Institute	2006.07.26 - 2006.08.27
厚美瑛	中國科學院	2006.07.28 - 2006.08.09
劉玉娟	英國, Bristol University	2006.08.17 - 2006.10.03
Hassan Ouacha	National Institute of Advanced Industrial Science and Technology	2006.08.24 - 2006.08.26
Jaroslavs Antos	斯洛伐克科學院實驗物理研究所	2006.09.01 - 2006.10.31
鄧立詩	土耳其 Middle East Tech. Univ.	2006.09.01 - 2007.08.31
Andreas Erbe	University of Leeds	2006.09.25 - 2006.09.28
李梅樹	波蘭科學院	2006.10.12 - 2006.12.10

訪問學人	所屬機構	訪問期間
Naoshi Sugiyama	日本 Nagoya University	2006.11.11 - 2006.11.15
John Wei	加拿大 University of Toronto	2006.11.12 - 2006.11.18
Raymond John Rivers	英國 Imperial College, London	2006.11.16 - 2006.11.25
Brett J. Pokines	Asian Office of aerospace Research and Development, Tokyo, Japan	2006.11.27 - 2006.12.23
Hassan Ouacha	National Institute of Advanced Industrial Science and Technology	2006.12.01 - 2006.12.31
梁宗嶽	Univ. of Delaware	2006.12.01 - 2007.01.13
阮錫超	中國原子能科學研究所	2006.12.01 - 2007.02.28
Alessandro Taloni	University of Camerino	2006.12.06 - 2006.12.10
Michael M. Deem	Rice Univ.	2006.12.12 - 2006.12.20
Jan Busa	Kosice Technology University	2006.12.14 - 2007.01.23
尼斯瓦	Indraprastha University	2006.12.18 - 2007.01.15
歐陽頎	中國北京大學	2006.12.19 - 2007.01.26
Edik Hayryan	亞美尼亞 Joint Institute for Nuclear Research	2006.12.20 - 2007.02.18
路家棋	中國 南京大學	2006.12.24 - 2007.12.03
Toshifumi Yamashita	SISSA	2006.12.26 - 2006.12.28
Brett J. Pokines	Asian Office of aerospace Research and Development, Tokyo, Japan	2006.12.27 - 2007.01.06
Larry Ford	Tufts University	2006.12.29 - 2007.01.13