喬遷誌喜

李廣明	基隆市七堵開源路一三號鐵路工程隊	
胡紹鐘	新竹市東美路四二號之五	張紹鎬
馮潤椿	臺北市敦化南路一〇〇巷五弄二五號之三	
王國成	臺中縣后里鄉月眉糖廠	馬孝駒
金龍潛	高雄市忠孝二路八四巷四七號	
陸君賢	臺北縣中和鄉警安巷五號	
張椿頤	新竹市自由路一一巷一〇〇號	
吳善同	臺北市南京東路五段二九一巷三八弄19號	蔣超望
嚴溢祺	高雄市蓬萊路一八號	
許　俊	台北市和平東路青田街八號之八	
沈繩一	台北市敦化南路三九〇巷五號之三	
金惲敦	台北市仁愛路四段12巷18衖一一一號	
彭宗灝	台北市安東街三一三巷廿三弄廿號之三	張殿民
沈炳中	Mr. P. T. Sun 1119 King Road Moscow, Ida, 83843 U. S. A.	
	Mr. T. P. Wang 13310 Coyle	陳德坤
	Detroit, michigan 48227 U. S. A.	
	Mr. Shau Hoa Chang 25 West 76th Street NewYork, N. Y. 10023 U. S. A. Telephone: 212-TR42963	
	Mr. H. J. Ma 1401 S. Sixth Ave. Des Plaines' ILL. 60018 U. S. A.	
	Mr. C. W. Chiang 1331 Glen Garden Drive Bldg 45, Apt 1, Newport News, Uerginia 23605 U. S. A.	
	Mr. T. M. Chang 3310 Leonidas Huston, Texas 77019 U. S. A.	
	Mr. D. K. Chen c/o Malay states Shpping Co. 6 Cecil St. Singapore	

母校要聞三則

鍾皎光

壹、淩前校長與王樹芳校友蒞校指導

客冬王樹芳校友因公自日來臺，曾與淩校長相約，於十二月十九日蒞校視察。皎光車站歡迎，則見食品工業研究所所長曾震東校友與唐慧貞校友亦同車蒞止，乃相與先往該所參觀，然後轉赴本校。簡報之餘，繼以視察，諸凡圖書館、實驗館、研究工場、計算機中心等，莫不蒞臨。備承淩前校長與王學長多方指導與鼓勵。是日適值美國國家科學院太平洋科學處副處長許伯樂博士 (Dr. Robert B. Sheeks)，由經合會技術合作室副處長孫金聲校友陪同來校參觀與洽談業務，當一併邀請參加午餐，三長暨各系主任亦均與焉。中外嘉賓邂逅之餘，獲同餐敘，咸感機會至爲難得。

貳、美國國際基金會撥贈設備費

本校爲充實設備，以適應「董浩雲講座」等需要，曾於去年十一月十一日，開列設備清單，函洽美國國際基金會撥贈美金一六、五〇〇元，以資購置。嗣獲該基金會十二月十五日函覆照撥，並將支票附寄。按該申請之得以順利通過，實拜旅美校友鼎助之賜，感何如之！茲將有關函件，刊登如次：

(1)校方致國際基金會函

(註：函中所附申請書，長凡十頁，因所佔篇幅過多，故不併送刊登)

November 11, 1967

Dr. Magnus I. Gregersen
President
International Foundation
155 Chesternut St.,
Englewood, N. J.

U. S. A.

Dear Dr. Gregersen:

It was a real pleasure to have had your acquaintance some ten years ago, when I was serving the National Taiwan University as Dean of its College of Engineering. (I kept on serving as Dean of Engineering until August of 1965, when I was transferred to the post of Dean of Studies, National Taiwan University).

National Chiao Tung University was founded in Shanghai in 1896 and has been famous for its alumni, who have emerged into prominence in various fields. The University was refounded in Taiwan in 1958 with the establishment of the Instituts of Electroics. It has just been expanded into its College of Engineering, which comprises 4 departments and the original Institute. As a result of this expansion, I have been President of the College since the first of last September.

As the government appropriations for our College are so limited, we have to resort to various foundations for funds to defray for the purchase of special equipment and facilities. Please allow me to take the liberty of submitting to your esteemed Foundation an application for a grant to purchase the listed important equipment to strengthen the research work in in the Institute of Electronics of our College. Judging from your generosity as shown in your successive grants for both National Taiwan University and National Chiao Tung University, we anticipate your compliance with our request. Your favorable consideration of the proposal and your presentation of this application to your Board of Trustees for approval would be greatly appreciated, not only by our College but by the entire electronic industry in Taiwan as

well.

On September 4th, I had the pleasure of meeting Mr. Samue l S. Auchincloss at the luncheon party given in his honor by Mr. Y. M. Chen. I was greatly impressed by hie knowledge of the industry industry in Taiwan and his understanding of the needs of our College.

I look forward to hearing from you a reply in the affirmative.

Very sincerely yours,

Kow-Kwong Choong
President
NCTU College of Engineering

cc to Dr. C. T. Shen
Dr. C. C. Wang
Mr. Y. M. Chen
Mr. Paul C. Yu
Mr. Darfoon Du

KKC/jt

(2)國際基金會覆校方函

December 15, 1967

President Kow-Kwong Choong
College of Engineering
National Chiao Tung University
Hsinchu, Taiwan

Dear President Choong,

Your letter of November 11th requesting $16,500 for educational equipment and electronics for the Electronics Institute of Chiao Tung University was reviewed by the

Grants Committee at a recent meeting and recommended to the Trustees for approval

I am happy to inform you that the Trustees have taken favorable action on this request and I enclose herewith a check for $16,500 to be applied towards the purchase of educational equipment in The United States.

On behalf of the Trustees I wish to express our best wishes for for the continued success and progress of the College of Engineering, and that the present grant will be of material assistance in developing your educational facilities in the Electronics Institute.

With warmest regards,

Sincerely yours,

MIG/mm

Check Encl:

(3)校方致國際基金會申謝函

December 29, 1967

Dr. Magnus I. Gregersen
President
The International Foundation
P. O. Box 101
Englewood. New Jersey 07631
U. S. A.

Dear Dr. Gregersen:

Your esteemed letter of December 15 1967 together with a check for $16,500 as the enciosure has just been received with profound gratitude for the favor you and the Trustees of your Foundation have shown us in the approval of our request for the grant.

The check for $16,500 is being deposited to our account with the New York Agency of Bank of China and will soon be ready to be defrayed for the purchase of educational equipment in the United States. In this eegard you may rest assured of our prompt information on how your grant is actually spent.

On behalf of our College I should like not only to express our gratitude for your generous grant but also to request of you the kindness to perpetuate your spiritual support and material assistance.

With heartfelt thanks and warmest regards.

Sincerely yours,

K. K. Choong

President

KKC/jt

叁、美國西屋電氣公司捐贈剩餘設備

本校校友潘寶梅博士與凌宏璋博士，同在美國西屋電氣公司服務，且均居要職，深爲該公司所器重。潘、凌兩博士對於母校素極關切；近向該公司索贈其所剩餘之貴重設備多件，查爲：(a)誘導加熱器一具。(b)擴散爐一具。(c)石英擴散管等多枝。(d) Hulen Line-up Table一張，估值美金七千二百元。該項設備並經校友程威廉先生洽交其服務所在之招商局裝運臺灣。本校業經辦妥有關提取之準備手續。茲將致謝各校友函，彙予刋登：

(1)校方致謝潘寶梅校友函

December 29, 1967

Dr. Paul P. M. Pan
Aerospace Division

(2)校方致謝凌宏璋校友函

December 29, 1967

Dr, H. C. Lin
8 Schindler Court
Silver Springs, Maryland
U. S. A.

Dear Dr. Lin:

It gives me a real pleasure to recollect our interview here in Taiwan last year, when you were attending as a lecturer the 1966 CIE Seminars on Modern Engineering and Technology.

On behalf of our College, I take great delight in expressing our gratitude for your enthusiasm and effort to have helped make possible a generous donation from the Westinghouse Electric Corporation.

By the way, the previous donation of a multiprobe was another credit you would have merited.

The packing list forwarded by you has been received by Dean Wen and has served the purpose of initiating the customs procedure. The bill of lading presumably forwarded by Mr. Willian Cheng has not been received as yet.

Letter of appreciation will be mailed to the Westinghouse Electric Corporation as soon as we have received the donations.

With warmest regards.

Sincerely yours,
K. K. Choong
President

c. c. to Pres. C. T. Shen

Westinghouse Electric Corp.,
Friendship Airport,
Baltimore, Maryland,
U. S. A.

Dear Dr. Pan:

I beg to express, on behalf of the College, our profound gratitude for your enthusiasm and effort to have made possible a generous donation from the Westinghouse Electric Corporation. The donation is a handsome one indeed, this being evident from its price as US$7,200, given primarily for the customs procedure.

The improvement of equipment adequacy through this donation will undoubtedly result in enhancing the teaching efficiency and broadening the research capability. This is an unusual contribution to Chiao Tung and you, ever so loyal an alumnus, merit the credit.

Not until the donation has been reeeived shall I write to the Westinghouse Electric Corporation for the expression of our appreciation and gratitude.

with warmest regards.

Sincerely yours,
K. K. Choong
President

c. c. to Pres. C. T. Shen
Mr. T. C. Tsao
Dr. L. J. Chu
Dr. C. C. Wang

KKC/jt

Mr. T. C. Tsao
Dr. L. J. Chu
Dr. C. C. Wang

KKC/jt

(3)校方致謝程威廉校友函

December 29, 1967

Mr. William Cheng
China Merchants Steam Navigation Co.,
61 Broadway, N. Y. 6, N. Y.
U. S. A.

Dear Mr. Cheng:

According to Dr. C. C. Wang, the equipment donated by the Westinghouse Electric Corporation is being shipped Taiwan-bound on board S. S. Hai-Ho, scheduled to have left New York early December.

I feel obliged to express on behalf of the College, our gratitude for your enthusiasm and effort to have made the arrangement for shipment possible.

Although the bill of lading has not yet been received, we have already initiated the customs procedure with the packing list forwarded by Dr. H. C. Lin.

As soon as the donations have reached us, an efficial letter of appreciation will be forwarded to your esteemed CMSN Co.

With warmest regards.

Sincerely yours,
K. K. Choong
President

c. c. to Pres. C. T. Shen
Mr. T. C. Tsao
Dr. L. J. Chu
Dr. C. C. Wang

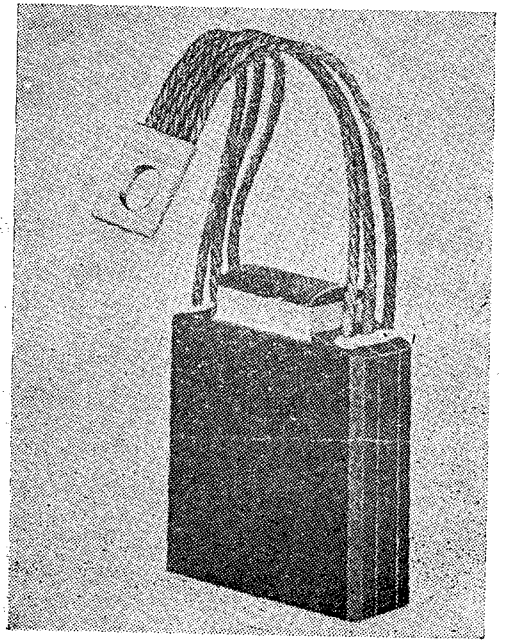
KKC/jt

科學消息

由美洲校友會供給資料

臺鐵陳景福學長對柴油機車 Flashover fnoflew 甚爲頭痛，此小消息對他或有興趣。

——編者註



Traction-motor brush

The AC-100 Tri-Power diesel-electric traction-motor brush, according to the manufacturer, has increased brush life and improved commutator condition on several large railroads. The "floating" action of the center wafer in the brush is said to produce maximum brush-to-commutator contact of all

wafers. Pad of new design and material is permanently bonded to the brush which is available both for original equipment and replacement use. Stackpole Carbon Co.

OPTICS

Synthetic Ruby Laser

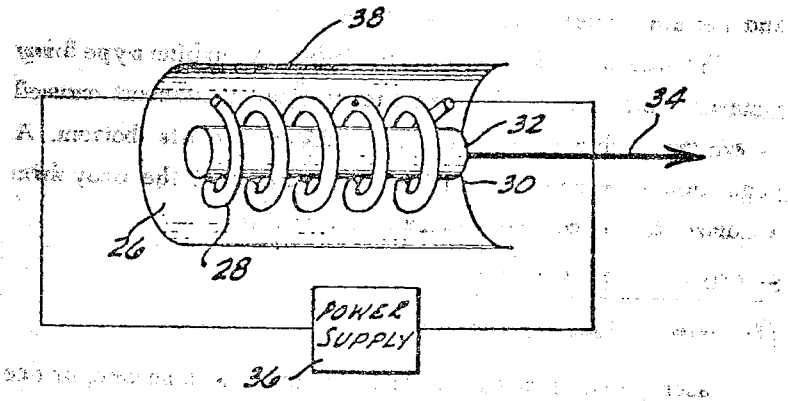
The man who first successfully amplified the laser light of ruby last week received a patent on the operating system.

Dr. Theodore H. Maiman, now president of Korad Corp. in Santa Monica, Calif., assigned rights to Hughes Aircraft Co., Culver City, Calif., where he was was working at the time of the development in 1960 (SN:7/23/60).

An atomic method for amplifying light beams was suggested early in 1959 by Drs. C. H. Townes, now a Nobelist and professor-at-large at the University of California, and Arthur L. Schawlow, chairman of the physics department at Stanford University. Many scientists immediately started working to see if they could build a laser, Dr. Maiman among them.

Dr. Maiman was convinced that synthetic ruby was the proper material for a laser, while his competitors experimented with different materials.

As originally developed Dr. Maiman, a light source such as a powerful flash tube lamp, irradiates a synthetic ruby crystal. This optical energy excites the ruby atoms to a higher energy state from which the energy is reradiated almost entirely in one frequency band. The excited atoms are coupled to the atomic resonator and stimulated to emit their radiation together.



In ordinary light sources, the atoms radiate individually at random and the light is therefore incoherent. The light from the ruby laser, as well as other optical masers, is coherent.

A ruby laser very similar to the one Dr. Maiman developed originally can be bought for from about $5,000 to $50,000, depending upon the power output. Purchasers are mainly university and industrial laboratories for scientific experiments.

BUOYS

Power from Waves

Harbor buoys which utilize the motion of waves to generate electricity for their lights and fog horns have been developed and tested in Japan.

The buoys reportedly are less expensive to operate and less troublesome to service than buoys using standard or solar batteries.

According to Nichiro Kogyo Corp., which builds them, the buoys require a battery check only once or twice a year

and general repair every two years.

The buoys work on two principles. A turbine-type buoy generates electricity through the vertical movement caused by waves acting on a long stem attached to its bottom. A pendulum-type converts the rocking motion of the buoy into a horizontal force that generates electricity.

SOLID STATE PHYSICS

Measuring Laser Pulses

Laser pulses lasting about a trillionth of a second, or one picosecond, can now be measured accurately for the first time, making it possible to measure picosecond events in atoms and molecules.

The laser pulses are measured by taking advantage of a phenomenon known as two-photon absorption, Drs. J. A. Giordmaine and his co-workers report in APPLIED PHYSICS LETTERS (Oct. 1).

In the technique, the pulse is reflected by a mirror immersed in a clear organic solution. The solution's molecules are such that they emit light by radiating a photon after absorbing two photons from the laser pulse. The resulting intense fluorescence from the release of a large number of photons in the area where the pulse overlaps itself clearly illuminates the pulse as a short bright region near the mirror.

The pulse, usually a hundredth of an inch in length, is recorded photographically--one of thc briefest events yet photographed.

PHYSICAL CHEMISTRY

Two Forms of Solid Hydrogen

An answer to the puzzling question of why the crystal

structure of solid hydrogen is sometimes hexagonal and sometimes cubic has been found by Los Alamos Scientific Laboratory researchers. Drs. Adam Schuch and Robert Mills have shown by X-ray photos that hydrogen and deuterium of the hexagonal type changes to the cubic form when the temperature is lowered close to 457 degrees below zero F.

By studying diffracted X-rays with a geiger counter, the Los Alamos scientists were able to get a motion picture view of the nature and progress of the change. The crystals switch from hexagonal to cubic because certain layers of molecules shift relative to other layers.

Solid hydrogen and deuterium can be returned to their original hexagonal structure by raising the temperature close to the melting point, the scientists reported at the American Physical Society meeting in New York.

DRUG THERAPY

New Drug Against Tuberculosis

The Food and Drug Administration has approved a new anti-tuberculosis drug active against strains of the tubercle bacillus that are resistant to available drugs.

In spite of significant inroads against TB in the last 25 years, the disease still infects some 15 million to 20 million persons in the world and kills two million to three million every year. In 1964, TB killed 8,303 persons in the United States.

The new drug, called Myambutol by Lederle Laboratories, Pearl River, N. Y., where it was developed, will be used only in combination with isoniazid or streptomycin, the two drugs currently used against tuberculosis. In experiments with

One problem with electrostatic printers has been accuracy, but that problem is being solved, according to a Xerox spokesman.

BUILDING TECHNOLOGY

Plastic bricks

A revolutionary new plastic building brick developed by an English inventor, Geoffrey Hern, will go into production in November. The project is a joint effort by Courtaulds, a British synthetic fiber maker, and Guinness Breweries.

Hern said that he expected to be able to produce and sell 20 million bricks in the first year, representing a turnover of between $4 and $6 million.

"We have ordered an output of 500,000 in the first month," he added, "and have already won a contract that will take half of these."

The bricks are a foot long, 4 inches wide, and 4 inches high. Each has an interlocking device, which enables it to be clipped to another brick, like toy units.

Hern claims that if his bricks were employed, a builder could complete a bungalow from start to finish, including all on-site work, within four days.

SYNTHETICS

Soybeans for nylon

A raw material obtained from soybean oil has been used by chemists at the Agriculture Department's Northern Regional Research Laboratory, Peoria, Ill., in the experimental manufacture of Nylon 9.

previously untreated patients, Myambutol given with one of these other drugs completely wiped out tubercle bacilli in 100 percent of cases, according to Dr. Marjorie M. Pyle of the Illinois State Tuberculosis Sanitorium, Chicago.

The bacilli are often resistant to streptomycin or isoniazid used alone.

AGRICULTURE

Dry Rice Seed Gives Full Harvest

Rice seeds harvested with little moisture content produce faster growing rice crops, the American Society of Agronomy was told at its annual meeting in Washington.

Rice plants emerge a lot earlier and grow a lot faster when the harvested seed rice contains 20 percent moisture content or less, said Dr. Ervin A. Oelke, agronomist at the University of California.

CYBERNETICS

Fast Print-out for computers

Machines to print the output of big computers are getting faster all the time, but not fast enough to suit the users or the engineers.

Most output printers are electro-mechanical, using switches and printing hammers. A printer patented last week uses electric sparks to mark special paper, at a speed which the inventor claims can be eight times faster than the high-speed printers now in use.

The new electrostatic printer, patented by Paul F. King and assigned to Xerox Corp., puts out a page at a time, saving milliseconds on the paper-advance time.

INFRARED

Thermal mapper charts forest fires

An airborne thermal mapping device, successfully tested recently over forest fires in Idaho and Montana, can pinpoint hotspots and small blazes that might otherwise be overlooked, and can record the image either on film or video tape.

Developed by the Bendix Corp.'s Aerospace Systems Division in Ann Arbor, Mich., the infrared device can detect temperature differences under one degree F.

Other uses for the instrument include location of possible sources of water pollution by mapping temperature variations in currents, early detection of crop disease, spotting of geothermal energy sources and exploration for oil and gas.

In fighting forest fires, the device enabled mapping of the fire from an altitude of 6,000 feet, despite dense smoke that completely obscured the ground.

It absorbs less moisture than domestic commercial nylons and is used in metal coatings, electric parts and moulded products. A fiber of it weighing 0.0001 pound per inch can support about one pound.

The new process using soybean oil was developed by Richard A. Awl and Drs. William R. Miller, Everett H. Pryde, and William L. Kohlhase.

COMMUNICATIONS

Artificial ionosphere

Creation of an artificial ionosphere for use in a communications system that would be independent of perturbations, as well as of the frequency and distance limitations of conventional systems, is being investigated by engineers with the U. S. Army Electronics Command at Ft. Monmouth, N.J.

The man-made ionosphere would be produced by rocketing a payload of cesium-aluminum which would explode at a height of about 60 miles, the "E" region of the atmosphere. The cloud could then be incorporated into an elaborate system including tropospheric scattering, ionospheric scattering, meteor trails and the natural E layer. Such a system could be used for ranges of up to 1,400 miles without skip and despite adverse propagation conditions, according to Edward L. Blackwell.

For frequencies around 30 megacycles, 30 pounds of cesium-aluminum has produced a cloud that would support transmission for up to two hours, Blackwell says. The signal scattered extends up to 700 or 800 miles.