



Catalyzer

International
Chemistry
Olympiad
237th
July 18-25, 2005
TAIPEI, TAIWAN

http://icho.chem.ntnu.edu.tw

Monday 26 July 2004 Issue No. 1

Greetings from the President of the Academia Sinica

It is my great pleasure to welcome you to the 37th International Chemistry Olympiad to be held in Taipei.

As a modern science, chemistry has contributed enormously to the amazing progress of the world. The atomic theory of matter, the double-helix structure of DNA, and the latest adventures in nanotechnology are but a few well-known examples of how chemistry has brought significant changes to our everyday life. As a student of chemistry for more than half a century, I have never ceased to believe in the magic power of chemistry. The world of chemistry is indeed marked with miraculous unmapped territories.

I have strong confidence in the younger generation of chemists to do cutting-edge research in the field. New frontiers are to be explored, significant breakthroughs are to be made, and new theories and approaches are to be formulated. The International Chemistry Olympiad, as a long-standing, prestigious world-wide competition in chemical research, provides an exciting starting-point for many young and promising chemists to fulfill their dreams.

On behalf of the Steering Committee, I once again welcome you to join us at the forthcoming Olympiad to be taken place on this island. Many of you will meet at the 2005 Olympiad not only to compete but also to make friends and to explore your common interest in the field of scientific research. This, I believe, is likely to signal the beginning of your life-long career as scientists.



Yuan T. Lee
Dr. Yuan T. Lee
President
Academia Sinica
1986 Nobel Laureate in Chemistry

Welcome Message from the Minister of Education

Taiwan, the "Formosa, the beautiful island", is waiting for you!

The International Chemistry Olympiad (IChO) was initiated in 1968 for the propose of promoting chemistry education within each participating country, for motivating young talented students towards chemistry and to provide an atmosphere for cultivating friendship among its participants. Therefore, IChO is the most prestigious competition for those high school students who will be representing your countries.

The 37th IChO will be held in Taipei, Taiwan from July 16 th-25 th 2005. Representatives from more than 68 countries will be participating in this competition. This will be a unique opportunity to have our young and talented students show their abilities and creativeness in chemistry to the international community. It will also be an intellectual festival for these elite students from all over the world. Participation in the IChO-2005 Competition is something to be very proud of.

The IChO-2005 Competition be held at two university sites, in downtown Taipei. These sites are at the National Taiwan Normal University's College of Science (NTNU) and at the National Taiwan University (NTU). Both university campuses offer a pleasant and vital atmosphere.

Taipei is Taiwan's capital, as well as being its economic and cultural center. Because of its modern and cosmopolitan atmosphere, Taipei offers the visitor gracious hospitality, world-renown Taiwanese cuisine and a place where unforgettable memories and friendships are formed.

Please remember to circle the dates of July 16 th-25 th 2005 on your calendar for the 37th International Chemistry Olympiad, in Taipei, Taiwan. We look forward to seeing you here.

Cheng-Sheng Tu
Dr. Cheng-Sheng Tu
Minister of Education



A Message from the Minister of the National Science Council

It is a great honor for Taiwan to host the Thirty-Seventh International Chemistry Olympiad. We cordially welcome students from all countries to take part in this long-standing, world-renowned scientific competition.

In contrast to the diversity found in human cultures and languages, chemistry and other scientific disciplines articulate a common language that is recognized around the world. Scientists use the same symbols and equations to express their findings and exchange ideas. Over the past century, the development of science has not only played a vital role in modernizing societies and improving the welfare of human life, but has gradually formed the idea of a global village. This concept of a connected community is wonderfully exemplified in the International Chemistry Olympiad, which draws young students together to strive for excellence in chemistry, and also provides opportunities for participants to establish friendships across political, religious, and ethnic borders.

Today, Taiwan's government is enthusiastically promoting a knowledge-based economy and the modernization of industries. These efforts will transform the island from the traditional manufacturing-based industries

of the "Made in Taiwan" (MIT) era into the knowledge-based economy of the "Invented and Innovated in Taiwan" (IIT) era. Therefore, we are pleased to see this gathering of many young promising scientists from every continent for this upcoming Olympiad, as it will help motivate science education not only in our country, but also in each participating nation. While maintaining steady growth in her economy, Taiwan has made great strides in developing into a democratic society through peaceful political reform over the past decade. During your stay, you will see a friendly, energetic, and democratic society in Taiwan.

Welcome to Taiwan!
We are looking forward to seeing you in Taipei.

Maw-Kuen Wu
Dr. Maw-Kuen Wu
Minister of the National Science Council



Journal for the 37th International Chemistry Olympiad • Taipei, Taiwan • Monday 26 July 2004 • Issue No. 1

Taiwan

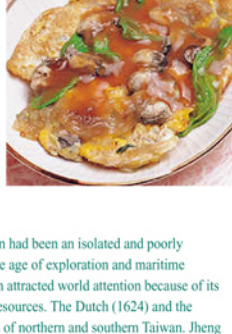
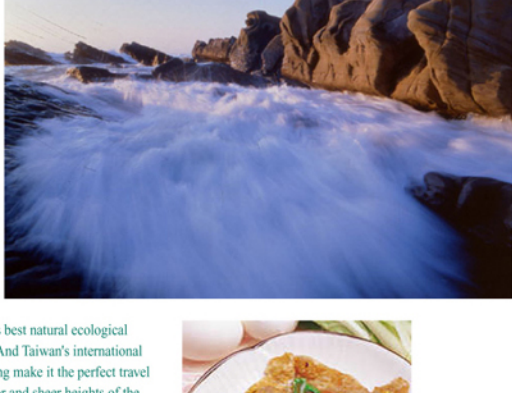


Area:
36,179 square kilometers
Population:
22.56 million
Capital:
Taipei City
People:
Chinese
Language:
Mandarin/Taiwanese/Hakka
Religion:
Buddhism/Taoism/Christian
Gross National Product (GNP):
US\$289.3 billion
Per Capita GNP:
US\$12,916
Gross Domestic Product (GDP):
US\$281.9 billion
President:
Chen Shui-Bian

Taiwan is shaped like a tobacco leaf that is narrow at both ends. It lies off the southeastern coast of mainland Asia, across the Taiwan Straits from Mainland China--a solitary island on the western edge of the Pacific Ocean. To the north lies Japan and Okinawa, to the south is the Philippines. So the geographic location of Taiwan makes it the unique international situation.

Despite being ruled by colonial regimes in the 17th and 20th centuries and martial law for 40 years after World War II, Taiwan's peaceful democratization has been acclaimed as a "quiet revolution." Today, Taiwan's civil society has flourished, and it is a pluralistic society where a wide variety of views are tolerated. The continued efforts of the people and government are bringing Taiwan into the mainstream of promotion and protection of human rights; the hard work and entrepreneurial spirit of the people has created the "economic miracle"; their peace-loving personalities make Taiwan not hesitate to share its newfound wealth with others; and its economic assistance and humanitarian aid to developing countries have received international recognition and friendship.

Crossed by the Tropic of Cancer, lying on the western edge of the Pacific "rim of fire," and surrounded by oceans which are why the natural environments in Taiwan are so diversified and famous for "Ilha Formosa," called by the Portuguese for Taiwan in the mid-16th century. There are about 18,400 species of wildlife on the island, with more than 20% belonging to rare or endangered species. Therefore, the government has established 6 national parks and 11 national scenic areas to preserve Taiwan's best natural ecological environment and cultural sites. And Taiwan's international flights are well developed, helping make it the perfect travel destination to take in the splendor and sheer heights of the cliffs at Taroko Gorge; to take a ride on the Alishan train--one of only three mountain railways in the world--and experience the breathtaking sunset and sea of clouds; to hike up to the summit of Northeast Asia's highest peak, Jade Mountain; to explore the natural ecology including the species of flora and fauna that are unique to the Shei-Pa National Park; to soak up the sun in Kending, Asia's version of Hawaii; to traipse the colorful ocean bays and geological landscapes composed of volcanic sedimentary rocks at the North Coast, and so on.

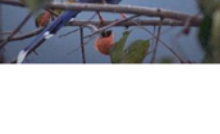


Taiwan's culture just one big exciting melting pot! Food is the best representative of this cultural mixing and matching. Therefore, tasting the Taiwanese cuisine is necessary while visiting Taiwan.

Taipei: A Cyber City



City Tree:
Banyan (*Ficus microcarpa*)
City Flower:
Azalea (*Rhododendron* spp.)
City Bird:
Formosan Blue Magpie



As the current capital of Taiwan, Taipei is a vibrant blend of traditional culture and cosmopolitan life. Taipei is the political, economic, educational and recreational center of the country, offering an array of significant cultural sights. The city is nestled in majestic, lush green mountains within the Taipei Basin, lying near the northern tip of the island of Taiwan, which is shaped roughly like a tobacco leaf. The city is divided into 12 districts, and encompasses a total area of 271.79 square kilometers. The population has reached to 2,627,138 (as of Nov. 2003), making it one of the most crowded cities in the world. Given the limited physical space, Taipei has moved to a cyber city, and has promoting to be a global biotech city since 2002. In doing so, Taipei seeks to better the lives of its residents as well as transform Taipei into a competitive international metropolis forging ahead into the 21st century.



Taipei is constantly reinventing itself, and has been undergoing major urban renovations over the last ten years, building the Mass Rapid Transit (MRT) system and bypass highways, expanding major thoroughfares, and moving railways underground, then it emerges as one of the Orient's most convenient and attractive cities.

Taipei 101, the new landmark of Taipei city and a world renowned building. It's not only a new record-creating dream in Taiwan's architectural history, but more to do something meaningful for Taiwan, to show the world Taiwan's economic power and technical capability. The 101-floor skyscraper resembles sections of sturdy bamboo rising from the ground, steadily growing taller, flexible but strong representing the eternity of Chinese traditional architecture with local Taiwanese features. Taipei 101 Mall, the first world-class shopping mall in Taiwan, presents you with designer brands, latest fashion, and gourmet dishes, and the world-class space design and artistic architecture make shopping here a joyful pleasure. Now, the Internet's "Skyscraper Page" carries a message congratulating Taipei 101 on its confirmation as the world's tallest building.

During Taiwan's long history, the old architectures in Taipei are also rich in cultural heritage. Long Shan Temple is the city's oldest and most famous temple, and the Lin Family Garden is the island's finest example of classical Chinese landscaping and architecture. Taipei's leading attraction is the majestic National Palace Museum, which houses the world's largest and finest collection of oriental art treasures. The Chiang Kai-shek Memorial Hall, the island's most impressive monument to the late president, has a beautiful Ming-style arch at its main entrance that is flanked by the National Theater and the National Concert Hall.

In addition to numerous other attractions, Taipei is well known for its lively night markets, a true experience of modern Taiwanese life. In this prosperous city, you will be amazed at the beauty of the Yangmingshan National Park, towering over Taipei City, the volcanic terrain gives it a limitless supply of geothermal resources and makes it an ideal place for hot-spring bathing. At Wulai, just south of Taipei City, there is an indigenous village where visitors can enjoy the traditional dances and ceremonies of Taiwan's Atayal people, as well as the beauty of a magnificent waterfall cascading through lush vegetation.

With the wealth of interesting and fun activities available in Taipei, and its warm hospitality, visitors are certain to be able to come in touch with all aspects of this city's multifaceted culture.

General Information for Visitors

Tourist visas for Taiwan can be obtained from the ROC Ministry of Foreign Affairs and ROC embassies, consulates, or representative offices in foreign countries. Both single- and multiple-entry visas are available and are valid for between 14 to 60 days. Citizens from 21 countries are permitted to stay in Taiwan for up to 14 days without a visa so long as their passports are valid for at least six months from the date of entry and they have an onward or return plane ticket with confirmed seats. These 21 countries are Australia, Austria, Belgium, Canada, Costa Rica, France, Germany, Greece, Italy, Japan, Luxembourg, New Zealand, the Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States. The unit of currency in Taiwan is the New Taiwan Dollar (NT\$). The exchange rate as of December 2003 was around NTS34 to US\$1 and is subject to fluctuation. Foreign currencies can be exchanged at government-designated banks, hotels, and shops.

All major credit cards are accepted in Taiwan, and traveler's checks may be cashed at large hotels, tourist-oriented restaurants, souvenir shops, most department stores, and local branches of the banks that issued them. Banks are open from 9:00 A.M. to 3:30 P.M. Monday through Friday. Most commercial firms operate the same hours as banks, except they close two hours later. Department stores are open daily from 10:00 A.M. to 10:00 P.M., in general. Government offices are open from 8:30 A.M. to 5:30 P.M. Monday through Friday. All territories under the Taiwan government's jurisdiction follow one time standard, which is UTC GMT +8:00 hours. Accommodations available around the island include international tourist hotels, standard tourist hotels, and youth activity centers. The electricity used throughout Taiwan is 110-volt, 60-cycle AC. The drinking water served in hotels and restaurants is usually distilled or boiled.

Journal for the 37th International Chemistry Olympiad • Taipei, Taiwan • Monday 26 July 2004 • Issue No. 1

Program

- S**aturday 16 July
- Arrival of Mentors, Students, and Guests
 - Registration
 - Welcome Dinner
- Sunday 17 July**
- Opening Ceremony in Howard International House.
 - Laboratory Inspection & Safety Instruction
 - 1st Jury Meeting
 - Translation of Practical Examination
 - Night Tour to Yang Ming Shan National Park & Hot Spring for Students
 - Wu-Lai Aboriginal Tour for Guests
- Monday 18 July**
- Translation of Practical Examination
 - Taipei City Tour for Students
 - Excursion to Shei-Pa National Park(2 days) for Guests
- Tuesday 19 July**
- Taipei City Tour for Mentors
 - 2nd Jury Meeting
 - Translation of Theoretical Examination
 - Practical Examination
 - Sport Activities for Students
- Wednesday 20 July**
- Translation of Theoretical Examination
 - Excursion to North Coast for Students
 - Excursion to Northwest Coast for Guests
- Thursday 21 July**
- Excursion to North Coast for Mentors and Guests
 - Theoretical Examination
 - Night Tour for Students
- Friday 22 July**
- Excursion to Yang Ming Shan National Park & National Palace Museum for Mentors
 - 3rd Jury Meeting
 - Excursion to Wu-Lai for Students
 - Excursion to Hualien(2 days) for Guests
- Saturday 23 July**
- Arbitration in Groups
 - Wu-Lai Aboriginal Tour for Mentors
 - 4th Jury Meeting
 - Excursion to Formosa Fun Coast for Students
- Sunday 24 July**
- Shopping in Taipei
 - Closing Ceremony & Party
 - Closing Dinner
- Monday 25 July**
- Farewell



National Taiwan Normal University (NTNU)

National Taiwan Normal University (NTNU) is a dynamic university, offering top quality education and research opportunities to those who study there. Originally founded in 1946, as the provincial Taiwan Teachers College, NTNU continues to uphold the highest of standards for the preparation of teachers and intellectuals, that it committed itself to in 1967, when it became a National University.

After the enactment of the Teacher Preparation Law in 1994, NTNU revitalized many of its programs, resulting in the ongoing process of offering students chances to broaden their academic horizons, with the commitment to mentoring and preparing its students for the challenges of the 21st century. Over the past five decades, NTNU has played a leading role not only in the growth of Taiwan's higher and secondary education, but also with the international university community. It has been able to establish links with numerous prestigious educational institutions from around the world. Through such programs, NTNU has shown that it is taking active steps to become an international university.

National Academy for Educational Research

The accommodation for mentors and guests in 37th IChO will be the National Academy for Educational Research (NAER). This organization, responsible for educational reform to increase international competitiveness in Taiwan, was formally established in



May 2000 and located at Sanhsia. This cultural thriving town is about 22 Km southwest to Taipei; had been flourishing for the procession of agriculture and forestry, such as cloth dyeing, kamphor, and tea leaves in the period of Japanese colonization. But now, it is known for the Sanhsia Bridge with its prominent arches and columns stands above the Sanhsia River, the Old Street, and the Tsushih Temple. The Tsushih Temple is famous for its delicate architecture, the rich tapestry of Chinese art and culture, and won the name of "The Palace of Oriental Art".

Lessons in Chinese

- | | |
|-----------------------------|---------------------|
| ◆ Yes | 是的 /shyh de/ |
| ◆ No | 不 /buh/ |
| ◆ Please | 請 /ching/ |
| ◆ Excuse me! / Sorry! | 對不起 /tuey buh chii/ |
| ◆ Thank you! | 謝謝 /shieh shieh/ |
| ◆ Good bye. /See you later! | 再見 /zay jian/ |

Sponsor

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Industrial Technology Research Institute

Customer Sincerity Credibility Cooperation
CHINA STEEL CHEMICAL CORPORATION

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Wah Lee Industrial Corp.

中國合成橡膠股份有限公司
CHINA SYNTHETIC RUBBER CORP.

TAIYAN 台鹽集團

CHEMICAL SOCIETY

台灣石化合成公司
Tasco Chemical Corporation



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Co-hosted by
Ministry of Education
National Science Council
Organized by
National Taiwan Normal University



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International
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<http://icho.chem.ntnu.edu.tw>

Friday 1 July 2005 Issue No. 2

Greetings from the Coordinator of the Scientific Committee

The 37th International Chemistry Olympiad will be held in Taipei on July 16-25, 2005. It is a great pleasure and honor for me to organize the Scientific Committee.

The Scientific Committee, recruited 21 professors that were devoted themselves to learning different fields in Chemistry; they have put a lot of effort on this event for almost two years. We tried very hard to integrate the studies of Chemistry in Taiwan and the individual specialty to prepare the examination problems. And our success, in the end, can only be achieved by your encouragements and positive suggestions.

On behalf of the Scientific Committee, I would like to welcome all of you to Taiwan, and provide the young elite with an opportunity to distinguish yourselves in Chemistry.



Dr. Peng, Shie-Ming

Coordinator of the Scientific Committee, 37th 2005 IChO
Professor, Department of Chemistry, National Taiwan University
Academician, Academia Sinica

Greetings from the Chairman of the Organizing Committee

The International Chemistry Olympiad is held in different countries around the world and has been a great event in discovering talented young minds for the world of Chemistry. As a chemist and Chemistry teacher myself, I feel most honored and delighted that we, National Taiwan Normal University, have the opportunity to be in charge of this great event, provide a wonderful platform for the most outstanding Chemistry teachers and students of the world to demonstrate and share their expertise with each other.

To prepare for this Chemistry Olympiad, my colleagues in NTNU are very exciting, but also have been very painstaking in planning and preparation. We hope to ensure all of the participants comfort and convenience both in accommodation and travel during the period of the IChO. Here, on behalf of the Organizing Committee, may everyone have a beautiful memory while staying in Taiwan.



Prof. Ming-Chang P. Yeh

Chairman of the Organizing Committee of the 37th 2005 IChO
Dean of School of Science, NTNU

Greetings from Secretariat, 37th 2005 IChO

We are very pleased to publish the No.2 issue of Catalyzer two weeks ahead of the 37th International Chemistry Olympiad (IChO), which will be held in Taipei, Taiwan (ROC) in July 16-25, 2005. It looks that the things related this great event are ready to go! We are looking forward to having 59 competing and 8 second time observing countries with 236 competitors, 117 mentors, 37 scientific observers and 34 guests up to June 30 with us in the upcoming mid-July.

The five-hour theoretical examination will be held on Thursday, July 21 at College of Science, the branch campus of National Taiwan Normal University where the students are housed during the whole event. The five-hour laboratory practical competition will be arranged on Tuesday, July 19 in National Taiwan University, about 5 minutes driving distance from Student Dorm 7 of NTNU. The two international jury sessions for Tasks discussion and translation will be held at National Academy of Educational Research (NAER) where teachers (mentors, scientific observers and guests as well) are to be housed during the period of July 15 to 20. NAER, about 30 km from NTNU, is located in the south-east of Taipei City. A buffet dinner for the reunion of students and teachers will be in the evening of Thursday, July 21, in Grand Hotel where teachers will

stay during the rest of event from July 21 to July 24.

A special Steering Committee meeting is to be called in the night of Thursday, July 22. The final jury session is scheduled in the evening of Friday, July 23 to determine the awards and to discuss the business of IChO. Most of the official VIPs will attend the two successive Sundays' ceremonies. Between test days and while the mentors are to be grading and arbitrating (July 23) exams, science for fun, many cultural and social events are planned for students and teachers. 1986 Chemistry Nobel Laureate, President Y.-T. Lee, Ministers Tu and Wu, and President of Chemical Society located in Taipei will present the students with their medals and special awards.

Many thanks to those patrons who make this great event to be realized. We hope that you are going to have a nice trip to Formosa, Taiwan and a pleasant stay here in Taipei during the period of 37th 2005 IChO.



Prof. Tai-Shan Fang, Ph.D.
Organizer of 37th 2005 IChO





TAIWAN AT A GLANCE 2004 - 2005 (I)



Introduction

The Republic of China (ROC), better known as Taiwan, was founded in 1912, and is Asia's oldest constitutional republic. When the Chinese Communist Party established the People's Republic of China (PRC) on the Chinese mainland in 1949, the ROC government relocated to Taiwan, where it maintained jurisdiction over Taiwan. The two sides of the Taiwan Strait have since been governed as separate territories and have developed separate identities.

In the realm of political development, Taiwan has grown into a free and vibrant democracy. The government lifted martial law in 1987 and launched a series of political reforms to expand the democratic process. In 1996, the people of Taiwan completed their first direct presidential election.

Taiwan's competitive and dynamic free-market economy has brought unprecedented prosperity to all levels of society. In January 2002, Taiwan joined the World Trade Organization (WTO). The government is now vigorously promoting a knowledge-based economy and industrial modernization to transform Taiwan into a "green silicon island" of high value-added

Geography and Climate

Taiwan measures about 394 km (245 miles) long and 144 km (90 miles) wide and has an area of approximately 36,000 sq. km (13,900 sq. miles). It is located in the Western Pacific about 160 km (99 miles) off China's southeast coast, midway between Japan and the Philippines.

Taiwan's climate is subtropical in the north and tropical in the south, with average temperatures ranging from 28°C (82°F) in July to 14°C (57°F) in January. Summers, which start in May and last through September, are usually hot and humid. Short and mild winters last from December through February, with snowfall only occurring on the island's higher mountains. Three to four typhoons hit Taiwan every year.

Visiting Taiwan

Since 1994, citizens of certain countries have been allowed to enter Taiwan without a visa for stays of up to 30 days. Alternatively, a 30-day landing visa can be obtained upon arrival.

Major Tourist Attractions

Tourism Bureau Website:
<http://202.39.225.132/jsp/Eng/html/attractions/index.jsp>

General Information for Visitors

Currency:

Currency exchange is available in banks at downtown Taipei, also at the International CKS Airport (TPE) during office hours (in the area of Luggage-claim & Customs, Arrival Lobby [10:30 a.m. - 9:30 p.m.], etc). Unit of currency: New Taiwan Dollar (NT\$). Some exchange rate in June 2005 average: 1 US\$ ≈ 31.31 NT, 1 Euro ≈ 38.28 NT, 1 Japanese Yen ≈ 0.29 NT

Time Differential:

All territories are in one time zone, which is UTC+ 8 hours. Same time standard is applied year-round.

Credit Cards & Travelers' Checks:

Major credit cards are accepted widely and travelers' checks can be cashed at most tourist-oriented stores and local branches of the issuing banks.

Tipping:

A standard tip is NT\$50 per piece of luggage at airports. A 10% service charge is automatically added to room rates and meals at restaurants. All other tipping is optional.

Electricity:

Electrical power: 110-volt, 60-cycle AC

Visa Information:

1. Bureau of Consular Affairs, Ministry of Foreign Affairs: Phone: 886-2-2343-2888
Website: www.boca.gov.tw/english/index.htm
2. ROC Embassies, Consulates & Representative Offices Abroad
Website: www.boca.gov.tw/~boca3007/en/roca/index.htm

Customs Regulations:

Directorate General of Customs, Ministry of Finance: Phone: 886-2-2550-5500
Website: wwweng.dgoc.gov.tw

Current Weather Information:

1. CNN Weather Website:
weather.cnn.com/weather/forecast.jsp?locCode=TAIX
2. Central Weather Bureau Website:
www.cwb.gov.tw/V4e/index.htm

TAIWAN AT A GLANCE 2004 - 2005 (I)

Taboos and Superstitions in Taiwan

1. If someone gives you a present, it's best not to open it in front of them.
2. After eating a meal, never leave your chopsticks sticking up in the left-over rice at the bottom of your bowl. This is what people do at shrines when offering a meal to their ancestors' ghosts.
3. When writing anything friendly, don't use red ink. This color is reserved for protests and corrected exams.
4. Sometimes funerals, weddings, or religious ceremonies will suddenly occupy a whole street without warning. Even though they're blocking your way, it's not good to walk through such a gathering.
5. It's bad luck to give your friend an umbrella to go home with especially the dating couple. - a sure omen that you'll never see each other again. (The Chinese word for umbrella sounds like the word for "to break apart.")

Source: Government Information Office

NOVEL TEXTILES MAKE BETTER LIFE- FUNCTIONAL TEXTILES DEVELOPED IN TAIWAN -

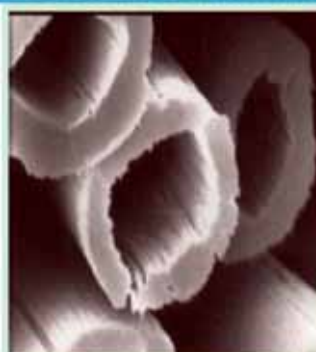
During the period of the 37th IChO, you can find some souvenir made of novel textile - Polydron-T4.

In regard of clothing, the consumers today are not only concerned about fashion, but about ergonomics as well, especially comfort and health. In this premise, developing the functional textiles is the global trend in textile industry. Taiwan also has made many efforts in this field, and the known examples are wrinkle-free cotton textiles, far-infrared textiles, anti-bacterial textiles, sun-protective textiles, thermal textiles, and so on. In the 2003 International Fashion Fabric Exhibition in New York, the waterproof and breathable textile - Polydron T4 which is innovated in Taiwan is one of the successful case and is widely welcomed.

Polydron-T4 is a quadrangular polyester fiber formed by utilizing the concept of polymer rheology and a special designed spinneret. Instead of forming a high density fabric and ultra-fine fibers, this quadrangular and geometric design makes this synthetic fiber present wind-stop

performance with paper-like appearance and harmonized light reflection.

Polydron-T4 was the novel achievement of the Union of the Chemical Laboratories and the Industrial Technology Research Institute, collaborated with Taiwan Textile Federation and China Textile Institute, developing this high-tech functional fabrics and apparels. In responding to the policy of reinforcing innovative R&D activities by Taiwan's government, it is a successful example that Taiwan's industry is transforming from the traditional manufacturing-based industries, which was famous for the "Made in Taiwan" (MIT) era, into the knowledge-based economy of the "Invented and Innovated in Taiwan" (IIT) era, and her industrial structure is upgrading for high-added products.



Polydron-T4

References

Development of Novel Textile Fibers in Taiwan

Union Chemical Laboratories, ITRI Taiwan
Frank L. Chen

LESSONS IN CHINESE

• What's your name?	請問你姓大名 /ch'ing wen' tzu' en' shing dah ming/	• See? / Do you understand?	懂了嗎 /toong le ma/
• Where are you from?	你是哪裡人 /ni shyh naa li ren/	• I understand.	我懂了 /woo toong le/
• How do you do? / Nice to meet you.	幸會 /shing hui/	• I don't understand.	我不明白 /woo buh ming bai/
• Glad to meet you.	很高興見到您 /heen gau shing jian' dawn i/	• What?	什麼 /shyh me/
• How are you?	你好嗎 /ni hao ma/	• I know. / I got it.	我知道 /woo jy daw/
• Fine, thank you.	我很好 + 謝謝 /woo heen hao, shieh shieh/	• Who knows?	誰知道呢 /sheir jy daw ne/
• Not bad.	還可以 /hair ke yih/	• I don't know for sure.	我不太清楚 /woo buh tay ching chu/
• Hello.	你好 /ni hao/	• Pardon me?	請再說一次 /ching tzay shuo i tsyh/
• Good morning.	早安 /t'ao an/	• What do you mean?	什麼意思呢 /shyh me yih sy ne/
• Good night.	晚安或再見 /woan an/ or /tzay jian/	• You're welcome.	不客氣 /buh keh chih/



CHINESE ZODIAC - THE 12 ANIMAL SIGNS

Background Information

In the United States, the years are dated from the birth of Jesus Christ, for example, 1977 means 1977 years after the birth of Christ. This represents a linear perception of time, with time proceeding in a straight line from the past to the present and the future. In traditional China, dating methods were cyclical, cyclical meaning something that is repeated time after time according to a pattern. A popular folk method which reflected this cyclical method of recording years are the Twelve Animal Signs. Every year is assigned an animal name or "sign" according to a repeating cycle: Rat, Ox, Tiger, Rabbit, Dragon, Snake, Horse, Sheep, Monkey, Rooster, Dog, and Boar. Therefore, every twelve years the same animal name or "sign" would reappear.

A cultural sidelight of the animal signs in Chinese folklore is that horoscopes have developed around the animal signs, much like monthly horoscopes in the West have been developed for the different moon

signs, Pisces, Aries, etc. For example, a Chinese horoscope may predict that a person born in the Year of the Horse would be, "cheerful, popular, and loves to compliment others". These horoscopes are amusing, but not regarded seriously by the Chinese people.

The animal signs also serve a useful social function for finding out people's ages. Instead of asking directly how old a person is, people often ask what is his or her animal sign. This would place that person's age within a cycle of 12 years, and with a bit of common sense, we can deduce the exact age. More often, though, people ask for animal signs not to compute a person's exact numerical age, but to simply know who is older among friends and acquaintances.

Legend

According to Chinese legend, the twelve animals quarreled one day as to who was to head the cycle of years. The gods were

asked to decide and they held a contest: whoever was to reach the opposite bank of the river would be first, and the rest of the animals would receive their years according to their finish.

All the twelve animals gathered at the river bank and jumped in. Unknown to the ox, the rat had jumped upon his back. As the ox was about to jump ashore, the rat jumped off the ox's back, and won the race. The pig, who was very lazy, ended up last. That is why the rat is the first year of the animal cycle, the ox second, and the pig last.

Zodiac Chart: The rotating cycle of twelve animal signs was a folk method for naming the years in traditional China. The animal signs for one another in an established order, and are repeated every twelve years. 1976 was the Year of the Dragon, and 1977 was the year of the Snake.

From: <http://www.bound412.co.uk/astro/12/12animals/12animals.htm>

Rat

(1912 - 1924 - 1936 - 1948 - 1960 - 1972 - 1984 - 1996)

You are imaginative, charming, and truly generous to the person you love. However, you have a tendency to be quick-tempered and overly critical. You are also inclined to be somewhat of an opportunist. Born under this sign, you should be happy in sales or as a writer, critic, or publicist. Some Rats: Charlotte Bronte,



Truman Capote, Catherine I, Mata Hari, Wolfgang Mozart, William Shakespeare, George Washington.

Ox

(1913 - 1925 - 1937 - 1949 - 1961 - 1973 - 1985 - 1997)

A born leader, you inspire confidence from all around you. You are conservative, methodical, and good with your hands. Guard against being chauvinistic and always demanding your own way. The Ox would be successful as a skilled surgeon, general, or hairdresser. Some Oxen: Napoleon Bonaparte, Walt Disney, Clark Gable, Richard Nixon, Rosa Parks, Sylvia Porter, Vincent Van Gogh.



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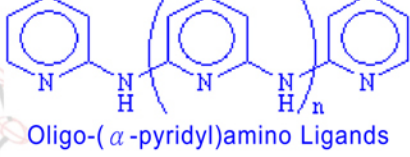


2005 IChO July 16-25, Taipei, Taiwan Catalyzer



by Dr. Shie-Ming Peng, Coordinator of Scientific Committee

Prof. Shie-Ming Peng was the 1st Head Mentor when Taiwan Participated 24th 1992 IChO in Pittsburg, USA for the 1st time. He is currently leading the scientific committee of over 20 scientists from several universities here in Taiwan worked for about 3 years to prepare a practical examination as well as a theoretical examination for this year's competition.



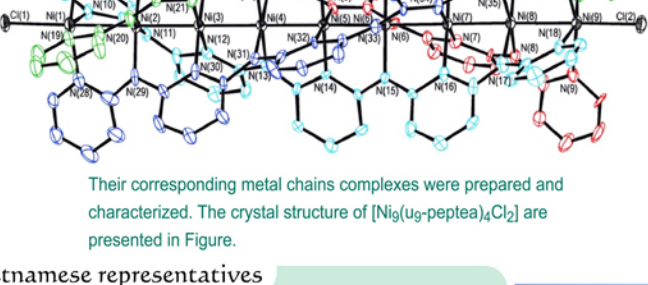
Seeking (Nano)-Molecular Metal Wires

Shie-Ming Peng was born in 1949 in Hsinchu, Taiwan where he grew up. He studied chemistry at National Taiwan University in Taipei (B.S., 1970). After one year of military service, he came to the U.S. in 1971 and studied chemistry at the University of Chicago under the supervision of Prof. Virgil L. Goedken (Ph. D. 1975). He spent one year at Northwestern University with Prof. James A. Ibers as a postdoctor fellow. In 1976, he moved back to his homeland as an associate Professor at National Taiwan University, and was promoted to full Professor in 1980. He had served as Chairman of the department in 1987-1990, Vice President of the University in 1999-2002, the President of the Chemical Society (Taiwan) in 2001-2002. He has received many honors of his profession and was elected as member of Academia Sinica in 1998.

Prof. Peng also spent his sabbaticals in West Germany as a Humboldt Fellow at Max-Planck Institute of Solid State Research in Stuttgart with Prof. Arndt Simon in 1983-1984. In 1991, he stayed in Japan for five months as a visiting scholar at Institute for Molecular Science in Okazaki with Prof. Koji Tanaka.

Prof. Peng, as a synthetic and structural inorganic chemist, is interested in synthesis of novel metal complexes and study of their bonding and properties. The prevailing hot target of seeking the nano-metal wires is one of his dreams for pushing it coming true.

Molecular Metal Wires are a class of one-dimensional oligomers and polymers with metal-containing backbones. Some other terms, e.g. "Extended Metal Atom Chain", "Metal String Complex" "Metal Chain Complex" may be also used. His approach for stabilizing M_n^{m+} chains is to bring the metal ions into close proximity by the use of specifically designed polydentate ligands whose number and orientation of donor atoms determines the nuclearity of the product. The polypyridylamine ligands were designed and synthesized.



Their corresponding metal chains complexes were prepared and characterized. The crystal structure of $[Ni_9(u_9\text{-peptea})_4Cl_2]$ are presented in Figure.

from Vietnamese representatives

Hi, everybody. Nice to meet you. We are Vietnamese representatives. Vietnam has the shape of "s" letter territory. Our team has 4 members: Nguyen Huy Viet, Nguyen Mai Luan, Nguyen Hoang Minh, Nao Xuan Hoang. Perhaps our names are pretty long. If you feel they are difficult to remember, you can just call us handsome, humorous or friendly guys; because it's true and easier to remember. :

Anyway, the characteristics of Nguyen Mai Luan are meekly, lovely and talkative, (especially with pretty girls). The hobbies of Nguyen Hoang Minh are sport, music and reading books. He is friendly and is laughing anytime, he also likes making friends. The hobbies of Ngo Xuan Hoang are martial arts, camping. He likes making friends, too. And, the characteristics of Nguyen Huy Viet are friendly, independent and self-confident. His hobbies are music, computer games, sports and reading books.

In fact, we had come to Taipei very early. We took the flight 3 hours and 10 minutes to fly here from HaNoi to Taipei. The weather of HaNoi is quite analogous to Taipei. So, we like here. In the morning of July 15th, we had visited the library at NTNU. There are many books. Great place! And, we went shopping around Gong Guan. Are we hard-working enough? :

Oh, we have the same hobby of studying chemistry. Yesterday, we received a very lovely periodic table from Nick, a lovely and affable American guy. (sorry! Nicholas, may I call you Nick?). On the back side of the periodic table, there is a big, bold, and impressive line-" Proud to be chemist". Sure! Nick, that's what we



Happy Together



Welcome! Welcome! Welcome to Taiwan! The 2005 37th International Chemistry Olympiad is coming right at the corner. Yesterday was the registration day for the 2005 IChO, we've almost have all of the participants here, the young elite from different countries and the professional mentors who are suppose to work very hard. But please don't worry for those mentors; we overheard that they would have some exercises, they bike!

Let's check out the students here in the NTNU, we can sense the lighten mood from the atmosphere because of the sunshine, meeting friends from different countries. I bet they must be extremely excited to be here in Taiwan. The campus in NTNU is transforming to a global village. We saw the students from Belgium who were taking photos with the staff of 2005 IChO, Germany students went to the famous pasteur-photo shop, and Taiwan Representatives were chitchatting in the conference room. They seemed not really nervous for this competition, that's a good sign, just enjoy everything now, we hope they wouldn't be missing home.

In the evening, the staffs were still expecting the participants to come, the Korean students and mentors must be very exhausted sitting on the bus for so long, they really need a good rest though.

The competition is about to come, GUYS, GO FOR IT!!

Journal for 37th International Chemistry Olympiad | Taipei | Taiwan
Sunday | 17 July 2005 | Issue No. 3

LESSONS IN CHINESE (III)

- Help! 救命啊 /jiow ming a/
- What's wrong with you? 你怎么啦 /nii tze me la/
- What's up? 怎麼啦 /tze me la/
- OK / No problem. 沒問題 /mei wenn tyi/
- Never mind! 不要緊 /buh yaw jin/
- Nothing. 沒什麼 /mei shyr me/
- That's all right. 沒關係 /mei guan shih/
- Please call a doctor. 請找醫生 /chiang jao i sheng/
- What time is it? 現在幾點 /shian tzay jii dean/
- Where's the restroom? 廁所在哪裡 /tseh suoo tzay naa lii/
- I'm sleepy. 好睏喔 /hao kuenn o/
- It's about time 時間差不多了 /shyr jian cha buh duo lei/

CHINESE ZODIAC

THE 12 ANIMAL SIGNS
(1914 - 1926 - 1938 - 1950 - 1962 - 1974 - 1986 - 1998)

You are sensitive, emotional, and capable of great love. However, you have a tendency to get carried away and be stubborn about what you think often seen as a "Hothead" or rebel. Your sign shows you would be excellent as a boss, explorer, race car driver, or matador. Some Tigers: Judy Blume, Emily Bronte, Emily Dickinson, Isadora Duncan, Dwight D. Eisenhower, Mary Harris Jones, Barbara McClintock, Marilyn Monroe, Marco Polo, Beatrix Potter.

ENJOY TAIPEI

Having an active cultural and economic life, Taipei is one of the livable cities in the world with 2,600,000 populations. As an advanced metropolitan, Taipei is still Chinese in heart, with an underlying current of traditional lifestyles and culture that makes it fascinating to everyone.

The National Theater and National Concert Hall are exotic venues for a legion of international renowned performers.

The National Palace Museum houses the world's largest assemblage of priceless Chinese art treasures.



Other attracting spots include nightclubs, theatres, sport facilities joining monuments and museums as popular weekend hangouts.

Taipei's Food Culture has been recognized all over the world for its outstanding cultural array of delicious ethnic foods. There are hundreds of restaurants to choose from. Selections range from local specialties to fantastic international cuisine.

"By making this vibrant city your home, for a summer, or longer, you assure yourself a unique educational experience, and the

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 良鴻科技
 毛寶
 中華電信

Today's Weather
 Sunday
 33°C (92°F) | 26°C (79°F)
 Emergency Contact Points
 Police 110
 Fire Station and Ambulance 119
 37th IChO Office
 02-2930-7327
 02-2931-6273 ext. 323
 02-2935-6132 ext. 323
 02-2935-6133 ext. 323
 Mentors Support
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 Students Support
 Dr. Jhy-Ming Horng 0937-885-831
 Guest Support
 Dr. Bao-tyan Hwang 0937-070-476
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