2000

Sixth Pacific Polymer Conference, PPC-6 Guangzhou, China

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Conference Report

Sixth Pacific Polymer Conference, PPC-6 Guangzhou, China

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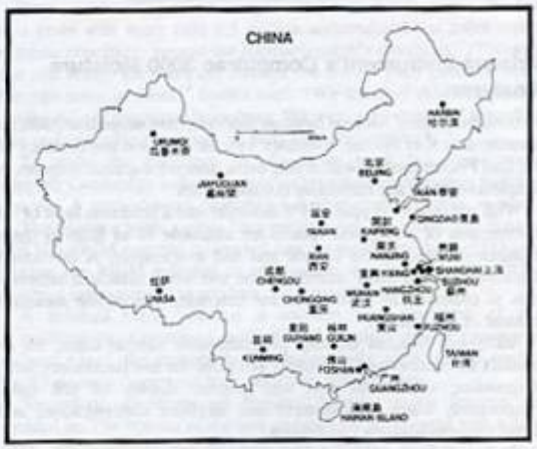

The Sixth Pacific Polymer Conference (PPC-6) was held at the Garden Hotel in Guangzhou, China, from December 7 to December 11, 1999. Professor Wang Fosong, the President of the Pacific Polymer Federation, (PPF) functioned as the Chairman of the Conference with Liu Hanbin and Xu Mao as the Vice Chairmen; Jin Xigao was the General Secretary. The Polymer Division of the Chinese Chemical Society organized PPC-6 with the assistance of the South China University of Technology which is located in Guangzhou. The organization also relied on the advice and help of an Advisory Committee, an Organizing Committee, a Program Committee and a Local Committee.

Guangzhou is a City of almost 7 million people. It was formerly known as Canton, (the name Guangzhou, means "Wide Mouth" in English) and is the capital of Guangdong province. Guangdong is one of the 23 Provinces of China (which also has 5 autonomous regions and 4 municipalities) with a population of about 70 million people and an area of 186.000 sq. km. It is located in the south east of China, bordering the South China Sea and has a subtropical to tropical climate. Neighboring provinces are Fujian, Jiangxi, Hunan and Guangxi. Guangzhou has a distinct and unique dialect (Cantonese) and cuisine (Cantonese) and is fairly remote from traditional centers of authority.

Guangdong is now one of the most prosperous and affluent provinces in China which now includes the Special Economic Zone of Shenzhen. Guangdong's proximity to Hong Kong has made it a major gateway to Southern China. The high level of integration between the Guangdong province and Hong Kong has led to enormous economic growth, and Guangdong is sometimes considered, in spite of the special status of Hong Kong, as part of greater Hong Kong.

Guangzhou is located at the beginning of the Delta of the Xijiang (Pearl River), one of the big rivers in China; others are the Huanghe (Yellow River), and Changjiang (Yangtze). Ocean going vessels can reach Guangzhou. Hong Kong is only 2–3 hours by bus from the major Hotels of Guangzhou.

* In Chinese, the family name is written first followed by the first or given name as in **Xu Mao**. It is becoming increasingly popular among Chinese scientists to write names in the English way, **Mao Xu**, to avoid the mistakes with the family name. However in this article we are using the traditional sequence of the Chinese names. In fact, we used also this sequence for authors, other than with Chinese names, as it is done in several Journals for references.

Polymer News, 2000, Vol. 25, pp. 204–212
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Historically, Guangzhou was an important trading port for 2000 years throughout the Qian, Qin, Han, Tang and Song dynasties. It had an ideal geographic location. The first town to be established on the site of present-day Guangzhou dates back to the Qin dynasty, the 2nd century B. C. The first foreigners to come here were Indians and Romans as early as the 2nd century A. D. By the Tang dynasty of China, 500 years later Arab traders visited regularly.

The Portuguese arrived in the area in the middle of the 16th century and the British established trade relationships in the late 17th century and were assigned and restricted to Shamian island on the Pearl River where they had their factories. This island was and is still the center of Western influence in Guangzhou.

Guangzhou had further influence in the development of China as it was a stronghold of the republican forces after the fall of the Qin dynasty in 1911. Sun Yatsen, the first President of the Republic of China was born near Guangzhou and a monument in his honor is still a major attraction of visitation in the city.

The most important monument in Guangzhou is the Temple of the Six Banyan Trees. Significant is the 55 m pagoda, constructed in the 11th century, the tallest in the city even though the temple itself dates back to the 6th century. Inside the Guanyin temple there is a beautiful golden statue of Guanyin, the goddess of compassion.

The Bright Filial Piety Temple is one of the oldest Temples of Guangzhou, from the 4th century.

Six Banyan Pagoda

Sculpture of the Five Rams

The Five Genies Temples is the site of the appearance of the five rams and celestial beings. The sculpture of the five rams is of very recent origin but is the symbol of Guangzhou. Important to see is also the Zenhai Tower and several Parks.

PPC-6 was attended by nearly 600 participants (130 of them were students) from 25 countries or regions; a number of participants came from Europe. The conference consisted of six plenary lectures and 85 invited papers. A total of 550 papers were presented; 200 in oral form, the rest as poster presentations.

The Guangdong Museum of Folk Handicraft

The Garden Hotel, Guangzhou

The invited papers provided a balance of polymer science and technology, but speakers were also selected to represent the participating organizations of the Pacific Polymer Federation.

PPC-6 began on Tuesday evening with registration and a nice Welcoming Reception in the Conference Hall of the Garden Hotel. It was nice to see many old friends and to make new acquaintances.

On Wednesday, December 8, 1999, the opening ceremony and the first two Plenary Lectures were held. Friday morning was also reserved for four Plenary Lectures. For the remaining presentations of PPC-6, six sessions were held in smaller lecture rooms.

The **Opening Ceremony** of PPC-6 started on Wednesday morning. (December 8) with a short talk by Professor Liu Huanbin, Vice Chairman of the Organizing Committee PPC-6 and President of South China University of Technology, who welcomed the participants of PPC-6.

The Opening Remarks were given by Professor Wang Fosong, President of the Pacific Polymer Federation, Chairman of the Organizing Committee of PPC-6 and a Member of the Standing Committee, National People's Congress. He pointed out that th has come a long way since its inception 15 years ago and PP years ago. Polymer scientists of China are happy to have been s to have the presidency of the PPF, to lead the organization i next millennium and to host PPC-6 in Guangzhou.. The confe of the PPF have increased in importance and attendance since t PPC in Maui, Hawaii, in 1989.

Zhu Xiaodang, Vice Mayor of Guangzhou delivered a welc address on behalf of the City of Guangzhou

Today, we are here to celebrate a magnificent event of the p science, the opening ceremony of the 6th Pacific Polymer Confe It is a great honor for China, especially for Guangzhou, to host great international event of the polymer circle for the first tin behalf of the People's Municipal Government of Guangzhou, I like to take this opportunity to extend our sincerest welcome t representatives and distinguished guests from all over the wor

In the sessions that follow, experts and scholars from arou world will meet together, to exchange and discuss ideas on fields of polymer science and technology. The conference is ex to make reviews on the achievement of polymer science and ind in the 20th century, and to envision its development in the c millennium, the 21st century. I believe that these activities wil great importance to the future of polymer science.

The exploitation of new materials has become a new indu Guangdong Province and the city of Guangzhou. It is also our f development for industries of advanced and innovative technol the next century. Polymer is most popular among the new ma In Guangzhou, polymer is widely used in businesses like ele appliances, automobile, construction materials, product pac and it acquires great commercial value. We sincerely hope that doing polymer research and developing polymer science, experts and scholars may look at the city of Guangzhou, a city and vigor, as a market as well as a partner.

Standing at the threshold between two centuries, the ever-ch new science and technology is promising golden opportunities city of Guangzhou in its further development. I believe successful carryout of this conference can bring new idea information and new opportunities to the polymer developme research for Guangdong Province and the city of Guan Guangdong Province and Guangzhou will contribute, with enthusiasm, to the development of polymer science. Please all again, to extend my best wishes to the success of this conferen wish all the participants a very pleasant stay in Guangzhou.

At the opening ceremony, a congratulatory message was al from Lu Zhonghe, Vice-Governor, Guangdong Provincial P Government:

Welcome to Guangdong Province! On behalf of the Guan Provincial People's Government, I take the pleasure to exte warmest congratulations on the opening of the 6th Pacific P Conference. This conference is of great significance since it highest-level and most large-scale conference in polymer sci China and it takes place at a time when we are approaching millennium.

The conference will offer a valuable opportunity for C scholars experts to exchange views with overseas academicia for overseas experts to better understand the improvement on p science research in China through reviewing the achieven polymer science and industry in the 20th century, and ex further development in the next century. I believe that the con will be rather meaningful for the development of polymer scie

Opening Ceremony

Guangdong has achieved remarkable economic growth, at the same time, the Guangdong Government is attaching great value to environment protection. We are particularly looking forward to your advice to overcome the indastrial pollution problems in Guangdong Province. Meanwhile, new products and industries are expected to speed up the economic development in Guangdong Province.

It is an honor for Guangzhou to host the 6th Pacific Polymer Conference, I congratulate The Polymer Academic Committee of the Chinese Chemical Society and The South China University of Technology on their successful carry-out of this conference. I wish all the participants a most fruitful conference and a very pleasant stay in Guangzhou.

A message was also delivered by Professor Xu Zhihong, Vice President, Chinese Academy of Sciences. Messages of congratulatory greetings were also delivered by Professor Robert G. Gilbert, the Chairman of the Macromolecular Section of IUPAC and by Professor Stanislav Penczek the Past President of the European Polymer Federation on behalf of the EPF.

The Organizing Committee of PPC-6 acknowledged the following patrons and sponsors for their contributions

Ministry of Science and Technology of China, Ministry of Education of China, The Chinese Academy of Sciences, National Natural Science Foundation of China, Provincial Government of Guangdong.

Guangzhou Municipal, China Association for Science and Technology, China Petro-Chemical Corporation, China International Culture Exchange Center, K C. Wong Education Foundation, Hong Kong, Guangdong Science and Technology Commission, Higher Education Department of Guangdong Province.

Guangdong Heavy and Chemical Industry Bureau, Guangzhou Municipal Science and Technology Progress Fund.

Institute of Chemistry, Chinese Academy of Sciences, Guangdong Provincial Association for Science and Technology, Guangzhou Association for Science and Technology, Institute of Materials Science and Engineering, South China University of Technology.

BASF AG, BASE (China) Co. Ltd., Beijing Yansan Petro-Chemical Corporation, SINOPEC, K WAH Group, Kingfa Science and Technology Development Co. Ltd., Shantou Ocean Enterprises (Group) Company, Twinson International Limited, Guangzhou Balyun Sealant Factory, the Bruke Co and the Guangzhou Chemical Industry Research Institute.

The first two plenary lectures were part of the opening ceremony.

The oral presentations both invited papers and contributed papers, as well as the posters were arranged in six scientific sessions: 1.) Syntheses and Reactions of Polymers; 2.) Structure and Properties of Polymers 3.) Polymer Blends and Composites; 4.) Functional Polymers; 5.) Bio- and Medical Polymers and 6.) Polymer Engineering and Processing.

The **Scientific Sessions** (chaired by Wang Fosong and Akehiro Abe) were opened with the first plenary lecture by Robert G. Gilbert of the Key Center for Polymer Colloids, Sydney University, Sydney, NSW 2006, Australia entitled, **"Polymer Science and Technology in the Past and the Future: Heroism, Exploration and Enlightenment"**.

The interlinked scientific and technical history of polymerization can be divided into three periods. These are illustrated for emulsion polymerization.

The first period, Heroic Age was the period in which emulsion polymers were originally produced. The technique was developed as an attempt to copy natural rubber latex. Even though the natural process is quite different from the synthetic process of emulsion polymerization and is actually a misnomer!

The second period in emulsion polymerization was known as the Age of Exploration. The first theories of the process, a huge range of products was made, for surface coatings, adhesives and even commodity polymers. The industrial research efforts were laid down by the founders of the field. They were giants, but not omniscient, and processes were semi-empirical. Many suppositions were not correct but many excellent products were made and are currently in everyday use.

The third period of emulsion polymerization might be termed the Age of Enlightenment which is now dawning. We now are starting to understand the fundamentals of emulsion polymerizations. It is now possible to design an industrial process based on first-principles. A good example for creating novel materials is the use of controlled seeded emulsion polymerization from natural rubber latex or from polybutadiene. By controlled free-radical chemistry we can now produce (a) a comb polymer with hydrophobic backbone and hydrophilic "teeth", or (b) with sufficient *in situ* compatibilizer between two otherwise incompatible polymers and (c) to produce controlled nanostructures.

"Stepwise Coupling Polymerization and Special Structural Polysiloxanes" was presented by *Zhang Rongben;* (in cooperation with Li Cui; Liu Chanqing; Xu Hui; Xie Ping; Dai Daorong; Zhu Chuanfeng and Wang Chen) of the Center for Molecular Science, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100080, China

The synthesis of the microscopic structure of precisely defined polymer is a focus in polymer chemistry. Ladder polyphenyisilsesquioxane and the first organic cyclodextrin tubular polymer were prepared recently. We have been interested in preparing: (1) New reactive ladder polysilsesquioxanes (LPS) and organo-bridged LPS (OLPS); (2) Novel "fishbone-like" and "rowboat-like" mesomorphic LPS derived from reactive LPS; (3) tubular polysiloxanes (TP) derived from reactive and cis-isotactic LPS and (4) Sieve-plate network polysiloxanes (SNP) derived from non-cis-isotactic reactive LPS. They constitute a new family of organic–inorganic hybrid polymers with one or two-dimensional ordered network structure. The architecture of the above-mentioned polymers is accompanied with supramolecular self-assembly and templating action.

a) A series of reactive LPS were successfully prepared
b) TP and their supramolecular clathrates were prepared by (1+1) or (2+2) reactions from reactive and cis-isotactic LPS.
c) SNP and their supramolecular or polymeric films were prepared by poling/gelling from a coupled silane.

The **early morning session** on Friday, December 10,1999 was chaired by Otto Vogl and Qian Renyuan. It started with the Plenary Lecture **Polymers Beyond the Year 2000**, by *Ingolf Buethe*, BASF A.G. Research Engineering Plastics, Ludwigshafen, Germany.

At the turn of this century, the global polymer industry is undergoing the most rapid and dramatic changes in polymer history:

a) Emerging markets, particularly in Asia, and their polymer consumption are catching up with other parts of the world, creating new business opportunities.
b) Economy of scale, combined with optimized logistic concepts, is becoming a key economic success factor. The optimization of plants for commodity plastics are ever increasing in size, forcing smaller suppliers out of business and creating a major hurdle for newcomers and for the introduction of new products.

Qian Renyuan

c) Globalization of polymer customers and cost pressure lead to a consolidation of suppliers and products. The future trends of this development will have a significant impact on R&D activity in the polymer industry.

Molecular and Supramolecular Ordering in Confined Environments by *Stephen Z. D. Cheng*, Maurice Morton Institute and Department of Polymer Science, The University of Akron, Akron Ohio 44325-3909, U.S.A.

Molecular and supramolecular structures and phase transformation behaviors in confined environments not only have scientific interest but also possess practical industrial importance. For many years, an interesting yet difficult question has been how small can a phase be and still be called a phase? In other words, where is the lower limit of the phase size at which the macroscopic phase properties are still retained? To search for the answer, this first issue is to precisely control the phase sizes using such as strongly separated microphase, nano-size tubes and spheres and other structures. When molecules and supramolecules are confined into a one-, two- or three-dimensionally small space, the geometric sizes and chemical environments can substantially affect structure and phase (meta) stability.

A series of poly(ethylene oxide)-b-polystyrene (PEO-b-PS) diblock copolymers, where PEO blocks are crystallizable and PS blocks are amorphous were synthesized and studied, varying molecular weights of both components. The order-disorder transition temperature can be changed to control microphase structures. Three temperature parameters need to be considered to describe the phase behaviors: the order–disorder temperature, the glass transition temperature of the amorphous phase, and the crystallization temperature (always lower than the melting temperature of the PEO blocks). Generally speaking, the order–disorder temperature is under thermodynamic equilibrium while crystallization requires undercooling, and vitrification is cooling rate dependent.

The late morning session had two Plenary Lectures and was chaired by Stanislaw Penczek and He Binlin: **Molecular Design of Functional Polymers Based on Unique Properties of Polymer Chains**, by *Mikiharu Kamachi*, Department of Applied Physics and Chemistry, Fukui University of Technology, Fukui, Japan.

He Binlin

Polymer synthesis has developed remarkably in recent years and plays an important role in human life. Unique macromolecular properties can be developed by macromolecular recognition and/or a self-organization of polymer chains We have worked in three fields: a,) Radical polymerization backed by ESR spectroscopy, b.) New polymer synthesis, and c.) Polymer chain effect on functionalities.

α-Dextranes (CD) when threaded on a poly(ethylene glycol) (PEG) chain [but not polypropylene glycol (PPG)], form a crystalline complex in high yields, although β-CD did not form complexes with PEG. The relationship between the chain cross-sectional areas of the polymers and the diameters of the cavities of cyclodextrins is very important in the complex formation of polymers and cyclodextrins.

These findings provided a new approach to the preparation of polyrotaxanes and tubular polymers. Polyrotaxanes were prepared by end-capping of the complexes and then, tubular polymers were prepared by bridging cyclodextrins on template synthesis and removing of the end groups.

Amphiphilic polyelectrolytes from hydrophobic domains resulting from aggregation of the hydrophobic groups in aqueous solution. Photo-active function of amphiphilic polymers co-valently tethered with small amounts of a hydrophobic chromophore, was investigated in water. Photo-physical and photo-chemical behaviors of the hydrophobic chromophore were remarkably different in aqueous solutions which is ascribable to the compartmentalization of the chromophore moieties by hydrophobic domains.

Molecular Design of Light-Emitting Polymers by *Chang Yup Kim* Korea Institute of Science and Technology, P. O. Box 13 1, Cheongryang, Seoul 130-650, Korea

A large number of polymer molecules with aromatic units and conjugated double bonds in the main chain have bandgaps with a range of 1.5–4.0 eV. Absorption of a photon with energy in the above range by the polymer molecules results in a light emission on a process of returning to the ground state from the excited state of an electron. The color of an emitted light can be controlled by the molecular structure of a polymer. The principle colors of blue, green and red have been successfully generated by various polymers. The colors are also generated electroluminescently by a light-emitting diode fabricated with a light-emitting polymer sandwiched between two electrodes.

A number of fluorene-based copolymers have been designed and synthesized for use in fabrication of polymer light-emitting diodes. Statistical copolymers have advantages for the fabrication of light-emitting diodes because of reducing the phase separation problem of a polymer blend.

Takeshi Ogawa, President PPF (right)

The following *Invited Papers* were presented at PPC-6: They are here reported in alphabetic order of the authors but were actually presented in a different sequence:

Brittain, William J. *(Akron, OH, U.S.A.)*
Surface-initiated polymerization

Brunelle, Daniel J. (Schenectady, NY, U.S.A)
Preparation, polymerization and processing of cyclic polyesters

Chan, Wai-Kin *(Hong Kong, China)*
Electronic properties of conjugated polymers with rhenium or ruthenium dipyridophenazine complexes

Chang, Feng-Chih *(Hsinchu, Taiwan, China)*
Phase separation process of polycaprolactone-epoxy blend

Chen, Show-An *(Hsinchu, Taiwan, China)*
Thermally stable polymer ferromagnet

Chen, Yonglie *(Guangzhou, China)*
Study on photocuring systems containing vinyl ethers as reactive diluent

Chu, Benjamin *(Stony Brook, NY, U.S.A.)*
Self assembly and charge complexation of polymers

Cook, Wayne D. *(Clayton, Vic., Australia)*
Cure and rheology of novel IPN systems

Daly, William H. *(Baton Rouge, LA, U.S.A.)*
Synthesis and antibacterial properties of cellulose or chitosan quaternary ammonium derivatives

Eby, Ronald K. *(Akron, OH, U.S.A.)*
Aspects of the morphology of silk

George, Graeme A. *(Brisbane, Qld, Australia)*
New approaches to the characterization and cure optimization of thermosets for composites

Gong, Jianping *(Sapporo, Japan)*
Dynamic surface properties of polymer gels

Guerrero, Ramiro *(Saltillo Coahuila, Mexico)*
New insights on the free radical polymerization of MMA and styrene mediated by carbon centered radicals of type R-C.Ph2

Han, Charles C. *(Gaithersburg, MD, U.S.A.)*
Phase separation and inter-diffusion of thin polymer blend film

Harris, Frank *(Akron, OH, U.S.A.)*
Polyphenylquinoxolines via aromatic nucleophilic substitution reactions

Hasegawa, Akira *(Tokyo, Japan)*
Recent developments in high performance polymer blends

Hattori, Iwakazu *(Yokkaichi, Mie, Japan)*
Molecular design of solution-(S)BR for tread of tire

He, Jiasong *(Beijing, China)*
In-situ hybrid composites

He, Tianbai *(Changchun, China)*
Soft order of polymer thin films modulated by external fields

Ho, Chee Cheong *(Kuala Lumpur, Malaysia)*
Adhesive force measurements of natural rubber latex film by scanning for microscopy

Hsiao, Benjamin S. *(Stony Brook, NY, U.S.A.)*
Toward the understanding of early stages of polymer crystallization: from quiescent state to elongational flow

Hu, Chunpu *(Shanghai, China)*
Interpenetrating polymer networks consisting of polyurethane

Irie, Masahiro, *(Fukuoka, Japan)*
Photochromism of diarylethenes in confined reaction space

Jiang, Ming *(Shanghai, China)*
New approaches to macromolecular assembly

Jin, Xigao *(Beijing, China)*
Thermal curing process and degradation mechanism of high performance polyimides

Jung, Jin Chul *(Pohang, Korea)*
Atropoisomeric polyimides

Kajiyama, Tisato *(Fukuoka, Japan)*
Surface rheology of polymeric solids

Kakugo, Masahiro *(Tokyo, Japan)*
Recent progress in polyolefin materials and processing

Kiatkamjornwong, Suda *(Bangkok, Thailand)*
Synthesis of styrenic toner particles by SPG emulsification techniqae

Kim, Key Hyup *(Pohang, Korea)*
Newly modified polymers for differentiated synthetic fibers

Kim, Sung Chul *(Taejon, Korea)*
Semi-IPN materials having morphology spectrum

Kobayashi, Shiro *(Kyoto, Japan)*
Precision synthesis of polysaccharides and polyesters catalyzed by hydrolase enzymes

Leung, Louis M. *(Hong Kong, China)*
Synthesis and characterization of poly(phenyl vinyl sulfoxide) and its copolymers

Liu, Guojun *(Calgary, Alb., Canada)*
Block copolymer nanofibers and thin films with nanochannels

Masuko, Toru *(Yamagata, Japan)*
Crystallization of biodegradable polyesters

McIntyre, Don. *(Akron, OH, U.S.A.)*
Polymer chain entanglement in linear and long-chain branched polymers

Miyashita, Tokuji *(Sendai, Japan)*
Light energy conversion in organized polymer LB assemblies

Morishima, Yotaro *(Toyonaka, Osaka, Japan)*
Self-assembling amphiphilic polyelectrolytes and their nanostructures

Motoda, Takehiko *(Chiba, Japan)*
New polyoleff in foam

Ng, Siu Choon *(Kent Ridge, Singapore)*
Modification of surfaces with functional conjugated polymers

Nishi, Toshio *(Tokyo, Japan)*
Penetration of foreign polymer chains into a polymer network

Nishide, Hiroyuki *(Tokyo, Japan)*
Very high-spin organic polymers

Ogawa, Takeshi *(Mexico DF, Mexico)*
Novel diacetylenic polymers for second order nonlinear applications

Ogilby, Peter R. *(Aarhus, Denmark)*
Oxygen diffusion in glassy polymers, effects of other gases and changes in pressure

Pan, Caiyan *(Hefei, China)*
Design and synthesis of star shaped polymers

Penczek, Stanislaw *(Lodz, Poland)*
Unified mechanism of polymerization of cyclic esters

Pugh, Coleen *(Akron, OH, U.S.A.)*
Miscibility of side chain liquid crystalline polymers with different architectures

Qiu, Kunyuan *(Beijing, China)*
Vinyl radical polymerization in the presence of 2-(N,N'-diethyl-dithiocarbamyl) acetate

Quijada, Raul *(Santiago, Chile)*
Synthesis and properties of homo and copolymers, coming from 1—octadecene with Zirconocene catalysts

Reneker, Darrell H. *(Akron, OH, U.S.A.)*
Polymer nanofibers, with a high ratio of surface area to mass, made by electrospinning

Rizzardo, Ezio *(Clayton South, Vic., Australia)*
Living radical polymerization by reversible addition-fragmentation chain transfer

Shanks, Robert A. *(Melbourne, Australia)*
Time, temperature, miscibility and morphology of polyolefin blends

Shen, Zhiquan *(Hangzhou, China)*
Catalytic activitiy of calixarene complexes of rare earth in polymer synthesis

Shi, An-Chang *(Hamilton, Ont., Canada)*
Nature of anisotropic fluctuation modes in ordered block copolymer phases

Shirai, Hirofusa *(Ueda, Japan)*
Fiber/textile containing metallophthalocyanines

Sisido, Masahiko *(Okayama, Japan)*
Peptides and proteins endowed with artificial functions

Sung, Yong Kiel *(Seoul, Korea)*
Development of biodegradable polymers for biomedical applications

Tong, Zhen *(Guangzhou, China)*
Electrostatic interaction and volume phase transition in polyelectrolyte gels

Tsujita, Yoshiharu *(Nagoya, Japan)*
Gas sorption, diffusion and permeation of ordered polymeric membranes

Tsushima, Rikio *(Tokyo, Japan)*
Production of polysaccharides by culture of plant callus, and its application to cosmetics

Ueda, Mitsuru *(Tokyo, Japan)*
Synthesis of aromatic polymers by oxidative coupling polymerization

Wang, Chun-Shan *(Tainan, Taiwan, China)*
Novel perfluoro group containing low dielectric polyimide for electronic application

Wang, Guochang *(Tianjin, China)*
Studies on aromatic ring aggregation and micromorphology of polymer system

Wang, Xianhong *(Changchun, China)*
Synthesis, structure and properties of carbon dioxide copolymer

Wang, Xiaogong *(Beijing, China)*
Study on photodynamic and photoresponsive azo polyelectrolytes

Woo, Sang Sun *(Taejon, Korea)*
Design of high performance polypropylene, high flowality, high strength and high heat resistance

Wu, Chi *(Hong Kong, China)*
The theta-state of a single homopolymer chain in solution

Wu, Dacheng *(Chengdu, China)*
Compression-reduced polymer brushes at air-liquid interface

Wu, Wen-li *(Gaithersburg, MD, U.S.A.)*
The effects of interface and free surface on polymer thin film properties

Wynne, Kenneth J. *(Arlington, VA, U.S.A)*
Elastomers from polydimethylsiloxane disilanols and alkoxysilanes: surface microstructures and surface characterization

Xu, Xi *(Chengdu, China)*
High performance polymers prepared through stress-induced reactions

Xue, Qi *(Nanjing, China)*
Physical properties and potential application of conductive polymers in their redoxy states

Yan, Deyue *(Shanghai, China)*
Kinetic model of self-condensing vinyl polymerization

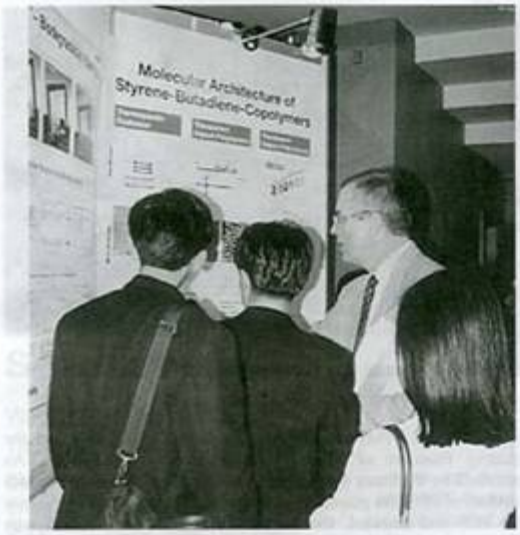
Yang, Yuliang *(Shanghai, China)*
Spinodal decomposition of binary polymer mixtures—elastic and viscoelastic effects

Yu, Huisheng *(Changchun, China)*
Recent advances of cellulose and lignocellulose chemistry in China

Yu, Yaoting *(Beijing, China)*
Biomaterials in blood purification

Zhang, Xi *(Changchun, China)*
Single-molecule force spectroscopy on polymers by AFM

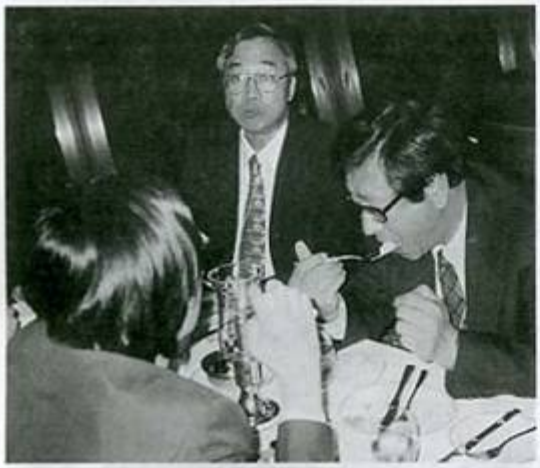
Zhou, Qifeng *(Beijing, China)*
Structure and properties of mesogen-jacketed liquid crystalline polymers



At the Poster Session

A special VIP luncheon, Chinese style, was provided at a special location at the Garden Hotel by the organizers for the Plenary Lecturers, members of the organizers and senior members of the Council of the PPF.

In the late afternoon, the Council meeting of the PPF was held. Several selected observers were also invited to provide the Council with the historic and legal background of PPF. In the Council meeting, it was pointed out that the PPC-6 was a success. Numerous activities of the PPF were also discussed, particularly the succession of the presidency. By the end of 1999 the presidency of Wang Fosong will come to an end and the newly elected, now Vice President Takeshi Ogawa, representing the Mexican Polymer Society, will take over as the President of PPF by January 1, 2000.



At the Banquet

Sei-ichi Nakahama and Supawan Tantayanon

A long discussion was held to guarantee that the meeting schedule for 2001 in Oaxaca, Mexico would be a success and details were presented. It seems that two organizations in Mexico will be involved in the details of organizing PPC-7.

PPC-8 is scheduled to be arranged by the Polymer Group in Thailand with Professor Supawan Tantayanon responsible for the organization. She will become the Vice President of the PPF on January 2000. It was understood that the Chairmanship of PPF, as it was stated in the original Councilor assignment in the constitution, the position of the Councilor seat and the now elected Chair will actually be handled by the polymer organizations of the ASEAN countries. The Council was told that the organization of Malaysia (C. C. Ho) will see that this presidency and the organization of PPF-8 will be supported and co-organized by the polymer organizations of these countries.

It had become desirable that an organization of the Founding members should be willing to take the presidency and arrange for PPC-9 Professor Horie, the Councilor of Japan, indicated that SPSJ would be willing to take the Presidency after 2003 and host PPC-9 in 2005. This is a very preliminary proposal and depends on a number of commitments, which Horie said he would explore.

An elegant dinner was held after the Council meeting, confirming the close atmosphere that existed between the Council members in their effort to perfect the PPF and to bring it into the needs for the next century.

On Friday evening, a Cantonese style banquet was held in the Conference Hall. Over 500 participants of the meeting attended. President Wang Fosong summarized the accomplishments for the meeting and pointed out how important PPC-6 was for the development of polymer science and technology in China and in the region.

The after dinner speech was presented by Professor Otto Vogl, the first President of PPF. He reminisced about the first ideas of the formation of PPF organization at an ACS meeting in Hawaii in 1984. It was the brainchild of the three persons that had substantial influence in their organizations: Otto Vogl, at that time the "Foreign Minister" of the ACS Division of Polymer Chemistry, USA, Professor Takeo Saegusa, of the Society of Polymer Science, Japan and (the late) Professor James O'Donnell, of the Polymer Division of the Royal Australian Institute of Chemistry. Professor Vogl pointed out that it took almost three years of discussions to conclude the agreement and to write the constitution: Negotiations started seriously in Kyoto, at the US-Japan meeting on Polymer Chemistry, a bilateral meeting held in 1985 at the Heian Kaikan

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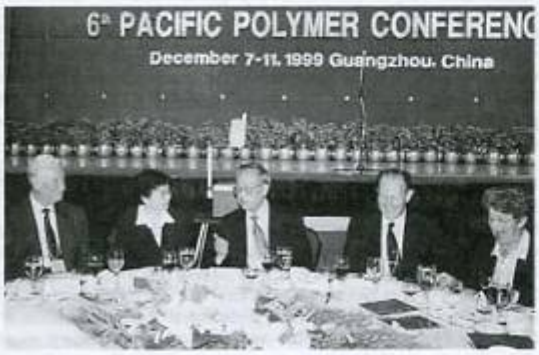
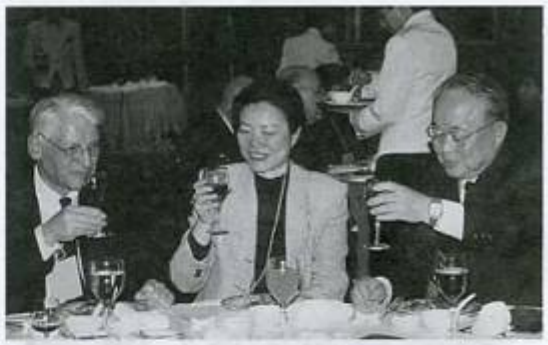
Hotel in Kyoto by the leaders of SPSJ and the ACS Division of Polymer Chemistry. Negotiations continued at the Annual Meeting of the Australian Polymer Division on the Gold Coast in Australia and in Brooklyn. The final touches on the agreement were made again in Australia, at the Annual Polymer meeting in Phillips Island in Australia. Vogl still remembers that Professor Robert Shanks, then the Chairman of the Australian Polymer Group told him, Vogl, the chief negotiator to pick up the phone, call Tokyo and tell SPSJ that we all agree, that we agree on the wording of the Constitution and we agree to establish immediately the Pacific Polymer Federation.

The constitution describing the formation of the Pacific Polymer Federation was signed on October 19, 1987 at the International House in Tokyo and Professor Otto Vogl became its first President of PPF. The first Conference of the PPF, which would now be called PPC-1, was held in Maui, Hawaii, in December 1989.

Otto Vogl recognized the dedicated devotion of a number of people that were essential for the creation of PPF: Professor Akihiro Abe, longterm Councilor of SPSJ, the signatory chairmen of the Polymer Division of the Royal Australian Institute of Chemistry, Professor David



At the Banquet: (from left) Otto Vogl, Han Dajian, Wang Fosong, Robert Gilbert and Irene Penczek



Stanislaw Penczek, Lu Yuanfang and Mikiharu Kamachi

Hill, of the ACS Polymer Division, Professor Ronald Eby and the signatory President of SPSJ, Professor Motowo Takayanagi. As mentioned by Professor Vogl, Professor Joseph C. Salamone, the 4th President of PPF also played a major role in the creation of PPF. Soon after PPF was founded, the Korean Polymer Society joined with Professors Sung Chul Kim and Chun Yup Kim, the 5th President of PPF, as the driving forces.

Soon after the joining of the Korean Society, the then President of PPF, Professor Vogl successfully urged his friend Professor Qian Renyuan, to have the Chinese Polymer Division of the Chinese Chemical Society join PPF. By now the PPF has 17 member organizations representing about 60,000 polymer scientists of the Pacific area.

The banquet attendees also heard from Professor Takeshi Ogawa who discussed the upcoming PPC-7 in Oaxaca, Mexico and Professor Stanislaw Penczek, Chairman, of the 38th IUPAC Symposium on Macromolecules, which will be held next in July 2000 in Warsaw, Poland.

The 6th Pacific Polymer Conference closed on Saturday morning, the participants felt it was a very successful meeting which showed that the PPF is now a permanent regional organization of Polymer Science and Technology that excellently fulfills the needs of Polymer Science in the Pacific Region. The selection of Guangzhou for the location of PPC-6 provided a most exciting and congenial atmosphere and presented modern science in China at its best.

Darell Reneker and Ronald Eby