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## Liquid Crystal Meeting of Japan, Sept 20-22 1993, Tokyo

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# CONFERENCE REPORTS

## Liquid Crystal Meeting of Japan, Sept 20-22 1993, Tokyo

Report from Hiro Toriumi, Dept of Chemistry, College of arts & Sciences, University of Tokyo, Komaba, Meguro, Tokyo 153, Japan

The Liquid Crystal Meeting of Japan, which started in 1975 with 50 paper contributions, has steadily expanded its scope and size throughout these two decades. This year the conference accumulated 192 papers. The major objective of this meeting is to integrate the latest developments in the science and technology of liquid crystals. The success of this objective is seen in the quality of invited and contributed papers.

Hiroshi Yokoyama (National Electro-technical Laboratory) presented an overview lecture on the phenomena and physics of "Surface Alignment of Liquid Crystals". In this sparkling lecture Yokoyama emphasized the necessity of developing the physics of surface phenomena, in order to enhance our understanding of the relationship between macroscopic events and microscopic molecular mechanism of liquid crystal alignment at the surfaces.

Junji Watanabe (Tokyo Institute of Technology) gave the second invited lecture on "Structural Characteristics of Smectic Liquid Crystals in Main-Chain Polymers". This lecture provided a clear insight into the role of chain conformation and mesogen packing in the formation of highly ordered smectic phases in LCPs. The structural prerequisites to obtain ferroelectric and antiferroelectric LCPs were also discussed.

In addition 190 contributed papers were presented. The subjects discussed and the number of papers are as follows: theory and simulation (18), spectroscopy (17), surface phenomena (23), LCD devices (35), Nematics (15), FLC and AFLC (37), LCP (14), PDLC (14), and heterocyclic-, ionic- and metallomesogens (17).

Another important objective of this meeting is to encourage the exchange of new ideas and information among researchers in academic and industrial societies. This purpose is pursued by 520 active and 120 student participants. Most active participants are from industry (395), showing that Japanese industry still maintains strong interests and activity in liquid crystal research despite the recent economic depression. The number of contributed papers from industry and academic-industrial joint research groups has been increasing (except for the last two years), so that we received 63 contributed papers from corporate researchers, and 31 pa-

pers from academic-industrial joint research groups, in addition to 98 papers from university and research institutes. Obviously, the interdisciplinary research effort is getting more important in this rapidly growing field of science.

To support this trend, we this year introduced two small improvements to the organization of the meeting. By the introduction of a database system, information including the names and addresses of authors, the title and the abstract of their paper can be obtained through "JICST database file" and "Condensed Matter News". Rapid and international exchange of information concerning the latest progress in liquid crystal researches should become more and more important. In this

regard, it would be useful if we could establish an international data exchange system between ILCS and other national liquid crystal societies. We also extended presentation time from 15 to 20 min for contributed papers, the purpose being to encourage discussion between people of different disciplines.

The Liquid Crystal Meeting of Japan provides an opportunity to all scientists working in the field of physics, chemistry and engineering of liquid crystals to meet and discuss their work. To promote research on liquid crystals further and get more people (young and active) involved with this field, we may need to establish our own national liquid crystal society in Japan that can cooperate with the ILCS. □

## FLC 93: 4th International Ferroelectric Liquid Crystal Conference, 28 Sept - 1 Oct 1993, Tokyo

Report from Hideo Takezoe, Department of Organic & Polymeric Materials, Tokyo Institute of Technology, O-Okayama, Meguro-ku, Tokyo 152, Japan

**This conference, chaired by Professor A Fukuda of Tokyo Institute of Technology was held in Komaba, Tokyo, with the support of JSPS (Japan Society for the Promotion of Science).**

Approximately 250 scientists (90 from abroad and 160 from Japan) attended, and about the same numbers of papers were presented (39 oral and 189 poster presentations). The topics spanned physics, chemistry and applications of ferroelectric, antiferroelectric and other chiral liquid crystalline systems.

The enthusiasm of the participants made all the sessions very active. From my personal point of view, the interpretation for the appearance of many phases (Devil's staircase) in antiferroelectric liquid crystals was one of the topics of this conference (Prost & Bruinsma, Yamashita & Miyazima, Koda & Kimura, and Isozaki et al). The SmCa\* phase also attracts us as a mysterious phase: it shows no sign of

helix but shows antiferroelectric and ferroelectric responses. Besides the scientific sessions, demonstrations of FLCD (Canon), AFLCD (Nippon Denso & Showa Shell Sekiyu and Citizen) and flexible polymer FLCD (Idemitsu) attracted all the participants.

Another interesting scene was the lunch on Sept 29. All the participants took a Japanese style lunch box with chopsticks. I, as one of the committee members, hope that all the foreigners enjoyed using chopsticks and now understood how the Japanese have developed delicate technology!

Proceedings of this conference will appear in a special volume of *Ferroelectrics*. More than 100 papers will be included.

Finally I would like to express our thanks to JSPS for their financial support and to all the participants for cooperating to make this conference so successful. □