

**Proceedings
of**

**The U.S.-Japan Seminar on
Basic Science of Ceramics 1975**

**Processing, Kinetics and
Properties of Electronic
and Magnetic Ceramics**

**Editors: Wazo Komatsu
Richard M. Fulrath
Yasumichi Oishi
Mitsue Koizumi
Shigeyuki Sōmigya**

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Processing, Kinetics and Properties of Electronic and Magnetic Ceramics

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June 23 - 27, 1975, Hakone, JAPAN

Sponsored by

Japan Society for The Promotion of Science

and

The U.S. National Science Foundation

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Japan

P R E F A C E

Address at the Opening Ceremony

Distinguished guests, ladies and gentlemen!

On behalf of the organizing committee of this seminar, I am very pleased to address you at the opening ceremony of the U.S.-Japan Seminar on the Basic Science of Ceramics. It is my great pleasure to extend a hearty welcome to all participants of this seminar.

I would like to express our gratitude for the sponsorship of U.S. National Science Foundation and also the Japan Society for the Promotion of Science. In addition I am grateful for the cooperation of Prof. Fulrath in the United States, Prof. Petzow in Germany and Dr. de Lau in Holland.

This seminar is primarily concerned with the Basic Science of Ceramics. The first seminar was held in 1969 in Japan under the direction of the late Dr. Yoshiki and Prof. Roy (Pennsylvania State University) who were the coordinators. The next seminar was held in 1972 in the United States. The coordinators were Prof. Pask (University of California, Berkley) Prof. Saito (Tokyo Institute of Technology) and Dr. Kotera (Governmental Chemical Industrial Institute, Tokyo). These two seminars were also sponsored by NSF and JSPS.

The main theme of this seminar is concerned with electronic and magnetic materials and their processing. We are particularly interested in the kinetic aspects of the processing of these materials. Included also in our discussions will be the emergence of new processing technique on these materials. The mutual exchange of recent information is, I think, very attractive to all participants here at the seminar and also important for the further development of these materials.

In this seminar in addition to the American and Japanese attendees we have the pleasure of the attendance of Prof. Petzow (Max-Planck Institute, Stuttgart, West Germany) and Dr. de Lau (Philips Co., Holland) who are representing the European scientific community. Thus the attendees at this seminar represent the scientific community around the world. This should promote our mutual understanding and provide our communication in the future.

You should be aware that the Japanese have some difficulty with English, therefore, I cordially request all participants from the U.S. and Europe speak clearly and slowly. By doing so we can make this seminar a rewarding experience for all. I sincerely believe that this meeting will achieve its objectives in promoting the exchange of information.

In closing, I would like to express my thanks to Dr. Somiya for his cordial assistance as the general secretary. Welcome to Japan. Thank you.

W. Komatsu

Wazo KOMATSU

P R E F A C E

Scientific advances contributing to our basic knowledge of electronic and magnetic ceramic materials have proceeded at a rapid rate in Europe, Japan and the United States. Keeping abreast of these developments through the published papers in the scientific journals in becoming an impossible task due to language barriers and the large number of publications where the information is published. It is only through international exchanges, such as this seminar, that investigators from other countries can become personally acquainted to share their ideas and philosophy in their area of expertise.

This seminar, although seemingly narrow in scope, involves the broadest fundamentals of ceramic science from powder characterization through the structure-property relations existing in processed ceramics. In addition its informal nature provides an unparalleled opportunity for cultural awareness among participants and a greater understanding between nations.

Richard M. Fulrath

Richard M. Fulrath

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The U.S.-JAPAN Seminar on Basic Science of Ceramics — 1975

P R O G R A M (CHAIRMEN)

June 23 Mon.	12:30 — 14:00	Welcome Party at Hotel New Japan, Tokyo
	14:30 — 17:00	The Chartered bus from Tokyo to Hakone
	19:00 — 21:00	Welcome address (Sōmiya) Progress of Basic Science of Ceramics in Japan and the United States
24 Tue.	9:00 — 12:00	Electronic Ceramics (Cross, Koizumi, Sakka)
	19:00 — 21:00	Electronic Ceramics (Fulrath, Yanagita)
25 Wed.	9:00 — 12:00	New Processing (Gordon, Saito, Kawai)
	13:30 — 16:50	New Materials (Jorgensen, Tashiro, Kotera)
	Evening	Business Meeting by the staffs of the both organizing committee
26 Thu.	9:00 — 12:00	Magnetic Ceramics; Fundamentals, Preparation and
	19:00 — 21:40	Application (Stokes, Yamaguchi, Bando) (Reed, Okamoto)
27 Fri.	9:00 — 14:00	Kinetics (Coble, Kinoshita, Oishi) Past and Future (Pask, Kotera)
	14:30 — 15:30	Sayonara Party
	16:00 — 19:30	To Tokyo by the Chartered bus
	20:00 —	Dinner Party, Invitation by Prof. Saito and Dr. Kotera of Ramada Alumni Club for the U.S. and other country participants Several Japanese Participants of the seminar in 1972 joined the Dinner Party
26 Thu.	15:00 — 17:30	Informal Discussion Meeting, "Sintering and Related Phenomena"
24 Tue.	Afternoon	Ladies Program. Visited Yamanashi Winery Guided by Prof. S. Saito

List of Participants of the United States of America

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Dr. J. G. M. de Lau

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At this time Professor Pask and Professor Petzow were Visiting Professor at the Research Laboratory of Engineering Materials, Tokyo Institute of Technology.

List of Participants of the Japan

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Sitting Scientists of Japanese

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Mr. Natsuo Umeda -----
absent

Toyota Central Research &
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