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No. 2

THE

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OF JAPAN

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CONTENTS

Jiro Osugi, Kiyoshi Shimizu and Hideto Takizawa: Effect of Pressure on the	
Dissociation of Electrolytic Solution. II. Effect of Pressure on the Migration	
of Hexammine Cobalt (III) Ion in Water	55
Jiro Osugi, Kimihiko Hara, Nishio Hirai and Junichi Hikasa: Crystallization of	
Polyethylene under High Pressure	59
Jiro Osugi and Muneo Sasaki: Kinetic Studies on Free Radical Reactions. II. The	
Photochemical Reaction between DPPH and Methylmethacrylate	65
Jayanta Benerjee and Kalyan K. Sengupta: Studies of Reaction Kinetics of Mono-	
hydric Alcohols by Acid Permanganate	81
Jiro Osugi and Tetsuo Hitouji: The Effect of Pressure on the Rate of the Benzidine	
Rearrangement	88
Jiro Osugi, Kiyoshi Shimizu and Akifumi Onodera: Liquid-Solid Transition at	
High Pressure. — Benzene, Monochlorobenzene and Toluene	98

THE REVIEW OF PHYSICAL CHEMISTRY OF JAPAN

(Butsuri-Kagaku no Shinpo)

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Asahi's history dates as far back as 1923 when the late Mr. Jun Noguchi, who was the first president of the company, erected a synthetic ammonia plant in Nobeoka, present site of the company's major plants. This is a memorable plant in that the first commercial production of synthetic ammonia in the world by the Casale process was successfully started at this plant.

Thereafter Asahi's production activity continued to expand, with the exception of the war years, into great many fields. Using ample electric power from its own power plants and standing on the firmly established basis that primary raw materials are available within the company, Asahi has been producing chemical fibers, synthetic resin, explosives, chemical fertilizers, chemical seasoning, industrial nitrocellulose and several scores of chemicals of ammonia, soda and chlorine derivatives.

This fact points up to Asahi's special feature as a chemical company. Asahi ranks first in the production of viscose rayon in Japan and its cuprammonium rayon capacity is largest in the world. Using acrylonitrile monomer produced by Sohio process at its Kawasaki plant, Asahi produces polyacrylic fiber "Cashimilon" by its own process. Production acrylonitrile monomer and of polyacrylic fiber is also the largest in

Japan. Asahi's chemical seasoning (monosodium glutamate) Asahi Aji, ranks second in output of similar chemical seasonings. Sun-Nitro, Asahi's unique chemical fertilizer, is building up for itself a spectacular sales. Asahi's industrial nitrocellulose and electrolytic soda production is the largest in Japan. Asahi is also at the top in production volume of all the explosives manufacturers in Japan. Recently Asahi launched into three new fields of operation, i.e. nylon 6, synthetic rubber polybutadiene "ASADENE" and new building material "Silikaltsuiit".

At present, Asahi's products are exported to 50 different countries. Export of the process is also making headway. Worthy of mention in this connection is the export of viscose rayon manufacturing techniques to the Baroda Rayon Corporation, India and Dawood Industries Limited, Pakistan, and of polyacrylic fiber manufacturing techniques to ANIC S.p.A., Italy. Through all these activities, the excellence of Asahi's techniques is highly evaluated.

Asahi now has many powerful affiliates, including Asahi-Dow Limited and Shin Nihon Chemical Industry Co., Ltd. and is proceeding on the road to further growth as a multiple-purpose chemical company.

The Review of Physical Chemistry of Japan

Vol. 34, 1964

CONTENTS

No. 1

Jiro Osugi, Kiyoshi Shimizu, Kazuo Inoue and Kazuo Yasunami: A Compact

Anvil Cubic High Pressure Apparatus	1
Jiro Osugi and Tetuo Mizukami: The Reaction of Methyl Chloride with	
Carbon Monoxide	7
Jiro Osugi and Hironobu Kubota: Studies on Oxidation Reaction of Propylene	
in the Presence of Metallic Silver	19
Kazuhiro Maruyama and Ryozo Goto: Electron Spin Resonance Studies of	
Radical-anions of Nitrobenzophenones	30
Ryozo Goto and Yo Miyagi: Syntheses and Structures of Acetylformoin and	
Related Compounds	35
No. 2	
10. 2	
Jiro Osugi, Kiyoshi Shimizu and Hideto Takizawa: Effect of Pressure on the	
Dissociation of Electrolytic Solution. II. Effect of Pressure on the Migration	
of Hexammine Cobalt (III) Ion in Water	55
Jiro Osugi, Kimihiko Hara, Nishio Hirai and Junichi Hikasa: Crystallization of	
Polyethylene under High Pressure	59
Jiro Osugi and Muneo Sasaki: Kinetic Studies on Free Radical Reactions. II. The	
Photochemical Reaction between DPPH and Methylmethacrylate	65
Jayanta Benerjee and Kalyan K. Sengupta: Studies of Reaction Kinetics of Mono-	
hydric Alcohols by Acid Permanganate	81
Jiro Osugi and Tetsuo Hitouji: The Effect of Pressure on the Rate of the Benzidine	
Rearrangement	88
Jiro Osugi, Kiyoshi Shimizu and Akifumi Onodera: Liquid-Solid Transition at	
High Pressure. — Benzene, Monochlorobenzene and Toluene	98
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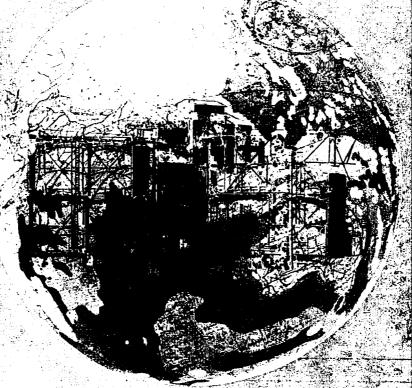


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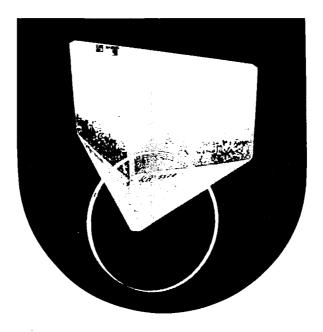


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Horiba Instruments, Inc. have developed growing of alkali-halide single crystals by molten salt method, in 1954. Having a largest production system in this country, Horiba produces various single crystals for infra-red ray measurements, in a process from growing ingots to finishing up as prisms, lenses and windows and the thallium activated sodium iodide single crystals for scintillation counting as radiation measurements. Following table shows a variety and characteristics of single crystals for infra-red ray measurements.

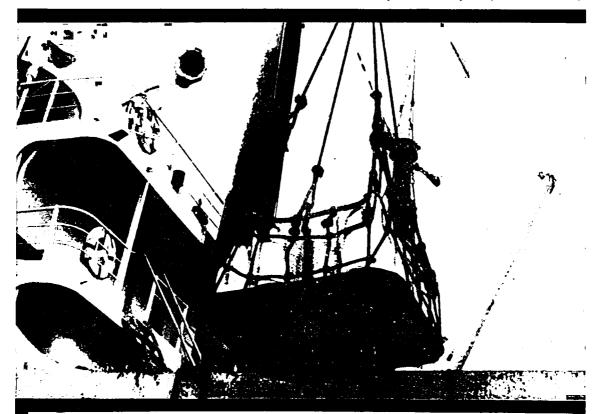
	NaCl	KCI	KBr	KI	LiF	AgCl	KRS-5	KRS-6*	CsI
Range of transparancy (microns)	-15	-21	- 27	-31	-6	-30	-40	-34	-70
Refractive index:	1.555	1.498	1.559	1.667	1.394	2.071	2.629	2.336	1.987
Solubility:**	35.7	28.5	53.5	127.5	0.27	8.9 × 10 ⁻⁵	0.02	0.32	44
Specific gravity: gr/cm3	2.16	1.59	2.75	3.13	2.64	5.56	7.2	7.19	4.53
Melting point: *C	801	776	730	680	843	455	415	424	621
Maximum diameter:	120	120	120	120	100	60	60	60	60
Maximum height: cm	100	100	100	70	60	100	60	100	100

^{*} KRS-5 is a compound single crystal of TlI and TlBr, and KRS-6 is a compound single crystal of TlCl and TlBr.

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^{**} g/100 gr water water at normal temperature.



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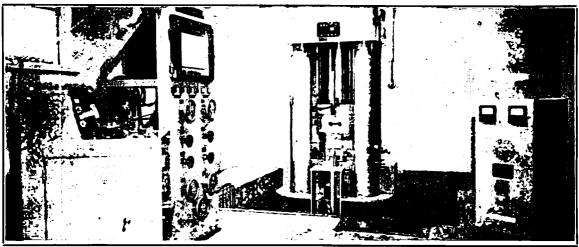
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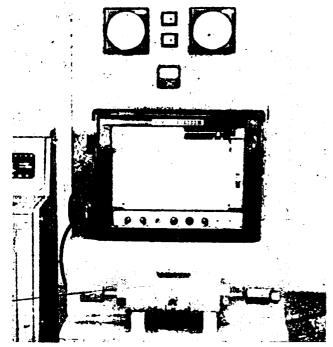
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