

Halogenation of Polypropylene, II, by
Shu Kambara, Takeo Onshika, 21 pp.

JAPANESE, per, Kogyo Kagaku Zasshi,
Vol LXII, No 11, 1959, pp 1781-1785.

SLA 60-16673

Sci
Vol IV, No 7
Apr 62

192, 730

Preparation and Polymerization of α -(2-Cyanoethyl)-
Acrylonitrile, by Makoto Tanaka, Seiichi Asai,
Shimpei Takaya, 12 pp.

JAPANESE, per, Kagaku Kagaku Zasshi, Vol LXII,
No 11, 1959, pp 1786-1788.

SLA 61-10001

Sci

Apr 61

146, 192

Reactions Between Diphenyldichlorosilane
and Some Inorganic Compounds, by T. Takiguchi,
6 pp.

JAPANESE, per, Kogyo Kagaku Zasshi,
Vol LXII, No 12, 1959, pp 1875-1876.

BATS-9542J

Sci
Vol IV, No 11
Jun 62

199,228

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Permeability of Polymer Films to Gases,
by Bunshichi Takeda, Bunnosuke
Yamaguchi, 33 pp.

JAPANESE, per, Kogyo Kagaku Zasshi,
Vol LXII, No 12, 1959, pp 1897-1904.

SIA 60-16678

Sci

Feb 62

186, 688

The Effects of Gamma-Irradiation on Polyethylene
Terephthalate, by H. Sobue, A. Kajiura.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXII,
No 12, 1959, pp 1908-1911.
NASA TT F-9008

Sci-Chem

Aug 64

U.S. GOVERNMENT ONLY

265,124

Matsuda, S. and Matsuda, H.
SYNTHESIS OF DIALKYL TIN DIODIDES. [1960]
12p.
Order from ATS \$19.45 ATS-51M47]
Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 1, p. 114-118.

148,645

61-12664

1. Tin iodides--Synthesis
2. Tin compounds (Organic)--
 Synthesis
- I. Matsuda, S.
- II. Matsuda, H.
- III. ATS-51M47]
- IV. Associated Technical
 Services, Inc., East
 Orange, N. J.

Office of Technical Services

(Chemistry--Organic, TT, v. 5, no. 7)

62-17620

Shilna, K. and Kumada, M.
A REACTION OF SILICON-CONTAINING AMINO
COMPOUNDS. [1962] 12p.
Order from K-H \$15.00 K-H 10512 b

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1960, v. 63
[no. 1] p. 173-175.

DESCRIPTORS: *Amines, *Silicon, *Chemical
reactions.

(Chemistry--Organic, TT, v. 9, no. 7)

- I. Shilna, K.
- II. Kumada, M.
- III. K-H-10512-b
- IV. Kresge-Hooker Science
Library Associates,
Detroit, Mich.

Office of Technical Services

Thermal Degradation of Polytrifluoro-
chloroethylene in Air, by Takaomi Satokawa,
Yutaka Komentani, Tatsuo Susyoshio,
19 pp.

JAPANESE, per, Kogyo Kagaku Zasshi,
Vol LXIII, No 1, 1960, pp 178-183.

SLA 60-16674

Sci
Vol IV, No 7
Apr 62

192,648

Epoxydation Reaction of Dehydrochlorinated
Polyvinyl Chloride, by Kiichi Takemoto,
11 pp.

JAPANESE, por, Kogyo Kagaku Zasshi,
Vol. LXIII, No 1, 1960, pp 186-188.

BLA 60-16671

Sci
Vol. IV, No 5
Mar 62

188, 445

Homogenous System Reaction Between Polyvinyl
Alcohol and Acrylamide, by Heihachiro Ito, 19 pp.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXIII,
No 2, 1960, pp 338-341.

SLA 61-10007

Sci

Apr 61

146,183

TT-64-14358

Arai, Teikichi and others.
ENTRANCE EFFECT AND BARUS EFFECT (IN
MOLTEN-POLYMER EXTRUSION). [1963] [34p] 50refs
Order from SLA \$3.60 TT-64-14358

1. Arai, T.

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 3, p. 418-427.

DESCRIPTORS: *Plastics, *Extrusion, *Hydrodynamics,
Polymers, Viscoelasticity, Fluid flow, Density,
Stresses, Mathematical analysis.

(Mechanics--Hydrodynamics, TT, v. 11, no. 10)

Office of Technical Services

63-14038

I. Fukasawa, Y.

Fukasawa, Yoshishi.
NON-NEWTONIAN FLOW OF POLYVINYL CHLORIDE
AT HIGH TEMPERATURE. 28 June 62, 10p. (figs.
tables omitted).
Order from SLA \$1.10 63-14038

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
p. 459-564.

DESCRIPTORS: *Polyvinyl chloride, *Fluid flow,
Viscosity, Molecular weight, Elasticity, Friction,
Shear stresses, Heat of activation, *Plasticizers,
Lubricants.

Flow character of PVC was measured by an extrusion
capillary viscometer. The flow curves indicated
considerable non-Newtonian character at lower temper-
atures. At temperatures above the melting point (206°C)
of the PVC, the flow curves obeyed the Bueche-Harding
equation, which has successfully explained the de-
(Materials--Plastics, TT, v. 10, no. 7) (over)

Office of Technical Services

Reaction of Sulfuryl Diisocyanate With Amines,
by N. Onodera.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 66, 1963,
pp 481-484.
NTC-71-16222-07C

Jan 72

60-18146

Okajima, Saburo and Kubo, Teruo.
DYEING CONDITIONS OF POLYACRYLONITRILE
FILAMENT WITH CONGO RED FOR DICHROIC
STUDY AND ITS APPLICATION TO THE DETERMI-
NATION OF THE DEGREE OF ORIENTATION. Rept.
no. 1 of Studies on Acrylic System Synthetic Fibers.
[1960] 18p. 18 refs. 60-18146
Order from SLA mi\$2.40, ph\$3.30

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 3, p. 523-528.

A straight polymer of acrylonitrile whose molecular
weight was 78000 was wet-spun by dissolving it in 70%
nitric acid. When in an undried state, this fiber could
be dyed easily to an intense color by direct dyes, and
the degree of orientation of this fiber could be deter-
mined from dichroism which appeared by the use of
Congo Red. When drawn by using a warm-water bath
at below 55°C or a 40% nitric acid bath (normal tem-
perature), both cases oriented at the same tendency at
(Materials--Textiles, TT, v. 5, no. 3) (over)

- 1. Synthetic fibers--
Processing
- 2. Dyes--Applications
- 1. Okajima, S.
- II. Kubo, T.
- III. Title: Studies...

143,049

Office of Technical Services

Polymerization of Vinyl Acetate Using
Trialkyl Borate. Part I., by F. Idee.
JAPANESE, per, Kogyo Kagaku Zasshi, vol. 63,
no. 3, 1960, pp. 529-533.
NTC 71-12829-07C

July 1971

Polymerization of Vinyl Acetate Using
Trialkylborates. Part II. Reaction Velocity
of the First Stage of Polymerization of
Vinyl Acetate Using a Tributylborate Catalyst,
by F. Ide.
JAPANESE, per, Kogyo Kagaku Zasshi, vol. 63,
no. 3, 1960, pp. 533-536.
NTC 71-12830-07C

July 1971

<p>Nagase, Kunitiko and Sakaguchi, Kabei. (DISTRIBUTION) OF PRODUCTS OF ADDITION OF ETHYLENE OXIDE TO LAURYL ALCOHOL AND NONYLPHENOL. [1961] [22]p. (7 figs. omitted) 16 refs.</p>	<p>61-10682</p>
<p>Order from SLA \$2.60</p>	<p>61-10682</p>
<p>Trans. of <u>Kogyo Kagaku Zasshi</u> (Japan) 1960, v. 63, no. 4, p. 588-592.</p>	<p>I. Nagase, K. II. Sakaguchi, K.</p>
<p>DESCRIPTORS: *Ethylene oxide, *Alcohols, *Phenols, Nonyl radicals, Chemical reactions, Statistical distributions.</p>	<p>161605</p>
<p>(Chemistry--Physical, TT, v. 6, no. 1)</p>	<p>Office of Technical Services</p>

Indirect Coulometric Titration of Reducible M^n
Organic Compounds by Produced (aric Ion, by Takeo
Takahashi, Hiroshi Sakurai, 15 pp.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXIII,
1960, pp 608-611.

AEC UCRL-Trans-635(L)

Sci - Chem
May 61

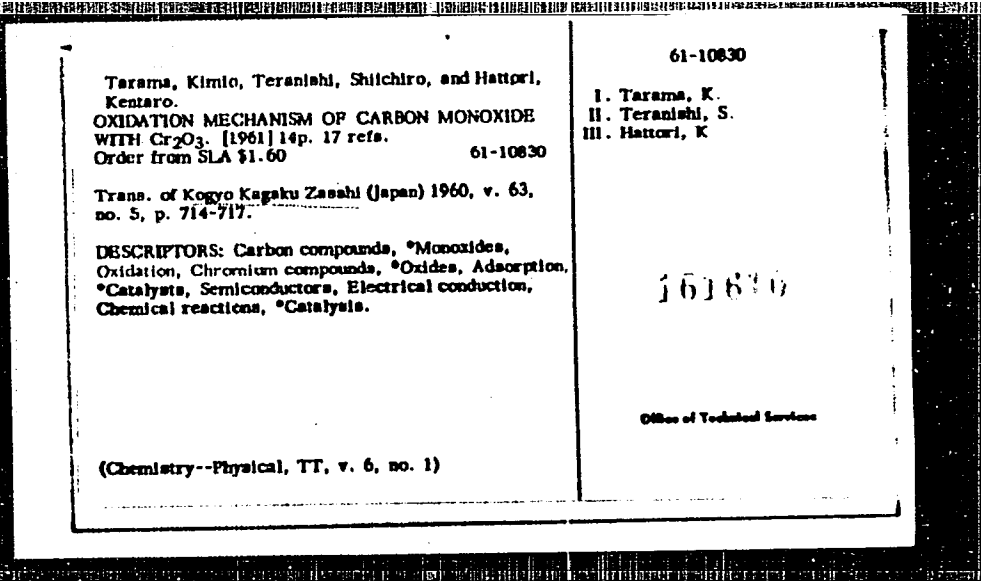
150,378

TT-65-14157 Field 111

Furukawa, J.; Tsuruta, T.; Fujita, Y.; Kanasaki, A.
POLYMERIZATION OF VINYL CHLORIDE WITH
ORGANOMETALLIC COMPOUNDS, 32p, 23refs,
Order from SLA: \$3.60 as TT-65-14157

Trans. of Kogyo Kagaku Zasshi (Japan) v63 n4 p645-52
1960.

MR 674



Tarama, Kimio, Teranishi, Shichiro, and Hattori,
Kentaro.
OXIDATION MECHANISM OF CARBON MONOXIDE
WITH Cr₂O₃. [1961] 14p. 17 refs.
Order from SLA \$1.60 61-10830

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 5, p. 714-717.

DESCRIPTORS: Carbon compounds, *Monoxides,
Oxidation, Chromium compounds, *Oxides, Adsorption,
*Catalysts, Semiconductors, Electrical conduction,
Chemical reactions, *Catalysis.

(Chemistry--Physical, TT, v. 6, no. 1)

61-10830

I. Tarama, K.
II. Teranishi, S.
III. Hattori, K

161830

Office of Technical Services

Synthesis of Maleic Anhydride by the
Catalytic Oxidation of C₄ Hydrocarbons With
Air, by M. Matsumoto, T. Ikawa, N. Nagasako,
8 pp.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXIII,
No 5, 1960, pp 734-737.

ATS-JJ-2913
ATS-69443

203, 217

Sci
Jun 62

Fujimoto, Teruo, Inoue, Yukio, and Kobatake,
Yonosuke.
CORRELATION OF INTERNAL STRUCTURE OF
HIGH POLYMER FILMS WITH THEIR PHYSICAL
PROPERTIES. [1960] 13p. 5 refs.
Order from SLA ml\$2.40, ph\$3.30 61-10272
Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 5, p. 851-854.

141,148

(Chemistry--Organic, TT, v. 5, no. 2)

61-10272

1. Polymers--Physical properties
 2. Vinyl films--Physical properties
 3. Coatings--Physical properties
- I. Fujimoto, T.
II. Inoue, Y.
III. Kobatake, Y.

Office of Technical Services

61-16523

I. Yoshida, M.

Yoshida, Michio.
AN ATTEMPT AT THE POLAROGRAPHIC DETERMINATION OF VINYL PYRIDINES. [1961] 5p. 4 refs.
Order from SLA \$1.10 61-16523

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 5, p. 893-894.

DESCRIPTORS: Vinyl radicals, *Pyridines, Determination, *Polarographic analysis, Quantitative analysis.

Quantitative analysis of vinylpyridine system compounds is comparatively troublesome, and analysis by near-ultraviolet absorption, for example, is being conducted recently, but it has become clear as a result of these experiments that in the area of small concentration, quantitative analysis is possible polarographically as well. (Author)

(Chemistry--Analytical, TT, v. 6, no. 6)

176546

Office of Technical Services

<p>Nakamura, Senichi, Azuma, Nobuyuki, and Arai, Zenzaburo. DECOMPOSITION OF BORON NITRIDE WITH ACID AND THE EFFECTS OF SOME OXIDIZING AGENTS. [1961] 12p. 8 refs. Order from SLA mi\$2. 40, ph\$3. 30 61-10589 Trans. of <u>Kogyo Kagaku Zasshi</u> (Japan) 1960, v. 63, no. 6, p. 903-906.</p>	<p>61-10589 1. Boron nitrides-- Decomposition I. Nakamura, S. II. Azuma, N. III. Arai, Z. <i>AEC ORNL-M-1242</i> <i>9233399</i> <i>148576</i></p>
<p>(Chemistry--Physical, TT, v. 5, no. 12)</p>	<p>Office of Technical Services</p>

<p>Takimoto, Masayoshi and Sawada, Masaru. INVESTIGATION OF THE DETERMINATION OF SEVERAL TYPES OF CYANAMIDE DERIVATIVES OTHER THAN GUANIDINE, DICYANDIAMIDE, AND BIGUANIDE. Rept. no. 3 of Studies on Separation and Determination Methods for Cyanamide Derivatives; [Paper] read in part at the Annual Conference of the Chemical Society of Japan (no. 11) Apr 58. [1961] 10p. 10 refs. Order from SLA \$1.10 61-10601</p> <p>Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 6, p. 967-970.</p> <p>DESCRIPTORS: *Colorimetric analysis, *Cyanamide, *Thiourea, *Urea, *Urea derivatives, Cyano radicals, *Guanidines, Separation, Determination.</p> <p>(Chemistry--Analytical, TT, v. 6, no. 1)</p>	<p>61-10601</p> <p>I. Takimoto, M II. Sawada, M. III. Title: Annual... IV. Title: Studies...</p> <p>161590</p> <p>Office of Technical Services</p>
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61-16576

Fukuhara, Sotsu.
EFFECTS OF WETTING (H₂O) AND AIR-DRYING ON
THE RECRYSTALLIZATION OF AMORPHOUS CELLU-
LOSE FILM AND GEL CELLOPHANE FILM. [1961]
[1]jp. 8 refs.
Order from SLA \$1.60

I. Fukuhara, S.

61-16576

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 6, p. 1059-1061.

DESCRIPTORS: *Cellulose, Crystallization, Cellulose
chemistry, *Plastic films.

The following experiments were carried out in order to
study the effects of water and air-drying on the recrystallization of cellulose from the infrared spectra. Water in which gel cellophane was soaked was replaced with D₂O, then this was dried over P₂O₅. This was again moistened with D₂O, and was again dried over P₂O₅.
(Chemistry--Organic, TT v. 6, no. 7) (over)

101091

Office of Technical Services

61-10831

Funaki, Koemon and Gejo, Teuo.
STRUCTURAL CHANGE OF ALUMINA-SILICA GEL
ATTENDANT UPON CALCINATION. [1961] 18p.
4 refs. 61-10831
Order from SLA \$1.60

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 7, p. 1166-1172.

DESCRIPTORS: *Alumina-silica catalysts. *Gels.
Heat treatment. X-ray diffraction analysis.
Structures.

1. Funaki, K.
II. Gejo, T.

161611

Office of Technical Services

(Chemistry--Physical, TT, v. 6, no. 1)

<p>Otsuka, Eiji, Yoshimura, Shinji and others. EQUILIBRIUM OF THE $\text{NH}_3\text{-CO}_2\text{-H}_2\text{O}$ SYSTEM. Rept. no. 11 of Studies on the Synthesis of Urea; [Paper] read at the Annual Conference of the Chemical Society of Japan (no. 11) Apr 58. [1961] 17p. 13 refs. Order from S.L.A. mi\$2.40, pi\$3.30 61-10593</p> <p>Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 7, p. 1214-1218.</p> <p>(Chemistry--Physical, TT, v. 5, no. 12)</p>	<p>61-10593</p> <ol style="list-style-type: none">1. Ammonia-carbon dioxide-water systems--Phase studies2. Urea--Synthesis3. Chemical equilibrium--Measurement <ol style="list-style-type: none">I. Otsuka, E.II. Yoshimura, S.III. Title: Studies...IV. Title: Annual... <p>148577</p> <p>Office of Technical Services</p>
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62-17045

Otsuka, Eiji.
EFFECTS OF INERT GASES PRESENT IN RAW
CARBON DIOXIDE ON SYNTHESIZING EFFICIENCY
OF UREA. Rept. no. 7 of Studies on the Synthesis of
Urea, May 62, 12p. 5 refs.
Order from SA \$18.00 SA Code-L

- I. Otsuka, E.
- II. Title Studies...
- III. SA Code...
- IV. Seizaburo Aoki (Japan)

Trans. of [Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 7, p. 1205-1211].

DESCRIPTORS: *Urea, Synthesis, *Carbon dioxide,
Gases, Ammonia, *Vaporization, Phase transitions,
Temperature, Liquefied gases, *Temperature, Re-
action time.

(Chemistry--Organic, TT. v. 8, no. 3)

Office of Technical Services

Murai, K., Akazome, G., and Murakami, Y.
STUDIES ON THE FORMATION OF PERACETIC ACID.
Paper no. 6 on Study of Epoxy Fatty-Acid Esters.
[1962] [13]p. (foreign text included) 4 refs.
Order from SLA \$1.60 62-14374

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 7, p. 1233-1235.

DESCRIPTORS: *Epoxydes, *Fatty acid esters,
*Acetic acids, Synthesis, Chemical equilibrium,
Catalysts.

Some studies are made on the synthesis of peracetic acid from hydrogen peroxide and acetic acid. The equilibrium constant for peracetic acid formation at 25-42°C. is found to be $K = 3.26$. The equilibrium constant for the reverse reaction is in close agreement. The apparent activation energy of 11.7 kcal/mole is obtained for peracetic acid formation in presence of (Chemistry--Organic, TT, v. 9, no. 2) (over)

62-14374

- I. Murai, K.
- II. Akazome, G.
- III. Murakami, Y.
- IV. Title: Study ...

Office of Technical Services

61-10605

Takahashi, Takeo, Yoshida, Eitichi, and Masuko, Akiyoshi.
COMBUSTION STUDIES OF HYDROCARBONS BY THE FLASH PHOTOLYSIS METHOD--ABSORPTION SPECTRA OF FREE RADICALS AND DYNAMIC PRESSURES. Rept. no. 1 on Combustion Studies of Hydrocarbons. [Paper] read at the Annual Conference of the Chemical Society of Japan (no. 12) Apr 59 and at the Symposium of the Petroleum Society (no. 2) Sep 59. [1961] 17p. 9 refs.
Order from SLA ml\$2.40, ph\$3.30 61-10605

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 8, p. 1364-1367.

In order to elucidate the relationship between the structure of hydrocarbons and their combustibilities, the knocking phenomenon, etc., the absorption spectra of free radicals were measured by the flash [photolysis] method developed by Norrish, and known [radicals of] OH, CN, C₂, CH, and NH were detected in the reaction (Chemistry--Physical, TT, v. 5, no. 12) (over)

1. Hydrocarbons--
Combustion
I. Takahashi, T.
II. Yoshida, E.
III. Masuko, A.
IV. Title: Combustion...
V. Title: Annual...
VI. Title: Symposium...

148589

Office of Technical Services

63-12282

Yamamoto, K., Morita, Y. and others.
REACTION BETWEEN KEROSENE AND STEAM IN
THE PRESENCE OF MULTICOMPONENT CATALYSTS.
[1962] 11p.

Order from: ATS \$19.75 ATS-67P64]

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 8, p. 1372-1376.

DESCRIPTORS: *Kerosene, *Steam, Chemical reac-
tions, *Catalysts.

SLA (LEAN) TT-63-20475 (25/11)

- I. Yamamoto, K.
- II. Morita, Y.
- III. ATS-67P64]
- IV. Associated Technical
Services, Inc., East
Orange, N. J.

(Chemistry--Physical, TT, v. 9, no. 2)

Office of Technical Services

Mizutani, K., Shiraki, E., and Suzuki, S.
**EFFECTS OF CROSSLINKING TREATMENTS UPON
MECHANICAL PROPERTIES OF POLYURETHANE
FIBERS.** [1961] 7p.
Order from ATS \$10.60 **ATS-32NS1J**

Trans. of Kokyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 9, p. 1314-1316.

61-22390

1. Urethane polymers--
 Mechanical properties
2. Fibers--Mechanical
 properties
 - I. Mizutani, K.
 - II. Shiraki, E.
 - III. Suzuki, S.
 - IV. **ATS-32NS1J**
 - V. Associated Technical
 Services, Inc., East
 Orange, N. J.

ATS-JJ-3098
160930

Office of Technical Services

(Materials--Textiles, TT, v. 5, no. 12)

Temperature Specificity of Polyethylene
Terephthalate Textiles, by K. Shirakashi, et al.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 63,
1960, pp 1516-1520.
NTC 71-13874-11E

Feb 72

Tsuji, W., Kitamaru, R. and others.
GRAFT POLYMERIZATION OF VINYL MONOMERS
ONTO POLYVINYL ALCOHOL FIBERS. [1961] 9p.
Order from ATS \$14. 40 ATS-56N55J

Trans. of Kogo Kagaku Zasshi (Japan) 1960, v. 63,
no. 9, p. 1527-1530.

DESCRIPTORS: *Vinyl alcohol, Polymerization,
Polymers, Alcohols, *Synthetic fibers, *Fibers.

(Chemistry--Organic, TT, v. 7, no. 2)

61-25713

1. Title: Graft polymers
- I. Tsuji, W.
- II. Kitamaru, R.
- III. ATS-56N55J
- IV. Associated Technical
Services, Inc.,
East Orange, N. J.

ATS-JJ-3064

Office of Technical Services

Studies on solvent extraction of inorganic salts.
4. Decomposition of extracted nitric acid on the
Extraction of Uranyl Nitrate by UBP (ureibutyrol
Phosphate), by Taiichi Sato, Totaro Goto, 6 pp.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol. LXIII,
No 9, 1960, pp 1586-1587. 9092283

ARC Tr-4665

Sci - Chem
Nov 61

172, 420

61-10840

Kamogawa, Hiroyoshi and Sekiya, Toshi.
AQUEOUS POLYMERIZATION OF N-METHYLOL
ACRYLAMIDE. Rept. 13 of Studies on Fiber-Treating
Agents. [1961] 12p. 7 refs.
Order from SLA \$1.60

61-10840

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 9, p. 1631-1635.

DESCRIPTORS: *Acrylamides, Hydroxides, Methyl
radicals, *Polymers, *Polymerization, Temperature,
Acrylic resins, *Fibers.

I. Title: Crosslinking
I. Kamogawa, H.
II. Sekiya, T.
III. Title: Studies...

161620

Office of Technical Services

(Materials--Textiles, TT, v. 6, no. 1)

Kamogawa, Hiroyoshi and Sekiya, Toshii.
CROSSLINKING OF POLYMETHYLOL ACRYLAMIDE
BY THE APPLICATION OF HEAT. Rept. 14 of Studies
on Fiber-Treating Agents. [1961] 12p. 5 refs.
Order from SLA \$1.60 61-10838

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 9, p. 1636-1639.

DESCRIPTORS: *Acrylamides, Hydroxides, Methyl
radicals, *Polymers, *Polymerization, Temperature,
Acrylic resins, *Fibers.

(Materials--Textiles, TT, v. 6, no. 1)

61-10838

- I. Title: Crosslinking
- I. Kamogawa, H.
- II. Sekiya, T.
- III. Title: Studies...

161618

Office of Technical Services

<p>Kamogawa, Hiroyoshi, Murase, Ryoichi, and Sekiya, Toshii. CROSSLINKING OF EMULSION COPOLYMER OF N-METHYLOL ACRYLAMIDE AND ETHYL ACRYLATE BY THE APPLICATION OF HEAT. Rept. 15 of Studies on Fiber-Treating Agents. [1961] 15p. 4 refs. Order from SLA \$1.60 61-10839</p>	<p>61-10839</p>
<p>Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 9, p. 1639-1643.</p>	<p>I. Title: Crosslinking I. Kamogawa, H. II. Murase, R. III. Sekiya, T. IV. Title: Studies...</p>
<p>DESCRIPTORS: *Copolymerization, *Polymers, *Acrylamides, Methyl radicals, Hydroxides, Acrylic resins, Temperature, *Fibers.</p>	<p>161619</p>
<p>(Materials--Textiles, TT, v. 6, no. 1)</p>	<p>Office of Technical Services</p>

Stabilizing Effect of Epoxidized PVC, by
Y. Fujikake.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 63,
1960, pp 1669-
HTC-71-16211-111

Jan 72

62-34472

Tagawa, Hiroaki and Nakajima, Hitoshi.
GRAPHITIZATION AND WET OXIDIZABILITY OF
HEAT-TREATED PETROLEUM COKE. Rept. 2 of
Studies on the Production and Properties of Carbides.
Oct 62, 15p. 13 refs.
Order from SA \$18.00 SA Code-G78

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 10, p. 1690-1694.

DESCRIPTORS: *Carbides, Production, *Coke, *Pe-
troleum, Heat treatment, Oxidation, *Graphite, Crys-
tallization, X-ray diffraction analysis, Towers
(Chemistry)

(Engineering--Chemical, TT, v. 8, no. 12)

- I. Tagawa, H.
- II. Nakajima, H.
- III. Title: Studies ...
- IV. SA Code-G78
- V. Seizaburo Aoki (Japan)

Office of Technical Services

<p>Nakamura, Tadaaki. STUDIES ON POLYGLUCOSE. [Paper] presented at the [Annual Conference] of the Chemical Society of Japan (no. 12) 2 Apr 59. [1961] [16]p. 16 refs. Order from S.L.A \$1.60 61-16125</p> <p>Trans. of Kogyo Kagaku Zasshi (Japan) [1960] v. 63 [no. 10] p. 1769-1772.</p> <p>DESCRIPTORS: Saccharides, *Glucose, *Polymerization Condensation reactions, Polymers.</p>	<p>61-16125</p> <p>I. Nakamura, T. II. Title: Annual...</p> <p>180441</p> <p>Office of Technical Services</p>
<p>(Chemistry--Organic, TT, v. 6, no. 5)</p>	

62-17047

Iwanaga, Ryoji, Fujii, Takashi and others.
THE EFFECT OF ORGANIC BASES ON THE RATES
OF OXO REACTIONS. Studies on the Oxo Reactions,
no. 2. May 62, 11p. 5 refs.
Order from SA \$18.00 SA Code-92

Trans. of [Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 10, p. 1754-1757].

DESCRIPTORS: *Chemical reactions, *Oxo process,
Reaction kinetics, *Pyridines, Organic compounds,
Acrylic acids, Methyl radicals, Amines, Ethyl rad-
icals, *Cobalt compounds, *Carbonyl radicals, Syn-
thesis, Catalysts, Catalysis.

(Chemistry--Organic, TT, v. 8, no. 3)

I. Iwanaga, R.
II. Fujii, T.
III. Title: Studies...
IV. SA Code-92
V. Seizaburo Aoki (Japan)

Office of Technical Services

Studies of Formaldehyde Resins. Part 52. Kinetic
Studies of the Reactions of 2,4-dimethylbenzyl
Alcohol and Bis-(2,4-dimethylbenzyl) Ether with
Aliphatic Acids, by M. Imoto.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 63, No 10,
1960, pp 1807-1811.
ATS-JS-176

Sci-Chem
1960 70

403,855

62-17066

Furukawa, Junji, Saegusa, Takeo and others.
POLYMERIZATION OF OLEFINS BY THE BINARY
MIXTURE OF ORGANOMETALLIC COMPOUND AND
SILICA-ALUMINA-TITANIA. May 62, 20p. 26 refs.
Order from SA \$21.00 SA Code-107

I. Furukawa, J.
II. Saegusa, T.
III. SA Code-107
IV. Seizaburo Aoki (Japan)

Trans. of (Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 10, p. 1812-1817).

DESCRIPTORS: *Ethylenes, *Polymerization, Metal-
organic compounds, Ethyl radicals, Aluminum com-
pounds, Silicon compounds, Titanium compounds, Ox-
ides, *Catalysts, Cautylsis, Pressure, Molecular
weight, Density, Temperature, Absorption, Infrared
spectroscopy, Propenes, Butadienes, Polymers.

(Chemistry--Organic, TT, v. 8, no. 3)

Office of Technical Services

61-16519

Sakata, Ryozo, Tsuruta, Teiji, and others.
POLYMERIZATION OF PROPYLENE OXIDE AND
VINYL COMPOUNDS WITH DIETHYLZINC IN THE
PRESENCE OF COCATALYSTS. [1961] 20p. 30 refs.
Order from SLA \$1.60 61-16519

I. Sakata, R.
II. Tsuruta, T.

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 10, p. 1817-1822.

176542

DESCRIPTORS: *Propanes, *Epoxydes, Vinyl radicals,
*Polymerization, Zinc compounds, Ethyl radicals,
Catalysts, Polymers, Synthesis.

Elastic solid polypropylene oxide was obtained by the
use of the following binary system catalysts: diethyl-
zinc-oxygen, diethylzinc-water, diethylzinc-methanol,
and diethylzinc-ethanol. The polymers obtained included
crystalline polymers. Zinc alkoxides appeared to play
an important role by the use of catalysts whose one
component was oxygen, methanol, or ethanol. The
(Chemistry--Organic, TT, v. 6, no. 6) (over)

Office of Technical Services

Kinetic Investigation of the Reaction Between
Aromatic Diisocyanate and Polyols, by
T. Yokoyama.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 63,
1960, pp 1835-1839.
NTC-71-15512-07C

Feb 72

61-22608

Matsuda, Y. and Tanaka, A.
HIGH POLYMERS AS FUEL BINDERS. [1961] 15p.
Order from ATS \$21.60 ATS-66N51J

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 11, p. 1869-1875.

DESCRIPTORS: *Binders, Fuels, *Polymers.

I. Matsuda, Y.
II. Tanaka, A.
III. ATS-66N51J
IV. Associated Technical
Services, Inc., East
Orange, N. J.

175821

Office of Technical Services

(Materials--Fuels, TT, v. 6, no. 3)

61-16520

Takimoto, Masayoshi and Yatsuo, Toru.
SEPARATION AND DETERMINATION OF NON-
CYCLIC CYANAMIDE DERIVATIVE MIXTURES AND
EVALUATION OF PRACTICALIZATION THEREOF.
Rept. no. 7 of Studies on Separation and Determination
Methods for Cyanamide Derivatives. [1961] 13p. 8 refs.
Order from SLA \$1.60 61-16520

I. Takimoto, M.
II. Yatsuo, T.
III. Title: Studies...

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 11, p. 1941-1944.

DESCRIPTORS: *Cyanamides., Determination, Separation,
Colorimetric analysis.

176543

Separations by ion-exchange resins and the colorimetric determination method were applied to various sample mixtures of the six types of non-cyclic cyanamide derivatives which are most common and which tend to co-exist most easily (viz., cyanamide, dicyandiamide, guanidine, biguanide, urea, and thiourea) and this (Chemistry--Analytical, TT, v. 6, no. 6) (over)

Office of Technical Services

TT-63-20358

Yamamoto, Ken'ichi, Morita, Yoshiro, Kurate,
Takeishi, Yoshitomi, Sushiko.
REACTION OF PURE C₆-HYDROCARBON ON WATER
VAPOR. Pt. 2 of Reaction of Petroleum on Water Vapor.
[1963] 28p (figs omitted) 13refs
Order from SLA \$2.60

TT-63-20358

- I. Yamamoto, K.
- II. Morita, Y.
- III. Kurate, T.
- IV. Yoshitomi, S.
- V. Title: Reaction...

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63
[no. 11] p. 1945-1949. (Abstract available)

DESCRIPTORS: *Petroleum, Hydrocarbons, *Hexenes,
*Cyclohexanes, *Benzenes, Chemical reactions,
*Catalysis, Nickel catalysts, *Water vapor, Heat of
reaction, Fuels, Gases.

Reaction of C₆-hydrocarbon on water vapor becomes
prominent above 800°C and the catalyzer on basic
carrier is apter to receive the influence of catalytic
temperature. Reaction without catalyzer requires
(Chemistry--Organic, TT, v. 11, no. 3) (over)

Office of Technical Services

Mizutani, Kiyoshi, Shiroki, Eitarō, and Suzuki,
Shōsaku.
RELATIONSHIP BETWEEN DRY SPINNING CONDI-
TIONS FOR POLYACRYLONITRILE SYSTEM FIBERS
AND THE FIBER PROPERTIES. Rept. no. 1 on Dry-
Spinning of Acrylic System Fibers. [1961] 14p. 6 refs.
Order from SLA \$1.60 61-16521.

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63,
no. 11, p. 2042-2045.

DESCRIPTORS: *Polymers, *Acrylonitriles, Synthetic
fibers, Processing

Fibers which were obtained by dry-spinning dimethyl-
formamide solutions of polyacrylonitrile or copolymers
containing over about 94% of acrylonitrile, by passing
them through a stainless steel nozzle into hot air, were
studied in regard to the relationship between dye affini-
ty and spinnability vs. dope heating method, solvent
(Materials--Textiles, TT, v. 6, no. 6) (over)

61-16521

- I. Title: Spinning
- I. Mizutani, K.
- II. Shiroki, E.
- III. Suzuki, S.
- IV. Title: Dry-Spinning

176544

Office of Technical Services

61-16522

Takimoto, Masayoshi and Tawara, Masao.
A SIMPLE DETERMINATION METHOD FOR AMMONIA IN CYANAMIDE DERIVATIVES BY MICRO-DIFFUSION ANALYSIS. [1961] 3p. 7 refs.
Order from SLA \$1. 10 61-16522

I. Takimoto, M.
II. Tawara, M.

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 11, p. 2059-2060.

DESCRIPTORS: *Ammonia, Determination, *Cyanamides, Chemical analysis, Microanalysis, Diffusion

176545

Office of Technical Services

(Chemistry--Analytical, TT, v. 6, no. 6)

63-20476

Yoshitomi, Sushiko, Morita, Yoshiro, and Yamamoto, Kenichi.

REACTION OF PURE HYDROCARBONS AND STEAM.

Pt. 3 of Reaction of Petroleum [on Water Vapor].

[1965] 32p 11refs

Order from SLA \$3.60

63-20476

I. Yoshitomi, S.
II. Morita, Y.
III. Yamamoto, K.
IV. Title: Reaction ...

Trans. of [Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 12, p. 2134-2140].

DESCRIPTORS: *Steam, *Hydrocarbons, *Catalysts, *Petroleum, Reaction kinetics, Pyrolysis, Statistical data.

There was found difference between the reactions of hydrocarbons and steam with neutral and basic catalysts, and neutral catalysts showed a better catalytic effect. As for the composition of gaseous product in the case of neutral catalysts, the sum of hydrogen and carbon monoxide amounted to 80-90% and it was not (Chemistry-Physical, TT, v. 10, no. 12) (over)

Office of Technical Services

Ishii, Y. and others.

KINETICS OF SUCCESSIVE ADDITION OF ETHYLENE OXIDE TO PHENOL. Pt. 3 of Studies of the Kinetics on the Ring Opening Addition of Epoxy Compounds to the Active Hydrogen Compound. [1961] 17p. 9 refs.

Order from SLA \$1.60

61-18630

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63 [no. 12] p. 2177-2180.

Portions of this report will not reproduce well.

DESCRIPTORS: *Ethylene oxide, *Phenols, *Ethanol, *Phenoxy radicals, Chemical reactions, Reaction kinetics.

This paper deals with the measurement of the addition reaction of ethylene oxide with phenol and phenoxy- (Chemistry--Organic, TT, v. 6, no. 12) (over)

61-18630

I. Ishii, Y.
II. Title: Studies...

187015

Office of Technical Services

Anomalies in Infrared Absorption Spectra by
the Alkali Halide Disk Technique,
by O. Nakaso, H. Ito, 10 pp.
FOR OFFICIAL USE ONLY
JAPANESE, per, Nippon Kagaku Zasshi, Vol LXXXI,
1960, pp 685-688. 9697643
KSTC-381-765-231

Sci - Phys
Jul 68

284,258

Dosage du Chrome dans les Aciers Inoxydables par la
Methode d'Analyse par Fluorescence aux Rayons X,
by K. Momogi, 27 pp.

FRENCH TO JAPANESE, per, Kogyo Kagaku Zasshi, Vol VIA,
No 1, 1961, pp 98-109. 9089596

CEA X-436
Reverse Translation

Aug 62

61-18681

Kaji, Keiji.
META-STABILITY OF GYPSUM SEMIHYDRATE IN
MIXED ACIDS (H_3PO_4 , H_2SO_4). Rept. no. 5 of
Studies on the Preparation of Phosphoric Acid Solution
by the Wet System. [1961] 22p. 5 refs.
Order from SLA \$2.60 61-18681

I. Kaji, K.
II. Title: Studies...

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 1, p. 123-128.

Portions of this report will not reproduce well.

DESCRIPTORS: Acids, *Sulfuric acid, *Phosphoric
acids, Solutions, Preparation, *Gypsum, *Hydrates,
Stability, Measurement, Chemical reactions.

The meta-stability of gypsum semihydrate in mixed
acids (H_3PO_4 , H_2SO_4) of various concentrations was
measured and the relationship between this meta-sta-
bility and the reaction conditions of phosphoric acid
preparation by the wet method was studied.

(Chemistry--Inorganic,
TT, v. 7, no. 1)
Office of Technical Services

Titanium-Iodine System, by Koyunenon Funaki,
Takataro Uchimura, et al, 20 pp.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXIV,
129-287 pp, 1961.

AEC-tr-6007

Sci-Mat & Met
Nov 63

241,354

63-18747

Muraki, Ichiro and Okajima, Yukio.
EFFECT OF CURRENT DENSITY ON SOME PROPERTIES OF ELECTROLYTIC MANGANESE DIOXIDE.
Rept. 4 on Experiments in the Manufacture of Electrolytic Manganese Dioxide. [1963] 15p. 17 refs
Order from SLA \$1.60 63-18747

I. Muraki, I.
II. Okajima, Y.
III. Title: Experiments ...

Trans. Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
p. 137-141.

DESCRIPTORS: *Electrolytes, *Manganese compounds,
*Dioxides, *Dry cells, *Wet cells, Density, Electric
potential, *Electrochemistry,

A study was made of the effects of current density on the relationship and adaptability of electrolysis conditions and the quality of manganese dioxide produced. Physical and electrochemical tests, galvanic cell tests and x-ray diffraction examination were run on the (Engineering--Electrical, TT, v. 10, no. 12) (over)

Office of Technical Services

Ide, Fumio and Takayama, Yuji.
GRAFT COPOLYMERIZATION OF METHYL METH-
ACRYLATE ON CELLULOSE. [1961] 20p. 6 refs.
Order from SLA \$1.60 61-16540

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 1, p. 213-218.

DESCRIPTORS: *Cellulose, *Acrylic resins, *Copoly-
merization, Polymers, Cellulose chemistry.

The ammonium salt of cerium nitrate was used as
catalyst and methyl methacrylate was polymerized in
the presence of cellulose. The effects of polymerization
time, polymerization temperature, catalyst concentra-
tion, monomer concentration, and nitric acid concentra-
tion as factors which affect the polymerization were
studied. The polymerization yield was proportional to
the polymerization time, polymerization temperature,
and nitric acid concentration, but was inversely propor-
(Chemistry--Organic, TT, v. 6, no. 6) (over)

61-16540

I. Title: Graft polymers
I. Ide, F.
II. Takayama, Y.

ATS-55-3103

176550

Office of Technical Services

Syntheses of Polyvinylthiophenols, by Makoto
Okawara, Yoshio Onishi, Eiji Imoto.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol. LXIV,
No 1, 1961, pp 226-228.

SLA 61-18676

Sci
Mar 62

189,555

Vol VII, No 2

Synthesis of Polymer Thiols Containing Vicinal
Sh Groups, by Makoto, Okawara, Eichi Haruki,
et al, 12 pp.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXIV,
No 1, 1961, pp 229-231.

SLA 61-18678

Sci.
Mar 62
Vol VII, No 3

188,101

Characteristic Properties of a Lead Storage Battery
Upon Use of a Phosphoric Acid Anode Paste, by
T. Ishikawa.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64, 1961,
pp 264-266.
NTC-71-12078-07D

Nov 71

A Study on the Reducing Reaction of Titanium
Tetrachloride to Titanium Trichloride, by
T. Ishino.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64,
1961, pp 1344-1347.
NTC 71-15651-07B

Mar 72

Synthesis of Dichloroparabanic Acid
and its Utilization, by Y. Oda.
JAPANESE, per, Kogyo Kagaku Zasshi,
Vol 65, No 2, 1962, p 294
NTC 72-11586-07C

June 72

Moisture Absorption of a Few Kinds of Polymers,
by S. Chujo.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 67, 1964,
pp 343-348.
NTC-71-12492-07D

Nov 71

The Polymerization of N-Acryloyl Acrylamide,
by Y. Miyake,
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64,
1961, pp 359-361.
NTC-71-11695-07C

Feb 72

Suzawa, Toshiro.
ZETA-POTENTIAL AND SURFACE CHARGE DENSITY OF WOOL FIBER IN BASIC DYE SOLUTION. Studies on Zeta-Potential of Natural and Synthetic Fiber in Dye Solutions, no. 11 [1961] 11p. 4 refs. Order from SA \$13.00

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 2, p. 367-368.

DESCRIPTORS: *Woolen textiles, Textiles, *Synthetic fibers, *Dyes, Surface area, Surface properties.

(Materials--Textiles, TT, v. 7, no. 5)

62-12402

1. Title: Zeta potential
- I. Suzawa, T.
- II. Title: Studies ...
- III. Seizaburo Aoki (Japan)

Office of Technical Services

Suzawa, Toshiro.
RELATIONSHIP BETWEEN SURFACE CHARGE DEN-
SITY AND DYE ADSORPTION OF VINYLON IN
DIRECT DYE SOLUTION. Rept. 12 of Studies on
Potential of Natural and Synthetic Fibers in Dye
Solution. Oct 62, 22p. 8 refs.
Order from SA \$24.00

SA Code-G23B

Trans. in manuscript of Kogyo Kagaku Zasshi (Japan)
1961, v. 64, no. 2, p. 369-372.

DESCRIPTORS: Textiles, *Synthetic fibers, *Vinyl
radicals, Surface properties, Electric fields, Density,
*Dyes, Solutions, Adsorption.

(Materials--Textiles, TT, v. 8, no. 12)

62-34470

1. Title: Zeta potential
2. Title: Vinylon
- I. Suzawa, T.
- II. Title: Studies ...
- III. SA Code-G23B
- IV. Seizaburo Aoki (Japan)

Office of Technical Services

Effects of Ionizing Radiation on Polyethylene.
Terephthalate, by H. Sobue, Y. Tabata, et al.
~~JAPANESE~~, per, Kogyo Kagaku Zasshi, Vol LXIV, ^{Nov,} 1961,
pp 372-374. _A
NASA TT F-8450

Sci - Chem
Mar 64
U. S. GOVERNMENT ONLY

251,963

62-34455

Sobue, Hiroshi, Tabata, Yoneho, and Oda, Eisuke.
RADIATION-INDUCED POLYMERIZATION OF METH-
ACRYLONITRILE. Oct 62, 6p. (figs. omitted) 3 refs.
Order from SA \$15.00 SA Code-G284

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 2, p. 378-379.

DESCRIPTORS: *Acrylonitriles, Polymerization, *Ra-
diation effect, Inhibition, Viscosity, Infrared
spectroscopy.

(Materials--Plastics, TT, v. 8, no. 12)

I. Sobue, H.
II. Tabata, Y.
III. Oda, E.
IV. SA Code-G284
V. Seizaburo Aoki (Japan)

Office of Technical Services

Nakamura, Y.
DIFFERENTIAL THERMAL ANALYSIS OF PHENOL-
FORMALDEHYDE RESINS. [1963] 8p
Order from ATS \$9.85 ATS-26Q73J

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 2, p. 392-393.

DESCRIPTORS: *Phenol-formaldehyde resins,
Calorimetry.

(Materials--Plastics, TT, v. 11, no. 4)

TT-64-12204

I. Nakamura, Y.
II. ATS-26Q73J
III. Associated Technical
Services, Inc.,
East Orange, N. J.

Office of Technical Services

Tanaka, Hisao.
THE EFFECT OF OXYGEN ON THE GELATION OF
UNSATURATED POLYESTER RESIN. Oct 62, 7p.
(figs. omitted) 2 refs.
Order from SA \$15.00 SA Code-G290

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 2, p. 396-398.

DESCRIPTORS: *Esters, Polymers, Resins, *Styrenes,
*Gels, Oxygen, Preservation, Carbon dioxide, Rare
gases.

(Materials--Plastics, TT, v. 8, no. 12)

62-34463

I. Tanks, H.
II. SA Code-G290
III. Seizaburo Aoki (Japan)

Office of Technical Services

Curing Reaction of Epoxy Resin with Amine Hardener,
by T. Kakusai, T. Noguchi.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64, 1961,
pp 398-404.
NTC 69-11293-111

Sci-Mat
July 69

387,140

Kawai, Wasaburo and Tsutsumi, Shigeru.
REACTION OF PHENOL AND BUTADIENE UNDER
THE OXYGEN PRESSURE. Oct 62, 12p. 6 refs.
Order from SA \$18.00 SA Code-G303

Trans. in manuscript of Kogyo Kagaku Zasshi (Japan)
1961, v. 64, no. 3, p. 467-468.

DESCRIPTORS: *Phenols, *Pentadienes, Chemical re-
actions, Oxygen, Pressure, *Phenoxy radicals, Poly-
merization, Inhibition.

(Chemistry--Organic, TT, v. 8, no. 12)

62-34469

- I. Kawai, W.
- II. Tsutsumi, S.
- III. SA Code-G303
- IV. Seizaburo Aoki (Japan)

Office of Technical Services

Concentration of Sea Water by the Gas Hydrate
Method. Report No II. Phase Equilibrium of
Dichlorodifluormethane and Monochlorodifluoro-
methane Hydrates, by M. Hashizume
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 67,
1964, pp 518-523
NTC 71-15101-07C

mar 72

Matsuda, H. and Matsuda, S.
QUANTITATIVE ANALYSIS OF HALOGENS IN
ALKYL TIN HALIDES BY HIGH-FREQUENCY TI-
TRATION. [1961] 5p.
Order from ATS \$8.00 ATS-28N56]

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 3, p. 539-540.

DESCRIPTORS: *Halogens, Quantitative analysis,
Alkyl radicals, Halides, High frequency, Titration,
Tin compounds.

(Engineering--Chemical, TT, v. 7, no. 10)

62-12074

- I. Matsuda, H.
- II. Matsuda, S.
- III. ATS-28N56]
- IV. Associated Technical
Services, Inc., East
Orange, N. J.

ATS JJ-4076

Office of Technical Services

62-12075

Matsuda, H., Taniguchi, H., and Matsuda, S.
REACTIONS BETWEEN ALKYL CHLORIDES AND
TIN. [1961] 7p.
Order from ATS \$12.65 ATS-27N56J

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 3, p. 541-543.

DESCRIPTORS: *Alkyl radicals, *Chlorides, *Tin,
Chemical reactions.

(Engineering--Chemical, TT, v. 7, no. 10).

- I. Matsuda, H.
- II. Taniguchi, H.
- III. Matsuda, S.
- IV. ATS-27N56J
- V. Associated Technical
Services, Inc., East
Orange, N. J.

Office of Technical Services

62-34471

Suzawa, Toshiro.
ZETA-POTENTIAL, SURFACE CHARGE DENSITY, SURFACE DYE ADSORPTION AND EFFECTIVE SURFACE AREA OF NATURAL AND SYNTHETIC FIBERS IN DYE SOLUTION. Rept. 13 of Studies on Zeta-Potential of Natural and Synthetic Fibers in Dye Solution. Oct 62. 20p. 13 refs.
Order from SA \$21.00 SA Code-G26

- I. Title: Zeta potential
- I. Suzawa, T.
- II. Title: Studies ...
- III. SA Code-G26
- IV. Seizaburo Aoki (Japan)

Trans. in manuscript of *Kogyo Kagaku Zasshi* (Japan) 1961, v. 64, no. 3, p. 573-576.

DESCRIPTORS: Textiles, *Synthetic fibers, *Woolen textiles, *Cotton textiles, Surface properties, Electric fields, *Dyes, Solutions, Adsorption.

(Materials--Textiles, TT, v. 8, no. 12)

Office of Technical Services

Separation of Polyethylene Glycol From the
Nonicolic (Surface) Active Agent by the Method
of Counter-Current Distribution Extraction,
by Kinshiko Nagase, Kahei Sakaguchi, 11 pp.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol. LXIV,
I No 4, 1961, pp 635-638.

X SLA 61-20681

Sci
Mar 62
Vol VII, No 3

188, 095

Chromatographic Behavior of Condensed Polynuclear Hydrocarbons, by T. Nagai, E. Funakubo, 25pp, 22.85.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXIV, No 4, 1961, pp 643-653.

ATB JJ-3976
ATC-04P60J

Sci-Chem
Dec 63

244, 864

Parabanic Acid-formaldehyde Resins, by R. Oda,
R. Baba.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64,
No 4, 1961, pp 741-742.
ATS-JS-175

Sci-Chem
Mar 70

403,854

Murata, Yoko and Takenishi, Tadao.
DIRECT GAS CHROMATOGRAPHIC ANALYSIS OF
ORGANIC COMPOUNDS IN AQUEOUS SOLUTION.
[1963] [17] p. (foreign text included) 5 refs. 63-18024
Order from SLA \$1.60

Trans. of Kyoto Kagaku Zasshi (Japan) 1961, v. 64,
no. 5, p. 787-791.

DESCRIPTORS: *Organic compounds, *Gas chromatog-
raphy, *Methanol, *Methanols, *Propanols, *Acryloni-
triles, *Propionitriles, *Aldehydes, *Amino acids,
Chromatographic analysis, Solvents, Water.

(Chemistry--Analytical, TT. v. 10, no. 6)

63-18024
I. Murata, Y.
II. Takenishi, T.

Office of Technical Services

Kashima, Kan and Osada, Takeshi.
HIGH PRESSURE HYDROCRACKING OF LIGNIN.
Rept. 1 of A Study of the High Pressure Hydrocracking
of Lignin. [1962] 10p. (figs. tables omitted) 4 refs.
Order from SLA \$1.10 62-20254

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 5, p. 916-919.

DESCRIPTORS: High pressure research, *Crazing,
*Sulfate pulp, Chemical waste, *Lignin.

The best conditions for manufacturing samples suitable
for hydrocracking from the sulfite pulp waste liquor
were sought. High pressure hydrocracking was carried
out by using these samples and employing phenol,
cyclohexanol, tetralin as the solvents, and the reaction
conditions, material balance and the composition of the
oils produced were examined. Among the oils produced,
(Chemistry--Organic, TT, v. 9, no. 9) (over)

62-20254

I. Kashima, K.
II. Osada, T.
III. Title: Study ...

Office of Technical Services

62-10222

Ide, Fumio.
GRAFT COPOLYMERIZATION OF VINYL ACETATE
ON CELLULOSE. [1961] 13p. 4 refs. 62-10222
Order from SLA \$1.60

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 5, p. 925-928.

DESCRIPTORS: *Vinyl radicals, *Acetates,
*Cellulose, *Copolymerization, Polymerization,
Temperature, Velocity, Catalysts, Catalysis,
Nitric acid, Acids, Chemical reactions, Polymers.

Graft polymerization of vinyl acetate on cellulose was
attempted using ceric ammonium nitrate as the initiator,
and the effects of the polymerization temperature,
polymerization time, catalyst concentration, monomer
concentration, and nitric acid concentration as the
various conditions affecting the polymerization, and
(Chemistry--Organic, TT, v. 7, no. 9) (over)

1. Title: Graft polymers
1. Ide, F.

Office of Technical Services

62-34476

Kunichika, S. and Katagiri, T.
SYNTHESIS OF VINYL SULFONIC ACID (VS) AND
THE MONOMER REACTIVITY RATIO (MRR) AND
DYEABILITY OF ITS COPOLYMER WITH ACRYLONI-
TRILE. Rept. 1 of Studies on Vinyl Sulfonic Acid.
Oct 62, 24p. 11 refs.
Order from SA \$24.00 SA Code-G419

I. Kunichika, S.
II. Katagiri, T.
III. Title: Studies ...
IV. SA Code-G419
V. Seizaburo Aoki (Japan)

Trans. in manuscript of Kogyo Kagaku Zasshi (Japan)
1961, v. 64, no. 5, p. 929-932.

DESCRIPTORS: *Vinyl radicals, *Sulfonic acids,
Synthesis, Chemical reactions, *Dyes, *Acrylonitriles,
Polymerization.

(Chemistry--Organic, TT, v. 8, no. 12)

Office of Technical Services

Effects of Water-Soluble Rust Preventives on
Mild Steel in Aqueous Solutions, by S. Sato,
Y. Kato, A. Kawai.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXIV,
1961, pp 1013-1017.

BISI 2480

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62-34459

Sato, Seimi, Kato, Yoichi, and Hori, Mutsumi.
ON THE RUST-PREVENTIVE PROPERTIES OF THE
DERIVATIVES OF THE MALEINATED OLEIC ACID.
Oct 62, 13p. 13 refs.
Order from SA \$18.00

SA Code-G441

- I. Sato, S.
- II. Kato, Y.
- III. Hori, M.
- IV. SA Code-G441
- V. Seizaburo Aoki (Japan)

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 6, p. 1017-1029.

DESCRIPTORS: *Corrosion inhibition, Rusts, *Oleic
acids, Maleic acid, Humidity, Chemical reactions,
Purification.

(Metallurgy--Corrosion, TT, v. 8, no. 12)

Office of Technical Services

62-14289

Nagase, K. and Sakaguchi, K.
ETHYLENE OXIDE ADDITION REACTIONS TO
LAURYL AMINE. [1962] [16]p. 11 refs.
Order from SLA \$1.60 62-14289

I. Nagase, K.
II. Sakaguchi, K.

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 6] p. 1031-1034.

DESCRIPTORS: *Ethylene oxide, Catalysts, Chemical
reactions, *Amines, Additives, Polymerization.

The addition of ethylene oxide to lauryl amine can be
divided into two reaction types depending on the kind
of catalyst used. One is the acid catalized reaction
(A.C. type), and the other is the base catalized reac-
tion (B.C. type). When the average number of moles,
 \bar{v} , of ethylene oxide is less than two, both reactions
can be clearly classified into these two types. These
reactions were studied in order to investigate the re-
action mechanism by examining the relationship of the
(Chemistry--Physical, TT, v. 8, no. 3) (over)

Office of Technical Services

62-14288

Nagase [K.] and Sakaguchi [K.].
ADDITION REACTION OF ETHYLENE OXIDE TO
LAURIC ACID. [1962] [18] p. 14 refs. 62-14288
Order from SLA \$1.60

I. Nagase, K.
II. Sakaguchi, K.

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 6] p. 1035-1040.

DESCRIPTORS: *Ethylene oxide, Additives, Chemical
reactions, *Fatty acids, Catalysts, Laurates.

Sodium metal was used as the catalyst in the reaction
of ethylene oxide at atmospheric pressure by the
bubbling method, and under pressure in measuring the
rate of addition. The product analyses were done
after extracting the product with ether and determining
the acid value, saponification value and hydroxyl value
of the extract. In both cases the addition curve shows
an inflection point when the average number of moles,
v, of ethylene oxide is one. But the products show dif-
(Chemistry--Physical, TT, v. 8, no. 4) (over)

Office of Technical Services

Nagase, K. and Sakaguchi, K.
ADDITION REACTIONS OF ETHYLENE OXIDE
UNDER PRESSURE. [1962] [15] p. 7 refs. 62-14287
Order from SLA \$1.60

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 6] p. 1043-1047.

DESCRIPTORS: *Ethylene oxide, Additives, Chemical
reactions, Pressure, Temperature, Catalysts,
Polymerization, Solubility.

Ethylene oxide was added to lauryl alcohol and nonyl
phenol under pressure (gauge pressure 1.5, 3.0 and
10.0 kg/cm²) at temperatures 100°, 125°, 150° and
175°C and catalyst concentration 0.25 to 2.0 mole
percent. The addition reaction curves, the rates and
the distribution of the degree of polymerization were
investigated. The addition curve is a straight line
corresponding to the reaction time in the case of
(Chemistry--Physical, TT, v. 8, no. 3) (over)

62-14287

I. Nagase, K.
II. Sakaguchi, K.

Office of Technical Services

Chromatographic Studies of Aminanthraquinone
Type Dispersion Dyes, by Y. Banho.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64,
No 6, 1961, pp 1061-1066.
ATS JS-144

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373,847

62-12405

Fukunoto, Osamu.
ON THE CONTINUOUS METHOD OF HYDROXYL-
AMINE PREPARATION. Studies on the Production of
E-Caprolactam, no. 1. [1961] 7p. 2 refs.
Order from SA \$15.00 SA Code-S8

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1961, v. 64,
no. 6, p. 1118-1121.

DESCRIPTORS: *Lactams, Production, *Amines,
*Hydrides, Preparation, Chemical reactions.

(Chemistry--Organic, TT, v. 7, no. 5)

- I. Fukunoto, O.
- II. Title: Os . . .
- III. SA Code-S8
- IV. Seizaburo Aoki (Japan)

Office of Technical Services

62-14968

Takahashi, Masao.
INVESTIGATION OF THE SIGNIFICANCE OF AL-
COHOL SYSTEM SPINNING BATHS IN THE WET SPIN-
NING OF ACRYLONITRILE FIBER (COMPARISON OF
VARIOUS ALCOHOLS FOR THE COAGULATING BATH
IN WET SPINNING). Rept. 25 of Studies on Acrylic
Fiber. [1962] 6p. 1 ref.
Order from SLA \$1.10 62-14968

I. Takahashi, M.
II. Title: Comparison ...
III. Title: Studies ...

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 6, p. 1130-1132.

DESCRIPTORS: *Synthetic fibers, *Acrylonitriles,
Manufacturing methods, *Alcohols, Coagulation, Or-
ganic solvents, Methyl radicals, Formamides,
Sulfoxides.

States of fiber formation when concentrated dimethyl
formamide or dimethyl sulfoxide solutions of acryloni-
(Materials--Textiles, TT, v. 9, no. 2) (over)

Office of Technical Services

62-14969

Takahashi, Masao.
SOLUBILITY OF ACRYLONITRILE POLYMER IN
ACETONITRILE SYSTEM MIXED SOLVENTS (MIXED
SOLVENTS CONTAINING ACETONITRILE AS A COM-
PONENT). Rept. 36 of Studies on Acrylic Fiber.
[1962] 7p. 13 refs.
Order from S.I.A. \$1.10

62-14969

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 6, p. 1132-1134.

DESCRIPTORS: *Synthetic fibers, *Acrylonitriles, Sol-
ubility, Organic solvents, *Acetonitriles, Methyl rad-
icals, Formamides, Sulfoxides.

A system prepared by mixing 20 vol% of acetonitrile
with nitromethane forms a semi-transparent unstable
solution. A system prepared by mixing 20~60 vol% of
acetonitrile with malononitrile forms a stable solution.
When acetonitrile is added to dimethylsulfone, the dia-
(Materials--Textiles, TT, v. 9, no. 2) (over)

I. Takahashi, M.
II. Title: Mixed ...
III. Title: Studies ...

Office of Technical Services

62-14965

I. Takahashi, M.

Takahashi, Masao.
SOLUTION TEMPERATURE OF VARIOUS MIXED
SOLVENTS TOWARD ACRYLONITRILE POLYMER.
Rept. no. 37 of studies on Acrylic Fiber. [1962] 10p.
20 refs.
Order from SLA \$1.10 62-14965

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 6, p. 1134-1136.

DESCRIPTIONS: Polymers, *Acrylonitriles, Organic
solvents, Mixtures, *Methanes, Nitro radicals, *Forma-
mides, Methyl radicals, Nitriles, Maleic anhydride,
Succinic anhydrides, Pyrrolidinone, Sulfoxides, DNP,
Nitrophenols, Acetones.

Polymer solutions which are stable at normal tempera-
ture are formed by the addition of about 20 vol% of
malononitrile or dimethyl sulfoxide to nitromethane.
Compounds which demonstrate some slight interaction
(Materials--Plastics, TT, v. 9, no. 4) (over)

Office of Technical Services

62-1240c

Kodama, Hiroshi and Atarashi, Yuuji.
POLYMERIZATION OF PROPYLENE IN THE PRESENCE OF ETHERS AND AMINES WITH TRIETHYLALUMINUM-TITANIUM TRICHLORIDE. [1961] 13p. 18 refs.
Order from SA \$16.00 SA Code-43

- I. Kodama, H.
- II. Atarashi, Y.
- III. SA Code-43
- IV. Seizaburo Aoki (Japan)

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 6, p. 1140-1145.

DESCRIPTORS: *Propenes, Polymerization, Ethers, Amines, Aluminum compounds, Ethyl radicals, Titanium compounds, Chlorides, Catalysts, Catalysts, Chemical reactions, Polymers, Molecular weight

Polymerization of propylene was carried out in n-heptane, in the presence of ether or amine with the aid of a catalyst of the triethylaluminum-titanium trichloride system. The effects of the addition agents upon the (Chemistry-Physical, TT, v. 7, no. 5) (over)

Office of Technical Services

Studies of Addition Reaction of Ethylene Oxide.
Part VII. By-Products in Addition Reaction of
Ethylene Oxide, by K. Nagase.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64, 1961,
pp 1199-1203.
NTC-71-15514-07C

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62-10686

Nakada, Ichiro.
THE GROWING OF ANTHRACENE SINGLE
CRYSTALS. [1962] 14p. 7 refs.
Order from SLA \$1.60 62-10686

I. Nakada, I.

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 7, p. 1216-1221.

DESCRIPTORS: *Anthracenes, *Single crystals,
Crystallization, Scintillation counters.

The growing of single crystals of 2.5 cm diameter
and height, as scintillators for radiation measure-
ment, was attempted. The Bridgman method of grow-
ing spontaneously with a capillary tube was unsuitable
for substances such as anthracene, whose inter-
molecular force is weak and which is markedly ani-
sotropic. By one method, a crystal tube only for seed,
of about 1 cm diameter, was prepared separately
(Physics-Solid State, TT, v. 8, no. 10) (over)

Office of Technical Services

Hydrolysis of Titanium Sulfate Solution,
by N. Sakai, K. Yoshikawa, M. Suzuki,
S. Kobashi.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol
64, No 4, 1961, pp. 613-18
NTC 69-10683-07B

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