

BULLETIN OF THE INSTITUTE
FOR CHEMICAL RESEARCH

KYOTO UNIVERSITY

Vol. 31 No. 4

Published bi-monthly by

THE INSTITUTE FOR CHEMICAL RESEARCH
KYOTO UNIVERSITY
KYOTO, JAPAN

July, 1953

(Bull. Inst. Chem. Res., Kyoto Univ.)

INSTITUTE FOR CHEMICAL RESEARCH
KYOTO UNIVERSITY

Director

Senji UCHINO

Members of Council

Kiyoshi ABE	Rempei GOTO	Masao HORIO
Katashi INOUE	Yoshiyuki INOUE	Masayoshi ISHIBASHI
Tatsuo KARIYONE	Hideo KATAGIRI	Kiichi KIMURA
Ren KIMURA	Shinjiro KODAMA	Kinsuke KONDO
Sango KUNICHIKA	Hisateru MITSUDA	Risaburo NAKAI
Ryuzaburo NOZU	Ryohei ODA	Kikuo OGIU
Ichiro SAKURADA	Nobuji SASAKI	Ikutaro SAWAI
Hiroshi SAWAMURA	Sakae SHIMIZU	Keiichi SHISHIDO
Ejji SUITO	Isamu TACHI	Hideo TAKAKI
Seishi TAKAGI	Tetsuro TANAKA	Sankichi TAKEI
Yoshimasa TAKEZAKI	Waichiro TSUJI	Hideki YUKAWA

Editors

Junzo EBIHARA	Naokazu KOIZUMI	Risaburo NAKAI
Gisaburo TABUCHI	Yoshimasa TAKEZAKI	Teiji TSURUTA

Treasurers

Hideo KANO Yagoro KAWAI

History of Publications

Term	Vol.	Title	Published
Jan. , 1929- Dec. , 1947	1-16	化学研究所講演集 (The Reports of the Institute for Chemical Research)	Indeterminately
April, 1938	—	10 Jahre Institut für chemische Forschung (化学研究所創立十周年記念号)	—
March, 1949- Dec. , 1949	17-19	化研講演集 (The Reports of the Institute for Chemical Research)	Indeterminately
March, 1950- Sept. , 1952	20-30	化学研究所報告 (Bulletin of the Institute for Chemical Research)	Quarterly
Dec. , 1951	—	The Commemoration Volume for the Silver Jubilee (化学研究所創立二十五周年記念号)	—
Jan. , 1953 onwards	31 No. 1-	Bulletin of the Institute for Chemical Research (化学研究所報告)	Bi-monthly

C O N T E N T S

Review

- Rempei GOTO and Nishio HIRAI : Limits of Inflammability and Energy
of Activation 235

Original Reports

1. Akira WATANABE, Fukuju TSUJI, Kazuo NISHIZAWA and Shizuo UEDA :
Study on Surface Electricity. (XVI). On the Theory of U-effect
II (Continued.) 249
2. Masayoshi ISHIBASHI and Taitiro FUJINAGA : Studies on the Controlled
Potential Electrolysis. (V). A New Automatically Controlled Appa-
ratus.254
3. Akira TAKETA, Makoto KUMADA and Kimio TARAMA : Kinetical
Study on the Reactivity of Organo-Silicon Compounds. (I). The Cleav-
age Rate of Si-H Bond of Triethylsilane by HCl260
4. Yoshimasa TAKEZAKI and Hatsuhiko MASUMOTO : Decomposition of
t-Butanol Induced by Methyl Radicals267
5. Masayoshi ISHIBASHI and Yuroku YAMAMOTO : Analytical Chemistry
by Means of Organic Compounds. (XXIV). Studies on the Reaction
between Copper and 7-Azo-benzene-8-hydroxyquinoline-5-sulfonic
Acid280
6. Rempei GOTO, Naokazu KOIZUMI, Naomi HAYAMA and Takeo SUGANO :
Molecular Weight of Polyoxyethylene Glycols and Their Derivatives.
(I). Cryoscopic Measurements and Solvent Effects285
7. Kiyoshi ABE, Tetsuro TANAKA and Akira KAWABATA : Study on the
Modes of Vibration about Langevin Type BaTiO₃ Ceramic Vibra-
tor. (I)295
8. Rempei GOTO, Takeo SUGANO and Naokazu KOIZUMI : Micelle Formation
of Non-ionic Surfactants. (I). Properties of Aqueous Solution of
Polyoxyethylene mono-alkyl Ether305
9. Junji FURUKAWA : Bond Energies and Reactivity of Radicals. (I). A New
Expression of Bond Energies of Organic Compounds312

編 集 後 記

本号は綜報及び原報のみの充実した内容で刊行できましたことは皆様と共に欣快に存じます。今後も多くの原報をお寄せ下さる事を期待して居ります。

猶本文の符号、略号に就いては本化研報告に於いては大体 Chemical Abstracts の方式に準拠して統一を計つて居ります。編集の迅速を期したいと思しますので、寄稿者に於かれましては論文の形式、略号に就いては近刊の化研報告を参照して頂きたく思います。就いては近く投稿に関する注意書を別にお手元に送る予定です。學術雑誌の略記法に就いては、例えば、Chemical Abstracts, 45. Index, I-CCLV (1951) を御参照下さい。次号には国近教授の綜報を掲載致します。(小泉)

化学研究所報告第31巻第4号

昭和28年7月25日 印刷

【非 売 品】

昭和28年7月30日 発行

大阪府高槻市古曾部

京都大学化学研究所

編集兼発行人

内 野 仙 治

京都市上京区寺之内通小川西入

印 刷 所

山代印刷株式会社

京都市上京区寺之内通小川西入

印 刷 者

山 代 多 三 郎

京都大学
化学研究所報告

第 31 卷 第 4 号

(通卷第 34 集)

1953 年 7 月

綜 報

Rempei GOTO and Nishio HIRAI: Limits of Inflammability and Energy of Activation 235

原 報

1. Akira WATANABE, Fukuju TSUJI, Kazuo NISHIZAWA and Shizuo UEDA : Study on Surface Electricity. (XVI). On the Theory of U-effect II (Continued)..... 249
2. Masayoshi ISHIBASHI and Taitiro FUJINAGA : Studies on the Controlled Potential Electrolysis. (V). A New Automatically Controlled Apparatus 254
3. Akira TAKETA, Makoto KUMADA and Kimio TARAMA : Kinetical Study on the Reactivity of Organo-Silicon Compounds. (I). The Cleavage Rate of Si-H Bond of Triethylsilane by HCl..... 260
4. Yoshimasa TAKEZAKI and Hatsuhiko MASUMOTO : Decomposition of *t*-Butanol Induced by Methyl Radicals 267
5. Masayoshi ISHIBASHI and Yuroku YAMAMOTO : Analytical Chemistry by Means of Organic Compounds. (XXIV). Studies on the Reaction between Copper and 7-Azo-benzene-8-hydroxyquinoline-5-sulfonic Acid 280
6. Rempei GOTO, Naokazu KOIZUMI, Naomi HAYAMA and Takeo SUGANO : Molecular Weight of Polyoxyethylene Glycols and Their Derivatives. (I). Cryoscopic Measurements and Solvent Effects..... 285
7. Kiyoshi ABE, Tetsuro TANAKA and Akira KAWABATA : Study on the Modes of Vibration about Langevin Type BaTiO₃ Ceramic Vibrator. (I)..... 295
8. Rempei GOTO, Takeo SUGANO and Naokazu KOIZUMI : Micelle Formation of Non-ionic Surfactants. (I). Properties of Aqueous Solution of Polyoxyethylene mono-Alkyl Ether 305
9. Junji FURUKAWA : Bond Energies and Reactivity of Radicals. (I). A New Expression of Bond Energies of Organic Compounds..... 312

京都大学化学研究所

(化研報 31 卷 4 号)