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### Section B

Theoretical, mechanistic and stereochemical aspects of the organic chemistry of sulfur

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<sup>1</sup>Polish Academy of Sciences, Lodz, Poland; <sup>2</sup>Universita degli Studi di Bologna, Italy
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Osaka University, Japan Buffer Catalysis of Hydrolysis of Benzenesulfinates. Contrasting Behavior between Phenyl and Methyl Esters

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Institute of Physical Organic and Coal Chemistry of the National Academy of Sciences of Ukraine, Ukraine Mechanism of Arylsulfonyl Halides Solvolysis Catalysed by Amines. The First Kinetic Division of Competing Catalytic Routes.

### Ohgi Takahashi, Soichi Sato, and Naomichi Furukawa

University of Tsukuba, Japan

Non-Berry Pseudorotation and Ligand Coupling in Chalcogenuranes

Tristram Chivers1, Bruce McGarvey2, Masood Parvez1, Ignacio Vargas-Baca1, and Tom Ziegler<sup>1</sup>

<sup>1</sup>The University of Calgary, Canada; <sup>2</sup>University of Windsor, Canada Formation Mechanism of Organosulfur Derivatives of Diazenes by a Thiyl-radical Catalyzed Mechanism. Identification of the HC(NSPh)2. Radical.

Sergey Z. Vatsadze, Elena K. Beloglazkina, Nikolai V. Zyk, and Nikolai S. Zefirov M. V. Lomonosov Moscow State University, Russia Synthesis, Structure and Reactivity of Sulfoxylic Acid Derivatives

### Section C

Heterocyclic sulfur compounds

### Vera S. Berseneva, Natalja Yu. Birucheva, and Vasily A. Bakulev

Ural State Technical University, Russia Reactins of Thioamides with Esters of Acetylene Carboxylic Acids as a New Route to Heterocyclic Sulfur Compounds

### A. Scheunemann, K. Drexler, H. Dehne, H. Reinke, and M. Michalik

University of Rostock, Germany

Heterocyclization of Benzylidene Compounds of Zwitterionic Thiooxalic Acid 2-Amide-1-hydrazide-2-hydrazone with C1-Building Blocks

### Abdel Moneim El-Torgoman

Menoufia University, Egypt

 $\alpha,\beta$ -Unsaturated Nitriles in Heterocyclic Synthesis: Synthesis of Cyclohexeno[b]pyrans

#### and Cyclohexeno[b]pyrano[2,3-b]pyridines

#### Hoh-Gyu Hahn, Kee Dal Nam, and Kee Hyuk Chang

Korea Institute of Science and Technology, Korea Pummerer Reaction of Dihydro-1,4-oxathiin Sulfoxides

#### E. Lukevics, L. Ignatovich, S. Germane, and S. Belyakov

Latvian Institute of Organic Synthesis, Latvia Synthesis, Molecular Structure and Toxicity of Thienyl- and Aryl-germatranes

#### Akihiko Ishii, Kazuyo Umezawa, and Juzo Nakayama

Saitama University, Japan Synthesis of 1,1-Dialkyldithiiranes

#### E. Lukevics and O. Pudova

Latvian Institute of Organic Synthesis, Latvia
The Reactions of Silyl Substituted Thiophene-1,1-dioxides with Amines

### Lambert Brandsma<sup>1</sup>, Boris Trofimov<sup>2</sup>, Nina Nedolya<sup>2</sup>, and Anastasiya Mal'kina<sup>2</sup>

<sup>1</sup>University of Utrecht, The Netherlands; <sup>2</sup>Irkutsk Institute of Organic Chemistry, RAS, Russia

From 1-Lithioalkoxyallenes and Isothiocyanates to Pyrroles and Dihydropyridines in One Preparative Step

#### Tetsushi Maruyama and Naomichi Furukawa

University of Tsukuba, Japan

Syntheses of Bipyridine Derivatrives Bearing Two Functional Groups at the Proximate Positions

#### Peter D. Clark, Shaun T. E. Mesher, and Alex Primak

The University of Calgary, Canada Montmorillonite K10/ZnCl<sub>2</sub> Catalyzed Alkyl Disulfide Addition to Alkenes and Synthesis of Organic Conducting Materials

#### D. Berkes<sup>1</sup>, B. Decroix<sup>2</sup>, P. Netchitailo<sup>2</sup>, and J. Morel<sup>2</sup>

<sup>1</sup>Slovak Technical University, Slovak Republic; <sup>2</sup>University Le Havre, France Hofmann Degradation of Methiodides of Thieno[b]quinolizidines

#### Shin-ya Nakamura, Akihiko Ishii, and Juzo Nakayama

Saitama University, Japan

Optical Resolution, Absolute Configuration and Racemization of the First Isolable Dithiirane Oxide

#### Hideji Osuga, Kazuhiko Tanaka, Hitomi Suzuki

Kyoto University, Japan

Synthesis of Bifunctionalized Chiral Heterohelicene with Electron Deficient Pyridine Ring

#### Mohammad B. Shafii<sup>1</sup>, Amir R. Jalilian<sup>2</sup>, A. Shafiee<sup>2</sup>

<sup>1</sup>Sharif's Technical University, Iran; <sup>2</sup>The Medical Sciences University of Tehran, Iran

Syntheses of Substituted-thiazolo-1,3,4-thiadiazoles and Thiazolo-1,3,4-oxadiazoles

Yoshiaki Sugihara, Hitoshi Takeda, Akihiko Ishii, Shigekazu Kumakura, and Juzo Nakayama

Saitama University, Japan

Synthesis and Structural Analysis of a Pentathiepane Derivative with a Propellane Structure

Masahiko Takahashi, Sachio Ohnishi, Shigeru Muta, and Shinzi Yoshizawa

Ibaraki University, Japan

Cyclization Reactions of Methanesulfonamides and Sulfonylformazans

#### Issa Yavari

Tarbiat Modarres University, Iran MNDO Study of Sulfur-Nitrogen Heterocycles

Vasily Bakulev, Yury Shafran, Yury Morzherin, and Vladimir Mokrushin Ural State University, Russia Synthesis of Ureido 1,2,3-Thiadiazoles

### H.-J. Drexler and H.-J. Holdt

University of Rostock, Germany
MN-Crown Dithioethers and Derivatives

### E. Agad and V. Khodorkovsky

Ben-Gurion University of the Negev, Israel
Synthesis and Photochromic Properties of New Dyes Based on Thioindigo
Chromophoric System

### Steffen Ernst and Klaus Schulze

Universität Leipzig, Germany 4-Methallyl Substituted 1,2,4-Triazoline-3-thiones as a Source of N-Bridgehead Heterocycles

### Osamu Hoshino and Tetsuya Hirayama

Science University of Tokyo, Japan Synthesis of Thiophene Derivatives Having a Silicon Atom

#### Kimiaki Imafuku

Kumamoto University, Japan Reactions of 2-Hydrazino-8H-cyclohepta[d]thiazol-8-one

### Tadashi Kataoka, Tetsuo Iwama, and Atsuko Takagi

Gifu Pharmaceutical University, Japan Stereospecific C-N Bond Cleavage of 4-Silyl- $\beta$ -sultams with EtAlCl<sub>2</sub>: Formation of (E)-Vinylsulfonamides

Lambert Brandsma<sup>1</sup>, Boris Trofimov<sup>2</sup>, Nina Nedolya<sup>2</sup>, and Anastasiya Mal'kina<sup>2</sup>

<sup>1</sup>University of Utrecht, The Netherlands; <sup>2</sup>Irkutsk Institute of Organic Chemistry, RAS, Russia

An Unexpected Synthesis of Dihydropyridines Based on Reaction of Isothiocyanates

#### with Lithiated 2-Alkynes

#### Lambert Brandsma<sup>1</sup>, Anastasiya Mal'kina<sup>2</sup>, and Boris Trofimov<sup>2</sup>

<sup>1</sup>University of Utrecht, The Netherlands; <sup>2</sup>Irkutsk Institute of Organic Chemistry, RAS, Russia

N-Ethynylpyrrole and S-, Se- and Te-Bicycles Therefrom

#### Noboru Matsumura, Tsunao Konishi, and Hiroo Inoue

Osaka Prefecture University, Japan

Synthesis and Properties of New Macrocyclic Compounds Using the Characteristics of Hypervalent Sulfur

# Mitsuo Komatsu<sup>1</sup>, Masatoshi Mihara<sup>1</sup>, Satoshi Minakata<sup>1</sup>, Ilhyong Ryu<sup>1</sup>, and Yoshiki Ohshiro<sup>2</sup>

<sup>1</sup>Osaka University, Japan; <sup>2</sup>Kinki University, Japan

Novel Generation of Thiocarbonyl Ylide by 1,4-Silicon Shift of  $\alpha$ -Silylated Thiol Ester and Its Cycloaddition

#### Tatsuya Nabeshima<sup>1</sup>, Taizo Aoki<sup>2</sup>, and Yumihiko Yano<sup>2</sup>

<sup>1</sup>University of Tsukuba, Japan; <sup>2</sup>Gunma University, Japan

Highly Selective Ag<sup>+</sup> Ion Transport by Macrobicyclic Hosts Containing Sulfur Atoms and a Bipyridine Moiety

#### Takehiko Nishio

University of Tsukuba, Japan

Sulfur-containing Heterocycles Derived by the Reaction of Hydroxy-amides and Lawesson's Reagent

#### A. Shafiee and A. Foroumadi

The Medical Sciences University of Tehran, Iran

Preparation of Disulfonyl-1,3,4-thiadiazoles as Agrochemical Fungicides

#### Hiroshi Shimizu and Tomoko Watanabe

Gifu Pharmaceutical University, Japan

Cycloaddition of 2-Thianaphthalenes Bearing an Electron-withdrawing Group at 3-Position

#### Takayoshi Suzuki, Kaori Ando, Sachiko Yamada, and Hiroaki Takayama

Teikyo University, Japan

Some Aspect on the Chemistry of 3-Sulfolene

#### Tomohiro Uetake and Masaru Tada

Waseda University, Japan

Radical Substitution on the Sulfur of 2-Phenylthioindoles

#### Naomichi Furukawa, Shao Zhong Zhang, and Soichi Sato

University of Tsukuba, Japan

Isolation and Reactivity of Thiophene S-Oxides

#### Section D

Bioorganic and medicinal sulfur chemistry

Tomoyuki Ando<sup>1</sup>, Naruyoshi Mita<sup>1</sup>, Akihito Kanematsu<sup>1</sup>, Kazuya Sakai<sup>1</sup>, Kouichi Kawai<sup>2</sup>, Mitsuhiro Mori<sup>2</sup>, Shu Yuasa<sup>2</sup>, and Ken-ichi Hisamitu<sup>2</sup>

<sup>1</sup>Mitsui Toatsu Chemicals, Inc., Japan; <sup>2</sup>Mitsui Pharmaceuticals, Inc., Japan Novel Class of Amphiphilic Antioxidant: Synthesis and Biological Evaluation of 3H-1,2-Dithiole-3-thione Derivatives

Ahmed I. Khodair<sup>1</sup>, Hussein I. El-Subbagh<sup>2</sup>, and Ali A. El-Emam<sup>3</sup>

<sup>1</sup>Tanta University, Egypt; <sup>2</sup>King Saud University, Kingdom of Saudi Arabia; 3University of Mansoura, Egypt

Synthesis of Certain 5-Substituted 2-Thiohydantoin Derivatives as Potential Cytotoxic and Antiviral Agents

V. I. Jenja, V. P. Besrodnyi, and Yu. G. Skrypnik

Institute of Physical Organic and Coal Chemistry of the National Academy of Sciences of Ukraine, Ukraine

Acaricide Property of Some Sulfur-containing Compounds

A. V. Chernyshev, N. S. Kosterina, L. P. Antonyuk, and V. V. Ignatov Institute of Biochemistry and Physiology of Plants and Microorganisms, RAS, Russia Influence of Triphenylsubstituted Pyrilium, Thiopyrilium and Selenopyrilium Salts on the Catalytic Activity of a Bacterial Glutamine Synthetase

Duncan M. Gill<sup>1</sup>, Neil A. Pegg<sup>2</sup>, and Christopher M. Rayner<sup>1</sup> University of Leeds, UK; 2Glaxo Research and Development Ltd., UK Generation and Reactions of Thiiranium Ions; Synthesis of Novel Amino Acid Derivatives Related to the Aminopeptidase Inhibitor α-Thiobestatin

### T. Suzuki, T. Yamada, and K. Takama

Hokkaido University, Japan Antioxidant Effect of Sulfoquinovosyldiglyceride(SQDG) against Radical-induced Lipid Peroxidation

### Section E

Advanced materials: organic conductors, polymers, etc.

### Takeyuki Akita and Keiji Kobayashi

The University ot Tokyo, Japan Intramolecular Spin-interactions between Two Radical Units Linked to Condensed Thiophene Chromophores

Koichi Imamura, Youji Shibata, Kazuo Takimiya, Yoshio Aso, Tetsuo Otsubo, and Fumio Ogura

Hiroshima University, Japan Crisscross-overlapped Tetrathiafulvalenophanes Skeleton

#### Takashi Katoh<sup>1,2</sup>, Yoshio Inagaki<sup>1</sup>, and Renji Okazaki<sup>2</sup>

<sup>1</sup>Fuji Photo Film Co., Ltd., Japan; <sup>2</sup>The University of Tokyo, Japan Syntheses and Properties of Bis-thiacyanine Dyes with a Naphthalene-1,8-bispyridinium

### Yoshiyuki Kuwatani, Hironori Suzuki, Eiji Ogura, Hitoshi Ito, Shigeru Sasaki,

Tokyo Metropolitan University, Japan

Haruo Matsuyama, and Masahiko Iyoda

Charge-transfer Complexes and Radical Cation Salts of Halogenated TTF Derivatives

#### K. Miyatake, K. Yamamoto, and E. Tsuchida

Waseda University, Japan

Synthesis of New Aromatic Polymers Containing Sulfonium Group

# Riichiro Nakajima, Kanya Tanaka, Atsushi Murai, Tadahide Nishiyama, Yasuhisa Ohishi, Takashi Tamura, and Kazuhiko Tsukagoshi

Doshisha University, Japan

Synthesis and Properties of New (E)-Aryl-2-[5-(4-pyridyl)-2-thiophenyl]ethenes as Nitrogen Laser Dyes

#### Akira Ohta and Yoshiro Yamashita

Institute for Molecular Science, Japan

2,2'-Bis(1,4-dithiafulven-6-yl)-3,3'-bithienyls. A New Type of 1,3-Dithiole Compounds Affording Novel Electron Donors by Oxidative Intramolecular Cyclization

#### Kazuo Takimiya, Yoshio Aso, Tetsuo Otsubo, and Fumio Ogura

Hiroshima University, Japan

Synthesis, Structures, and Properties of Double-bridged Tetrathiafulvalenophanes

#### Hiroyuki Tani, Yoshihiro Kawada, Nagao Azuma, and Noboru Ono

Ehime University, Japan

Synthesis and Properties of Acenaphthylene Derivatives with the Chalcogen Atoms

# Shigehiro Yamaguchi<sup>1</sup>, Manabu Uchida<sup>2</sup>, Takenori Izumizawa<sup>2</sup>, Kenji Furukawa<sup>2</sup>, and Kohei Tamao<sup>1</sup>

<sup>1</sup>Kyoto University, Japan; <sup>2</sup>Chisso Corporation, Japan

Novel  $\pi$ -Electron Compounds Consisting of Thiophene and Silole

### G. I. Sarapulova, N. A. Keyko, Yu. A. Chuvashev, L. G. Stepanova, and M. G. Voronkov

Irkutsk Institute of Organic Chemistry, RAS, Russia

Stereochemical Transformations of  $\alpha$ -Butylthioacrolein and the Structure of Its Diene Cyclodimerization Product

# Hiroyuki Higuchi<sup>1</sup>, Haruki Koyama<sup>1</sup>, Hiroki Yokota<sup>1</sup>, Juro Ojima<sup>1</sup>, Tatsuo Wada<sup>2</sup>, and Hiroyuki Sasabe<sup>2</sup>

<sup>1</sup>Toyama University, Japan; <sup>2</sup>The Institute of Physical and Chemical Research (RIKEN), Japan

Syntheses and Electronic Properties of 3,3'-Dihexylbithiophene Derivatives with Head-to-head and Head-to-tail Orientations

# Naoki Katano, Yoshiaki Shimura, Yoshiaki Sugihara, Akihiko Ishii, and Juzo Nakayama

Saitama University, Japan

Preparation and Properties of Oligo(2,5-Thienylene Sulfides)

#### Naoto Hayashi, Koji Kuruma, Yasuhiro Mazaki, and Keiji Kobayashi

The University of Tokyo, Japan

A Three-component Clathrate Crystal Based on Thienothiophene Host Compounds; Novel Guest Exchange via Gas-solid Contacts

# Yohji Misaki<sup>1</sup>, Hideki Fujiwara<sup>1</sup>, Toshitaka Matsui<sup>1</sup>, Natsuko Higuchi<sup>1</sup>, Takashi Maruyama<sup>1</sup>, Toshihiro Sasaki<sup>1</sup>, Tokio Yamabe<sup>1</sup>, Takehiko Mori<sup>2</sup>, Hatsumi Mori<sup>3</sup>, and Shoji Tanaka<sup>3</sup>

<sup>1</sup>Kyoto University, Japan; <sup>2</sup>Tokyo Institute of Technology, Japan; <sup>3</sup>Internatinal Superconductivity Technology Center, Japan

Metallic and Superconducting Organic Solids Based on Bis-fused Tetrathiafulvalene Donors

# Kyoko Miyauchi, Yoshihiro Kawada, Hiroyuki Tani, Nagao Azuma, and Noboru Ono

Ehime University, Japan

Synthesis and Properties of 7,10-Diselenafluoroanthene

# Shin'ichi Nakatsuji<sup>1</sup>, Akiko Hirai<sup>1</sup>, Junichi Yamada<sup>1</sup>, Kazuya Suzuki<sup>2</sup>, Toshiaki Enoki<sup>3</sup>, and Hiroyuki Anzai<sup>1</sup>

<sup>1</sup>Himeji Institute of Technology, Japan; <sup>2</sup>Yokohama National University, Japan;

<sup>3</sup>Tokyo Institute of Technology, Japan

Preparation and Properties of Tetrathiafulvalene Derivatives Bearing Multi-TEMPOsubstituents

#### Wei-lin Sun, Xue-song Gao, and Feng-cai Lu

Institute of Chemistry, Academia Sinica, China

Synthesis and Properties of Some Novel Polymers Containing Bisthiazole Rings

# Jun Tanabe<sup>1</sup>, Hiroshi Terao<sup>1</sup>, Go Ono<sup>1</sup>, Akira Izuoka<sup>1</sup>, Tadashi Sugawara<sup>1</sup>, Tomoyuki Kudo<sup>2</sup>, and Yuzo Kawada<sup>2</sup>

<sup>1</sup>The University of Tokyo, Japan; <sup>2</sup>Ibaraki University, Japan Structure and Property of Novel Trimethylene Bridged Twin Donors

#### Kazuko Takahashi and Shinji Tarutani

Tohoku University, Japan

Synthesis and Properties of Novel Organic Conductors Composed of 4-Oxocyclopentadithiophene-TCNQ

# Katsuyuki Ogura, Hiroyuki Yanai, Masazumi Miokawa, Motohiro Akazome, and Makoto Fujita

Chiba University, Japan

1-Aryl-2,5-bis(2-thienyl)pyrrole Derivatives Having Ketene Dithioacetal S,S-Dioxide Groups (Syntheses and Physical Properties)