

M. Biruš,
N. Kujundžić,
M. Pribanić and
Z. Tabor

Equilibrium Studies on Complexation of Iron(III) by Acet-, Glycinium and Betaine Hydroxamic Acids

Equilibrium studies were performed to investigate the complexation of iron(III) by synthetic monohydroxamic acids: acet-, glycinium, and betaine hydroxamic acids. Determination were made at 1.0 M ionic strength and at 25 °C by spectrophotometric methods.

The synthesis of a new compound betaine hydroxamic acid chloride is described

313—324

H. Vogler

Donor-Acceptor Cyclophanes with Biradical-Ionic Ground States

Donor-acceptor cyclophanes are proposed which should be characterized by a biradical-ionic ground state $D^{+q}A^{-q}$ with an electron transfer $q > 1/2$ from the donor D to the acceptor A

325—329

M. Ladika,
D. E. Sunko and
S. Borčić

Solvolysis Rate of 3-Methyl-2-(3-pentynyl)-2-cyclohexenyl *p*-Nitrobenzoate. A Model System for π -Participation of the CC Triple Bond

The title compound solvolyzes in 97% CF_3CH_2OH without π -participation of the CC triple bond, showing solvolysis rate retardation in comparison with the saturated analog. This result is explained by electron-withdrawing inductive effect of the CC triple bond.

331—337

S. El-Basil,
P. Krivka and
N. Trinajstić

Application of the Dualist Model. Generation of Kekulé Structures and Resonant Sextets of Benzenoid Hydrocarbons

The dualist model of Balaban is used for the enumeration and display of Kekulé structures K and resonant sextet numbers $r(G; k)$ of large cata-condensed benzenoid hydrocarbons.

A number of formulae for competing the number of Kekulé structures of various families of cata-condensed benzenoid hydrocarbons are derived. In addition, the above approach is applicable to large benzenoid systems consisting of cata-condensed fragments and thin peri-condensed fragments.

339—353

S. Carter and
J. N. Murrell

Analytical Two-valued Potential Energy Functions for the Ground State Surfaces

of $\text{CO}_2(\tilde{X}^1\Sigma_g^+)$ and $\text{CS}_2(\tilde{X}\Sigma_g^+)$

A technique for constructing analytical two-valued potential energy functions of triatomic molecules is outlined. It is shown how these functions can be determined from the dissociation channels of the molecule, and from variational calculations of its vibrational spectrum

355—365

T. P. Živković

Splitting of the Configuration Interaction Space X_n into Two Complementary Subspaces

The configuration interaction space X_n generated by n particles moving over $2n$ orbitals is considered. The formalism of the molecular orbital resonance theory (MORT) approach is used. It is shown that the space X_n can be split into subspaces X_n^+ and X_n^- so that »elementary« one-particle operators connect either the states contained in the same subspace, or they connect the states contained in different subspaces. As a simple consequence the pairing theorem results. The connection with the pairing theorem as derived by other authors is discussed.

367—389

A. T. Balaban
and I. Tomescu

Chemical Graphs. XL. Three Relations Between the Fibonacci Sequence and the Numbers of Kekulé Structures for Non-branched *cata*-Condensed Polycyclic Aromatic Hydrocarbons

For benzenoid or non-benzenoid catafusenes having a non-branched string of *cata*-condensed rings, the numbers *K* of Kekulé structures can be expressed via the recurrence relationship (1); as a corollary when each annelated segment has exactly two rings, the numbers of Kekulé structures form the Fibonacci sequence. Corollary 2 presents a second relationship with Fibonacci numbers .

391—404

M. Dumić,
M. V. Proštenik,
J. Fabijanić und
I. Butula

Chemie der 1,3-Dioxepine; III. Palladium-katalysierte Isomerisierung von 4,7- zu 6,7-Dihydro-1,3-dioxepinen

4,7-Dihydro-1,3-dioxepine werden an verschiedenen Palladium/Träger-Katalysatoren zu 6,7-Dihydro-1,3-dioxepinen isomerisiert. Dabei zeigen Pd/Al₂O₃ und Pd(OH)₂/SiO₂ die grösste Aktivität, Pd/TiO₂, Pd/SiO₂ und Pd/CaCO₃ die grösste Selektivität. Durch Neben- bzw. Folgereaktionen bilden sich bei Isomerisierung von 4,7-Dihydro-2-isopropyl-1,3-dioxepin 2-Isopropyl-1,3-dioxepin bzw. 4-(2-Methylpropen-1-yloxy)-butanal und 2-Isopropyl-tetrahydrofuran-3-carbaldehyd.

405—409

V. Grdinić and
M. Jakševac-Mikša

Microdetection of Some Biologically Active Thiol Compounds with Sodium Pentacyanoammineferrate(II) on Ion-Exchange Resin Grains

A new test for microdetection of thiol compounds, using sodium pentacyanoammineferate(II) as a reagent and ion-exchange resin as the reaction medium, is presented. Nineteen thiol compounds were examined. Detection limits and tolerance limits were investigated. Limits of concentration, limits of dilution and exponents of sensitivity were evaluated

411—414

**V. Škarić,
M. Pavela-Vrančić
and J.
Matulić-Adamić**

**Stereoselective Transformations in the
Thymidine Series**

A series of stereoselective transformations of thymidine derivatives yielded a number of new compounds, characterized by ultraviolet, infrared, ^{13}C -NMR and ^1H -NMR spectroscopies.

415—424

**J. Babnik,
T. Lah,
V. Cotić and
V. Turk**

**Anticathepsin D Antibody-Sepharose
Chromatography of Human Cathepsin D**

Cathepsin D was isolated from human tissues by affinity chromatography on columns containing anticathepsin D antibodies bound to Sepharose 4B. The method yielded pure cathepsin D. It also enables quantitative determination of cathepsin D in small samples of human material taken by biopsy

425—432

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SADRŽAJ

Opća i teorijska kemija

- Istraživanje ravnoteže pri kompleksiranju željezo(III)-iona s acet-,
glicinium i betaïn-hidroksamatnim kiselinama
... **M. Biruš, N. Kujundžić, M. Pribanić i Z. Tabor** 313—324
- Donor-akceptorski ciklofani s biradikalno-ionskim osnovnim stanjima
... **H. Vogler** 325—329
- Brzina solvolize 3-metil-2-(3-pentilil)-2-cikloheksenil-*p*-nitrobenzo-
ata. Modelni sistem za π -participaciju trostruke veze CC
... **M. Ladika, S. Borčić i D. E. Sunko** 331—337
- Primjena dualističkog modela. Generiranje Kekuléovih struktura i
rezonancijskih sekteta benzoidnih ugljikovodika
... **S. El-Basil, P. Krivka i N. Trinajstić** 339—353
- Analitičke dvovrijednosne potencijalne energijske funkcije za površine
temeljnog stanja od $\text{CO}_2(\tilde{X}^1\Sigma_g^+)$ i $\text{CS}_2(\tilde{X}^1\Sigma_g^+)$
... **S. Carter i J. N. Murrell** 355—365
- Cijepanje konfiguracijsko-interakcijskog prostora X_n na dva komple-
mentarna podprostora
... **T. P. Živković** 367—389
- Kemijski grafovi. 40. Tri relacije između Fibonaccijevog niza i brojeva
Kekuléovih struktura za nerazgranate katakondenzirane poli-
cikličke aromatske ugljikovodike
... **A. T. Balaban i I. Tomescu** 391—404

Kemijska sinteza

- Kemija 1,3-dioksepina. III. Izomerizacija 4,7- u 6,7-dihidro-dioksepine
na katalizatorima paladija
... **M. Dumić, M. V. Proštenik, J. Fabijanić i I. Butula** 405—409

Analitička kemija

- Mikrodokazivanje nekih biološki aktivnih tiola s natrij-pentacijano-
aminoferatom(II) na zrcima ionsko-izmjenjivačke smole
... **V. Grdinić i M. Jakševac-Mikša** 411—414

Biokemija

- Stereoselektivne transformacije timidina
... **V. Škarić, M. Pavela-Vrančić i J. Matulić-Adamić** 415—424
- Imunoafinitetna kromatografija humanog katepsina D
... **J. Babnik, T. Lah, V. Cotić i V. Turk** 425—432

Prilozi

- Prikazi knjiga A7—A17
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CONTENTS

<i>General and Theoretical Chemistry</i>	
Equilibrium Studies on Complexation of Iron(III) by Acet-, Glycinium and Betaine Hydroxamic Acids ... M. Biruš, N. Kujundžić, M. Pribanić and Z. Tabor	313—324
Donor-Acceptor Cyclophanes with Biradical-Ionic Ground States ... H. Vogler	325—329
Solvolysis Rate of 3-Methyl-2-(3-pentynyl)-2-cyclohexenyl <i>p</i> -Nitro- benzoate. A Model System for π -Participation of the CC Triple Bond ... M. Ladika, D. E. Sunko, and S. Borčić	331—337
Application of the Dualist Model. Generation of Kekulé Structures and Resonant Sextets of Benzenoid Hydrocarbons ... S. El-Basil, P. Krivka, and N. Trinajstić	339—353
Analytical Two-valued Potential Energy Functions for the Ground State Surfaces of CO ₂ ($\tilde{X}^1\Sigma_g^+$) and CS ₂ ($\tilde{X}^1\Sigma_g^+$) ... C. Carter and J. N. Murrell	355—365
Splitting of the Configuration Interaction Space X _n into Two Com- plementary Subspaces ... T. P. Živković	367—389
Chemical Graphs. XL. Three Relations Between the Fibonacci Sequ- ence and the Numbers of Kekulé Structures for Non-branched cata-Condensed Polycyclic Aromatic Hydrocarbons ... A. T. Balaban and I. Tomescu	391—404
<i>Chemical Synthesis</i>	
Chemie der 1,3-Dioxepine; III. Palladium-katalysierte Isomerisierung von 4,7- zu 6,7-Dihydro-1,3-dioxepinen ... M. Dumić, M. V. Proštenik, J. Fabijanić, und I. Butula	405—409
<i>Analytical Chemistry</i>	
Microdetection of Some Biologically Active Thiol Compounds with Sodium Pentacyanoammineferrate(II) on Ion-Exchange Resin Grains ... V. Grdinić and M. Jakševac-Mikša	411—414
<i>Biochemistry</i>	
Stereoselective Transformations in the Thymidine Series ... V. Škarić, M. Pavela-Vrančić, and J. Matulić-Adamić	415—424
Anticathepsin D Antibody-Sepharose Chromatography of Human Cathepsin D ... J. Babnik, T. Lah, V. Cotič, and V. Turk	425—432
Book Reviews (in Croatian)	<i>Appendix</i> A7—A17
Announcement	C5—C6