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 $CO_2(\tilde{X}^1\Sigma_g^+)$ and $CS_2(\tilde{X}\Sigma_g^+)$

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/Al_2O_3 und $Pd(OH)_2/SiO_2$ die grösste Aktivität, Pd/TiO_2, Pd/SiO_2 und $Pd/CaCO_3$ die grösste Selektivität. Durch Neben-bzw. Folgereaktionen bilden sich bei Isomerisierung von 4,7-Dihydro-2-isopropyl-1,3-dioxepin 2-Isopropyl-1,3-dioxxepin 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

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

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J. Babnik, T. Lah, V. Cotič and V. Turk

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SADRŽAJ

Opća i teorijska kemija

Kemijska sinteza

Analitička kemija

Biokemija

Prilozi

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