

گزیده فهرست مقالات در شیمی

الف - شیمی نظری

از شماره ۱ تا ۲۱

دوره سوم

شماره اول و دوم

فروردین - خرداد ۱۳۵۲

مرکز مدارك علمی

مؤسسه تحقیقات و پژوهش‌های علمی و آموزشی

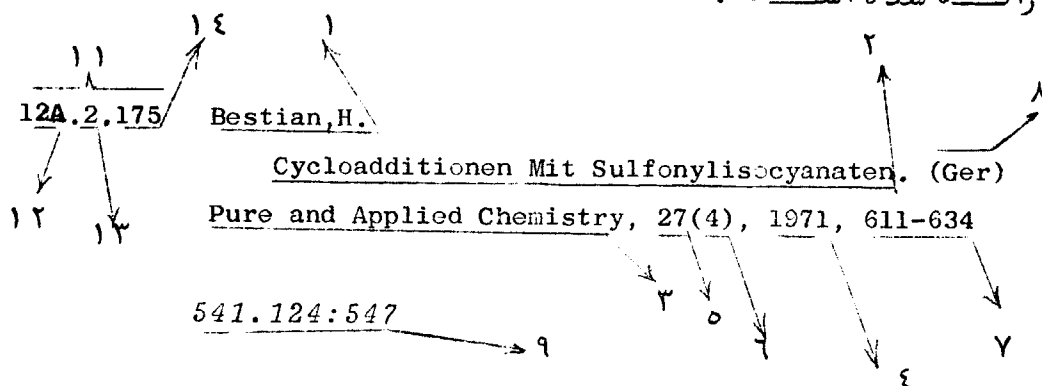


مقدمه :

مقاله نامه شیمی بخش "الف" به منظور آشنا ساختن محققین و متخصصان رشته های مختلف شیمی نظری (شیمی فیزیک، شیمی تجزیه، شیمی معدنی، شیمی آلی، شیمی بیولوژی) با تازه ترین اطلاعات در زمینه های مذکور منتشر میگردد. این مقاله نامه حاوی چکیده و فهرست مقالاتی میباشد که از آخرین مجلات رسیده به کتابخانه مرکز مدارك علمی استخراج شده است.

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این مقاله نامه بر اساس روش رده بندی دهدهی جهانی U.D.C طبقه بندی شده مشخصات هر مقاله و چکیده مربوط به آن بشکل زیر ارائه شده است .



10. { The cycloaddition reactions of chlorosul-
phonylisocyanate (CSI) with carbon-carbon double
bonds with formation of the

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Selected Bibliography of Chemistry

Pure Chemistry A

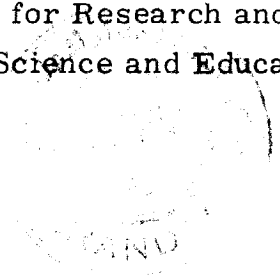
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Aim. and Scope

This bulletin will provide a quick and updated means of familiarizing one with the significant advances in the field of pure chemistry (physical, theoretical analytical, biological, organic and inorganic).

It contains indexes, author summaries and abstracts.
The original articles are available in the Library of the
Iranian Documentation Centre.

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The articles are classified according to
the UDC system.

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Academie des Sciences Comptes Rendus Hebdomadaires des Seances,Serie C	1972,	275
Chemical & Pharmaceutical Bulletin	20	(1)
	1972, 20	(10)
Current Science	1972, 41	(10)(21)
Education in Chemistry	1972, 9	(1)
Israel Journal of Chemistry	1972, 10	(2)
Justus Liebigs Annalen der Chemie	1972,	756
Monatshefte fur Chemie	1972, 103	(2)(6)
Nature, Physical Science	1972, 240	(97)
Pure and Applied Chemistry	1972, 29	(4)
	30	(1-2)
Tetrahedron Letters.	1972,	(35)

541.4/.5 *Chemical Combination*
Valancy Bonds. Affinity

12 A.3.1 Rempp, P.; Franta, E.

Grafting and Branching of Polymers.

Pure and Applied Chemistry, 30(1-2), 1972, 229-238

541.41

This review summarizes the present state of investigations concerning synthesis of various types of model macromolecules. Emphasis was given to those methods which enable preparation of well characterized macromolecules, suited well enough for morphological and thermodynamic investigations in dilute solution, and of enhanced segment density on the properties of the polymers considered. It can be seen that for such an aim, the anionic polymerization techniques which are versatile and well adapted to such problems, have yielded decisive progress. The main disadvantage of these methods is that the number of adequate monomers is rather limited. Other polymerization techniques do not involve active sites which retain their activity long enough to be of great interest for such synthesis.

12 A.3.2 Zuffanti's; Luder, W.F.

Electron Repulsion Theory Acids and Bases.

Education in Chemistry, 1972, 9(1), 12-13, 15

541.45

The Lewis electronic theory of acids and bases has to be modified in the light of two consequences of the electron repulsion theory of chemical bonds — the idea that not all the electrons in covalent bonds are close-pairs and the desirability of abandoning the concept of resonance hybrids. The electron repulsion theory also provides an explanation for certain acid-base properties which hitherto have been poorly understood.

12 A.3.3 Lipscomb, W.N.

Bonding in Boron Hydrides.

Pur and Applied Chemistry, 29(4), 1972, 493-512

541.5 BH

Unique preferred localized valence structures for B_2H_6 , B_4H_{10} , B_5H_{11} and B_6H_{10} have been found from accurate self-consistent field wavefunctions by maximizing Coulomb repulsions of electron pairs within orbitals. Objective evidence has thus been obtained

for two-centre BH, three-centre bridge BHB, ~~two-~~ centre BB and central three-centre BBB bonds, but not, as yet, for open three-centre BBB bonds.

Localization in B_5H_9 is ambiguous, as it is in organic molecules such as benzene. More thermodynamical stable isomers or plausible reaction pathways appear to have more resonance structures, and less reactive (or more plausible) structures or intermediates appear to have more nearly uniform charge distributions.

541.5 *Macromolecular Chemistry*

12 A.3.4 Chapiro, A.

Initiation and Propagation Steps in the Solid
State Polymerization of Vinyl Monomers.

Israel Journal of Chemistry, 10(2), 1972, 129-141

541.64

Several problems raised by initiation and propagation steps in solid-state polymerizations are reviewed on the basis of data taken from the literature as well as from unpublished work. The nature of the initial active centers is briefly considered; their addition to double bonds within the crystal is discussed. Examination of initiation yields in radiation-induced polymerizations shows that the efficiency of chain initiation rises with temperature. In most vinyl monomers, the propagation process, which is severely hindered in the crystal, presumably starts at lattice imperfections and thereafter proceeds on behalf of the additional imperfections introduced by the accumulated polymer. In a few specific cases

the orientation of the double bonds in the crystal or their localization in certain regions of the crystal favours chain propagation and may result in a stereo-controlled reaction. The role of crystallite boundaries is emphasized particularly in the case of copolymerizations which take place in eutectic mixtures of two monomers.

12 A.3.5 Morcellet-Sauvage, J.; Loucheux, C.

Etude de la Réactivité Chimique de la Fonction
Amine Tertiaire Engagée Dans un Copolymère ou
Dans une Petite Molécule. (Fr)

Académie des Sciences Comptes Rendus Hebdomadaires
des Séances, Série C, 275, 1972, 873-876

541.64

La fonction amine tertiaire dans la famille des vinyl pyridines a été étudiée sur des copolymères vinylpyridine/styrolène à faible teneur en vinyl pyridine et sur les analogues de petite masse. Les réactivités mesurées sont les mêmes sauf dans le cas du motif vinyl-2 pyridine.

12 A.3.6 Braun, D.

Darstellung, Eigenschaften und Anwendungen Von
Stabilen Polymeren Mit Ungepaarten Elektronen.(Ger)

Pure and Applied Chemistry, **30**(1-2), 1972, 41-56

541.64

There are three known types of stable polymers with unpaired electrons: neutral polyradicals, polyradical ions and polymeric charge transfer complexes. The preparation, properties and reactions of the most important stable polyradicals are described and their e.s.r. spectra are discussed. By spin-labelling of polymers conclusions on their mobility and the chain entanglement can be drawn. Polyradical ions can be used as initiators for graft copolymerizations.

12 A.3.7 Audureau, J.;Fontanille,M.;Sigwalt,P.

Etude Cinétique de la réaction de l'Ethylène
Avec des Dérivés Organo-Potasses en Solution
dans le Tétrahydrofuranne. (Fr)

Comptes Rendus de l'Académie des Sciences, Serie C,
275, dec, 1972, 1487-90

541.64

L'éthylène s'additionne aux chaînes actives de poly(α -méthylstyrolène)⁻,K⁺, en solution dans le tétrahydrofuranne à 20°C. Une étude cinétique de la réaction a pu être réalisée en utilisant comme espèce active le cumylpotassium, molécule modèle du poly (α -méthylstyrolène)⁻,K⁺. Il a ainsi pu être montré que seuls les ions libres participent à la réaction.

543.42 *Spectrum Analysis*

12 A.3.8 Lakshminavayana.G.;Narasimham.N.A.

Vibrational Analysis of the 2500-3400 $\overset{\text{O}}{\text{A}}$ Bands
of SO_2 .

Current Science, 41(21), November,5,1972, 771-772

543.42 SO_2

12 A.3.9 Muthukrishnan, K.;Ramakrishna,J.

Proton Magnetic Resonance Study of Internal
Motions in Hexahydrated Chlorostannates of
Nickel and Copper.

Current Science, 41(21), November,5, 1972, 769-770

543.422.25 *Ni, Cu*

12 A.3.10 Malingrey,B.

Limites de Validité et Correction de la Méthode
de Double Concentration Utilisée Pour les
Solutions en Spectrométrie de Fluorescence .(Fr)

Académie de Sciences Comptes Rendus Hebdomadaires
des Séances, Série C, 275 , 1972, 937-940

543.426

Même en déterminant les bruits de fond sur chacune des solutions, la méthode de double concentration n'est pas suffisante si la matrice donne un effet interélément important vis-a-vis de l'élément à doser. Une technique dérivée du principe des rajouts doses doit être alors associée à cette méthode de mesure.

547.7/.8 *Heterocyclic Compounds*

12 A.3.11 Gómez Aranda, V.; ~~et al.~~

Heterocyclic Synthesis by Means of Mercuric
Salts. II

Tetrahedron Letters, (35), 1972, 3621-3622

547.7.07[Hg]

12 A.3.12 Furukawa, M.; et al.

Reaction of Epoxides. III. The Synthesis of
2-Amino-5-substituted 4,5-Dihydrothiophene from
Substituted Propylene Sulfides and Ethyl
Cyanoacetate.

Chemical & Pharmaceutical Bulletin, 20(10), 1972,
2262-2264

547.732.057

12 A.3.13 Fritz, H.; Uhrhan, P.

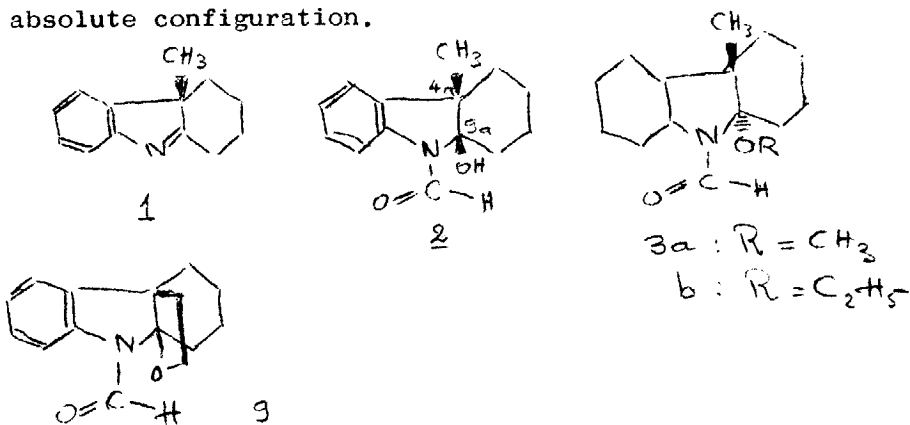
Ermittlung der Absoluten Konfigurationen Von
N-Formyl-Carbinolaminen der Carbazolreihe.

Indoles and Indole Alkaloids, XV, — Determination
of the Absolute Configurations of N-Formyl -
carbinolamines of the Carbazole Series. (Ger)

Justus Liebigs Annalen der Chemie, 756, 1972, 87-94

547.751

The absolute configurations of the N-formyl-carbinolamine derivatives 2, 3a and 3b are established by comparison of their ORD curves with that of the newly synthesized reference compound 9 of known absolute configuration.



12 A,3.14 Sakai,S.I.; et all.

Oxidation of 2,3-Disubstituted Indole Derivatives
with Selenium Dioxide.

Chemical & Pharmaceutical Bulletin, 20(1), 1972,
76-81

547.751:546.23

The action of selenium dioxide on several 2,3-disubstituted indole derivatives was found to give the corresponding 2-acylindoles as shown in Table I. In the case of tricyclic amides, (VI and VII), this oxidation reaction resulted in the formation of α -vinylindoles and organoselenium compounds. On the basis of these products, the mechanism of the oxidation with selenium dioxide is discussed.

- 12 A.3.15 Arnold, P.R.; Jones, F.

Annular Crystals of 6,6'-Diethoxythioindigo.

Nature Physical Science, 240(97), November 6 1972, 22

547.758

- 12 A.3.16 Zakharkin, L.I.

Some Recent Advances in the Chemistry of Dicarba-

Closo-Dodeca-Boranes (12), $B_{10}H_{10}C_2RR'$

Pur and Applied Chemistry, 29(4), 1972, 513-526

547.8

Experimental data on the mutual rearrangements of isomeric dicarba-closododecaboranes (12) and their B-halogen derivatives are reviewed. Reactions involving electron transfer to dicarba-closo-dodecaboranes (12), and the properties of the resulting dodecahydrodicarba-nido-dodecaborates (2—) as intermediates of the rearrangements of 1,4- and 1,12-dicarba-closo-dodecaboranes (12) are discussed. Attention is also paid to the introduction of an NH_2 group into 1,2-dicarba-closo-dodecaborane (12) via the formation of dodecahydro-1,2-dicarba-nido-dodecaborate (2 —) and to the reactions of 3-amino-1,2-dicarba-closo-dodecaborane (12).

12 A.3.17 Kappe,Th.;Chirazi,M.A.A.;Ziegler,E.

Zur Reaktion von Hydroxy-und Amino-Pyridinen mit
Reaktiven Malonestern. (Ger)

Monatshefte fur Chemie, **103(2)**, 1972, 426-434

547.82

The reaction of hydroxy and amino pyridines with 2,4,6-trichlorophenyl malonates (1) is discussed. Especially the reaction of 3-hydroxy-pyridine (4) with 1 to 4-hydroxy-2H-pyrano [3.2—b] pyridine-2-ones (5 a — e), and the reaction of 2-amino-3-hydroxy-pyridine (15) to 2,9-dihydroxy-4H-pyrido-[1.2—4]pyrimidin-4-ones (16 d — f) is described.

548.7 *Fine Structure of Crystals*

12 A.3.18 Venkataraman,G.

Raman and Crystal Dynamic.

Current Science, 41(10), 1972,

548.7

12 A.3.19 Yvon,K.;Boller,H.

Die Bestimmung der Kristallstruktur von V_4As_3

Mittels Direkter Methoden.

Determination of the Crystal Structure of V_4As_3

by Direct Methods .(Ger)

Monatshefte fur Chemie, 103(6), 1972,1643-1650

548.7 V_4As_3

Direct methods have been used to determine the crystal structure of V_4As_3 . This compound was found to be isotypic with Nb_4As_3 , space group Cmcn. The lattice constants are: $a = 3.420 \text{ \AA}$, $b = 13.73 \text{ \AA}$, $c = 18.12 \text{ \AA}$.

12 A.3.20 Braun, H.; Gallagher, K. J.

β -Fe₂O₃, a New Structural form of Iron (III)
Oxide.

Nature Physical Science, 240(97), November 6, 1972,
13.-14

548.73 Fe₂O₃

12 A.3.21 Mayer, H.; Völlenknecht, H.

Die Kristallstruktur von Ge₅O [PO₄]₆.

The Crystal Structure of Ge₅O [PO₄]₆. (Ger)

Monatshefte Für Chemie, 103(6), 1972, 1560-1571

548.73 Ge₅O[PO₄]₆

The crystal structure of Ge₅O [PO₄]₆ has been determined and refined by least-squares, using three-dimensional x-ray data from Weissenberg-photographs: space group R3; $a = 7.994 \pm 0.004$ and $c = 24.87 \pm 0.01$ Å; $Z = 3$; 467 independent reflections; $R = 0.083$. The crystal structure consists of isolated [GeO₆] octahedra and [Ge₂O₇] double tetrahedra which are

linked by $\text{[PO}_4\text{]}$ groups forming a three-dimensional network. The average interatomic distances are:
 $\text{Ge}^{[6]}-\text{O} = 1.863$, $\text{Ge}^{[4]}-\text{O} = 1.704$ and $\text{P}-\text{O} = 1.525 \text{ \AA}$.

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Transparent Magnesia Bodies.I. By Hot-Pressing."
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Transparent Magnesia Bodies.II. By Sintering."
Transaction and Journal of the British Ceramic
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