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10816

NICKEL BIS(ACRYLONITRILE). V. REACTIONS OF NICKEL ACRYLONITRILE COMPLEXES WITH ALKINES. ELUCIDATION OF THE ACTION OF REPPE CATALYSTS.

G. N. Sahrduzer.

Univ., Munich, Ger. Recd. Sept. 24, 1960.

Chem. Ber. 94(6), 1403-9(1961).

- 1) C31 H21 N 2,3,4,5-tetra-Ph-benzonitrile p. 1408
 2) C42 H30 hexa-Ph-benzene p. 1409
 3) C31 H22 O product of reaction of tolan + bis-(acrolein)-Ni(O)

10817

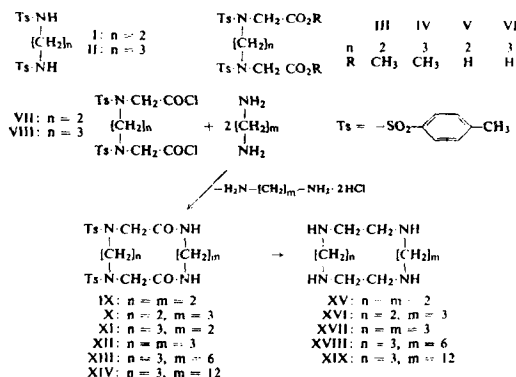
MACROCYCLIC RING SYSTEMS. VII. PREPARATION AND PROPERTIES OF MACROCYCLIC TETRAMINES.

H. Stetter, K. H. Mayer.

Univ., Munich, Ger. Recd. Oct. 17, 1960.

Chem. Ber. 94(6), 1410-6(1961).

- 1) C17 H22 N2 O4 S2 (II) p. 1413
 2) C22 H28 N2 O8 S2 (III)
 3) C23 H30 N2 O8 S2 (IV)
 4) C20 H24 N2 O8 S2 (V)
 5) C21 H26 N2 O8 S2 (VI)
 6) C20 H22 Cl2 N2 O6 S2 (VII)
 7) C21 H24 Cl2 N2 O6 S2 (VIII)
 8) C22 H28 N4 O6 S2 (IX) p. 1414
 9) C23 H30 N4 O6 S2 (X)
 10) C23 H30 N4 O6 S2 (XI)
 11) C24 H32 N4 O6 S2 (XII)
 12) C27 H38 N4 O6 S2 (XIII) (& adduct of (XIII) & toluene 1:1) p. 1415
 13) C33 H50 N4 O6 S2 (XIV)
 14) C8 H20 N4 (XV) 19) C36 H44 N4 O8 S4 tetra-Tos deriv. of (XV) p. 1415
 15) C9 H22 N4 (XVI) p. 1416 20) C37 H46 N4 O8 S4 " (XVI) p. 1416
 16) C10 H24 N4 (XVII) 21) C38 H48 N4 O8 S4 " (XVII)
 17) C13 H30 N4 (XVIII) 22) C41 H54 N4 O8 S4 " (XVIII)
 18) C19 H42 N4 (XIX) 23) C47 H66 N4 O8 S4 " (XIX)



10818

PHOSPHINE SUBSTITUTED CARBONYL-COBALTATES (-I), METHYL- AND HYDROGEN COBALT CARBONYLS.

W. Hieber, E. Lindner.

Tech. Hochschule, Munich, Ger. Recd. Dec. 22, 1960.

Chem. Ber. 94(6), 1417-25(1961).

$[\text{Co}(\text{CO})_3\text{PR}_3]_2 + 2 \text{Na} \xrightarrow{\text{THF}} 2 \text{Na}[\text{Co}(\text{CO})_3\text{PR}_3] \text{ (I)}$				$\text{M}[\text{Co}(\text{CO})_3\text{P}(\text{C}_6\text{H}_5)_3]_n \text{ (A)}$	
M = n =				M = n = R =	
1) C21 H16 Co O3 P	(A)	H	1	7) C21 H15 Co Na O3 P	(A) Na 1
2) C42 H30 Co2 Cu O6 P2	"	Cu	2	8) C21 H15 Co Na O6 P	(I) OPh
3) C42 H30 Co2 Hg O6 P2	"	Hg	"	9) C78 H54 Co2 N6 Ni O12 P2	$[\text{Ni}(\text{o-phenanthroline})_3][\text{Co}(\text{CO})_3\text{P}(\text{OPh})_3]_2$
4) C42 H30 Co2 O6 P2 Pb	"	Pb	"	10) C78 H54 Co2 N6 Ni O6 P2	$[\text{Ni}(\text{o-phenanthroline})_3][\text{Co}(\text{CO})_3\text{P}(\text{Ph})_3]_2$
5) C21 H15 Co O3 P Ti	"	Ti	1	11) C4 Co Na O4	$\text{Na}[\text{Co}(\text{CO})_4]$
6) C21 H15 Ag Co O3 P	"	Ag	"	12) C32 H48 Co3 O14	$[\text{Co}(\text{C}_4\text{H}_8\text{O})_6][\text{Co}(\text{CO})_4]_2$
				13) C22 H18 Co O6 P	$\text{MeCo}(\text{CO})_3\text{P}(\text{OPh})_3$
				14) C22 H18 Co O3 P	$\text{MeCo}(\text{CO})_3\text{PPh}_3$

10819

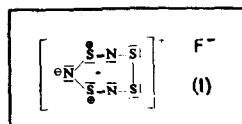
SULFUR-NITROGEN-FLUORINE COMPOUNDS. XII. PREPARATION AND PROPERTIES OF THIOTRITHIAZYL FLUORIDE.

O. Glemser, E. Wyszomirski.

Univ., Goettingen, Ger. Recd. Jan. 2, 1961.

Chem. Ber. 94(6), 1443-6(1961).

- 1) F N3 S4 (I) (as 1.5 HF) p. 1445



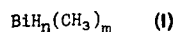
10820

BISMUTH HYDRIDES.

E. Amberger.

Univ. Munich, Ger. Recd. Jan. 3, 1961.

Chem. Ber. 94(6), 1447-52.

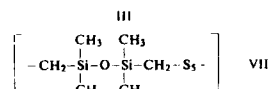
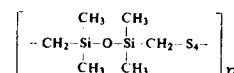
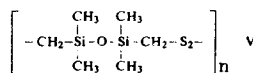
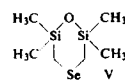
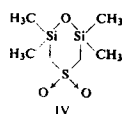
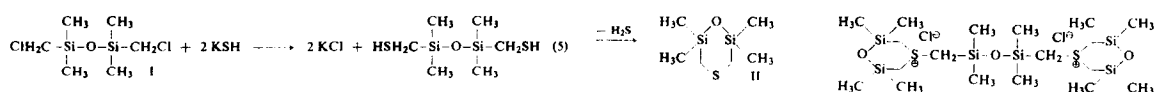
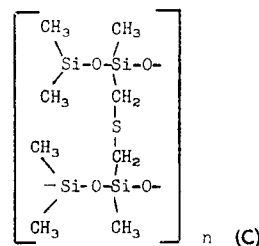
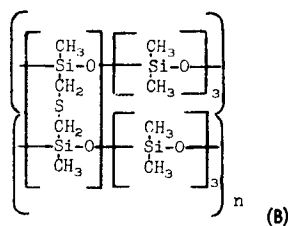
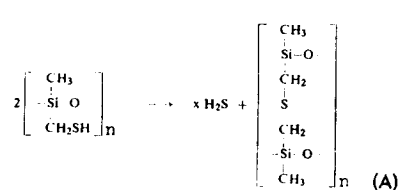


- $n = m =$
 1) C3 H9 Bi (I) 0 3 p. 1449
 2) C H5 Bi " 2 1 p. 1451
 $n = m =$
 3) C2 H7 Bi (I) 1 2
 4) Bi H3 " 3 0 p. 1452

10821

VULCANIZATION OF SILICONES.

M. Schmidt, M. Wieber.

Univ., Munich, Ger. Recd. Dec. 24, 1960.
Chem. Ber. 94(6), 1426-36(1961).

- n =
- | | | | | |
|--|---|---------|---|-----------------------|
| 1) (C ₆ H ₁₆ O S ₂ Si ₂) _n (VI) | 5 | p. 1435 | 7) (C ₆ H ₁₆ O S ₅ Si ₂) _n (VIII) | p. 1436 |
| 2) (C ₆ H ₁₆ O S ₄ Si ₂) _n (VII) | " | | 8) (C ₄ H ₁₀ O ₂ S Si ₂) _n (A) | p. 1434 |
| 3) C ₆ H ₁₆ O ₃ S Si ₂ (IV) | | p. 1433 | 9) (C ₁₆ H ₄₆ O ₈ S Si ₈) _n (B) | |
| 4) C ₆ H ₁₆ O Se Si ₂ (V) | | | 10) (C ₈ H ₂₂ O ₄ S Si ₄) _n (C) | |
| 5) C ₆ H ₁₆ O S Si ₂ (II) | | p. 1432 | 11) C ₇ H ₁₉ I O S Si ₂ | S-MeI of (II) p. 1432 |
| 6) C ₁₈ H ₄₈ Cl ₂ O ₃ S ₂ Si ₆ (III) | | | 12) C ₇ H ₁₉ I O Se Si ₂ | Se-MeI of (V) p. 1433 |

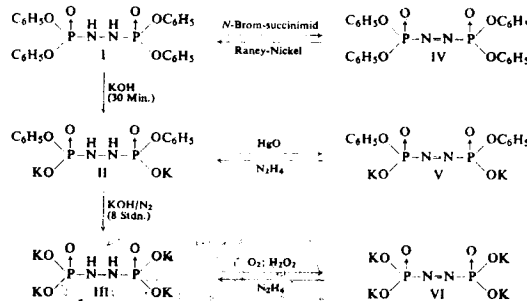
10822

NEW INORGANIC AZO COMPOUNDS: DERIVATIVES OF AZODIPHOSPHONIC ACID.

H. Bock, G. Rudolph.

Univ., Munich, Ger. Recd. Jan. 4, 1961.
Chem. Ber. 94(6), 1457-64(1961).

- | | |
|--|---------|
| 1) C ₂₄ H ₂₂ N ₂ O ₆ P ₂ (I) | p. 1461 |
| 2) C ₁₂ H ₁₄ N ₂ O ₆ P ₂ (II) (as K salt) | p. 1462 |
| 3) H ₆ N ₂ O ₆ P ₂ (III) | " |
| 4) C ₂₄ H ₂₀ N ₂ O ₆ P ₂ (IV) | |
| 5) C ₁₂ H ₁₂ N ₂ O ₆ P ₂ (V) (as K salt) | p. 1463 |
| 6) H ₄ N ₂ O ₆ P ₂ (VI) | " |



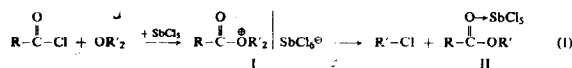
10823

OXONIUM SALTS CAPABLE OF FRIEDEL-CRAFTS REACTIONS.

F. Klages, E. Muehlbauer, G. Lukaszczuk.

Univ., Munich, Ger. Recd. Jan. 9, 1961.
Chem. Ber. 94(6), 1464-9(1961).

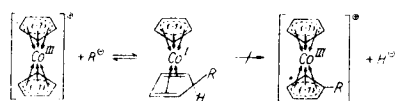
- | | R = | R' = | |
|---|-----|------|---------|
| 1) C ₆ H ₁₃ Cl ₆ O ₂ Sb (I) | Me | Et | p. 1467 |
| 2) C ₄ H ₉ Cl ₆ O ₂ Sb " | " | Me | p. 1468 |
| 3) C ₇ H ₁₅ Cl ₆ O ₂ Sb " | Et | Et | |



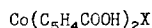
10824

AROMATIC COMPLEXES OF METALS. XLIV. REACTIVITY OF THE DICYCLOPENTADIENYL COBALT (III) CATION.

E. O. Fischer, G. E. Herberich.

Univ., Munich, Ger. Recd. Jan. 16, 1961.
Chem. Ber. 94(6), 1517-23(1961).

I a: R = H-; b: R = D-; c: R = CH₃-
d: R = CCl₃-; e: R = C₆H₅CO-; f: R = C₆H₅-



(A)

C₅H₄COOH = cyclopentadienylcarboxylic acid

X =

- | | | | |
|---|----|---|--|
| 1) C ₁₇ H ₁₅ Co O (Ie) | | 4) C ₁₂ H ₁₀ Cl Co O ₈ (A) | X = ClO ₄ |
| 2) C ₁₆ H ₁₅ Co (If) | | 5) C ₂₄ H ₁₆ Ag ₃ Cl Co ₂ O ₁₂ | {Ag[Co(C ₅ H ₄ CO ₂) ₂]} ₂ AgClO ₄ |
| 3) C ₁₂ H ₁₀ Br Co O ₄ (A) | Br | 6) C ₂₈ H ₂₈ Co ₂ Mn O ₂₂ | [(0.9 Mn, 0.1 Co)(H ₂ O) ₆][Co(C ₅ H ₃ CO ₂ HCO ₂) ₂] ₂ |

THE CHEMISTRY OF METAL CARBONYLS IN LIQUID AMMONIA. VIII. DIHYDROGEN HEXACARBONYL DINICKOLATE (-I).
2ND PART.

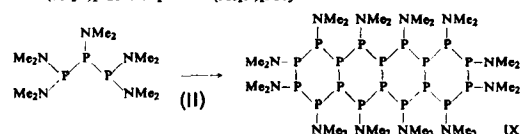
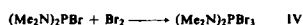
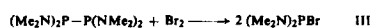
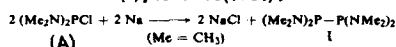
H. Behrens, H. Zizlsperger, R. Rauch.
Techn. Hochschule, Munich, Ger. Recd. Jan. 2, 1961.
Chem. Ber. 94(6), 1497-1505(1961).

- 1) C13 H13 N Ni4 O9 (NMe₄)₂[Ni₄(CO)₉H] p. 1503
2) C17 H24 N2 Ni4 O9 (NMe₄)₂[Ni₄(CO)₉] p. 1502
3) C38 H30 Ni O2 P2 Ni(CO)₄(Ph₂P)₂ p. 1505

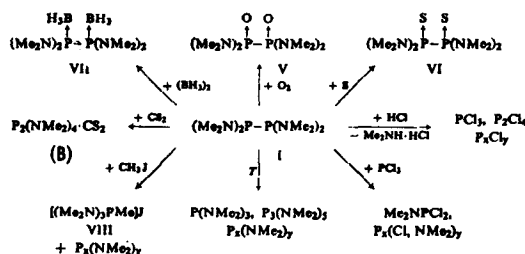
10826

DIALKYLAMINO-PHOSPHANES, I. PREPARATION AND PROPERTIES OF TETRAKIS(DIMETHYLAMINO)DIPHOSPHANE AND PENTAKIS(DIMETHYLAMINO)TRIPHOSPHANE.

H. Noeth, J. J. Vetter.
Univ., Munich, Ger. Recd. Jan. 12, 1961.
Chem. Ber. 94(6), 1505-16(1961).



- | | | | | | | | | | | | | | | | | |
|----|-----|-----|-----|----|------|---------|---------|-----|-----|-----|-----|----|--------|-----------------------------------|-----------------------------------|---------|
| 1) | C8 | H24 | N4 | P2 | (I) | p. 1513 | 8) | C7 | H21 | I | N3 | P | (VIII) | | | |
| 2) | C10 | H30 | N5 | P3 | (II) | | 9) | C24 | H72 | N12 | P18 | | (IX) | p. 1516 | | |
| 3) | C4 | H12 | Br | N2 | P | (III) | p. 1514 | 10) | C4 | H12 | CL | N2 | P | (A) | p. 1513 | |
| 4) | C4 | H12 | Br3 | N2 | P | (IV) | | 11) | C9 | H24 | N4 | P2 | S2 | (B) | p. 1515 | |
| 5) | C8 | H24 | N4 | O2 | P2 | (V) | | 12) | C6 | H18 | N3 | P | | P(NMe ₂) ₃ | p. 1513 | |
| 6) | C8 | H24 | N4 | P2 | S2 | (VI) | | 13) | C2 | H6 | Br2 | N | P | | Me ₂ NPBr ₂ | p. 1514 |
| 7) | C8 | H30 | B2 | N4 | P2 | (VII) | p. 1515 | 14) | C2 | H6 | CL2 | N | P | | Me ₂ NPCl ₂ | p. 1516 |



10827

CHEMISTRY OF SILICON- NITROGEN COMPOUNDS. XIII. SILYL SUBSTITUTED ALKALI AMIDES.

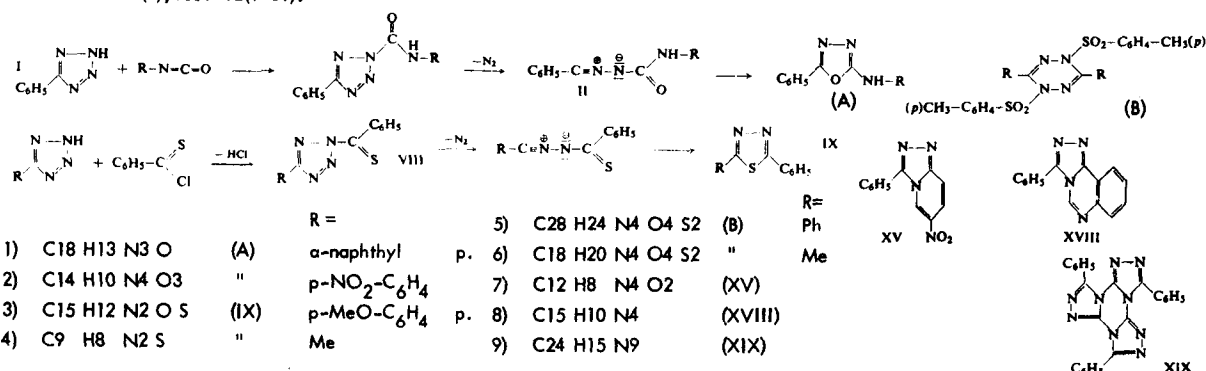
U. Wannagat, H. Niederpruem.
Techn. Hochschule, Aachen, Ger. Recd. Jan. 19, 1961.
Chem. Ber. 94(6), 1540-7(1961).

- 1) C₆H₁₈ Li N Si₂ (Me₃Si)₂NLi [& addition products with Et₂O (1:1) & dioxane (1:1), (1:0.75), (1:0.5)
- 2) C₉H₂₄ Li N Si₂ (Me₃Si)(Et₃Si)NLi [& addition product with (LiBr)_x]
- 3) C₆H₁₈ N Na Si₂ (Me₃Si)₂NNa [& addition products with Et₂O (1:1), THF (1:1), pyridine (1:1), & dioxane (1:0.5)
- 4) C₆H₁₈ K N Si₂ (Me₃Si)₂NK [as addition product with dioxane (1:2)]
- 5) C₃₆H₃₀ Li N Si₂ (Ph₃Si)₂NLi [as addition product with Et₂O (1:1)]

10828

RING OPENING OF AZOLES. V. REACTIONS OF TETRAZOLES WITH ELECTROPHILIC REAGENTS.

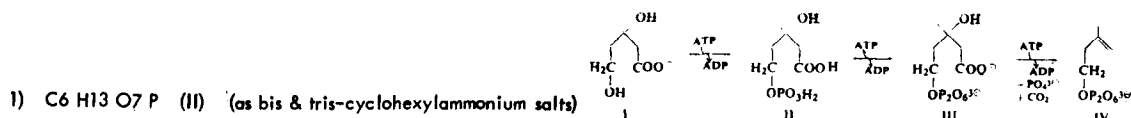
R. Huisgen, H. J. Sturm, M. Seidel.
Univ., Munich, Ger. Recd. Jan. 26, 1961.
Chem. Ber. 94(6), 1555-62(1961).



10829

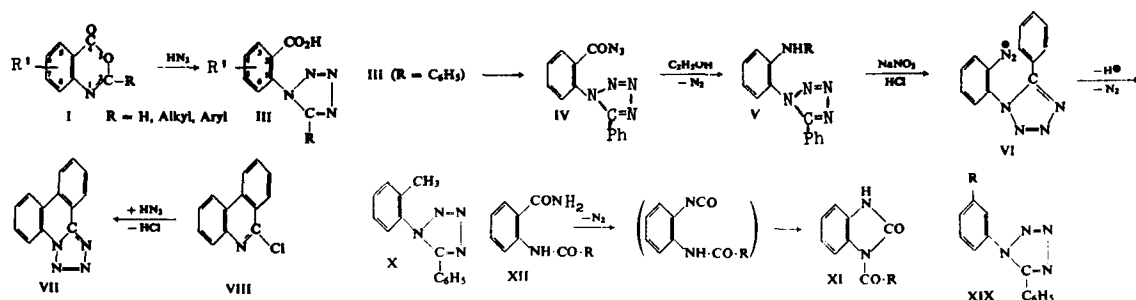
THE BIOSYNTHESIS OF TERPENES. XII. SYNTHESIS OF DL-5-PHOSPHOROMEVALONIC ACID.

K. Kirschner, F. Lynen.
Inst. Biochem., Univ. Munich, Ger. Recd. Feb. 16, 1961.
Chem. Ber. 94(6), 1595-1606(1961).



TETRAZOLES. III. REVERSIBLE AZIDOLYSIS OF 3,1-BENZOXAZINONES-4 ("ACYLANTHRANILES")

H. Behringer, H. J. Fischer.
Univ., Munich, Ger. Recd. Feb. 3, 1961.
Chem. Ber. 94(6), 1572-84(1961).

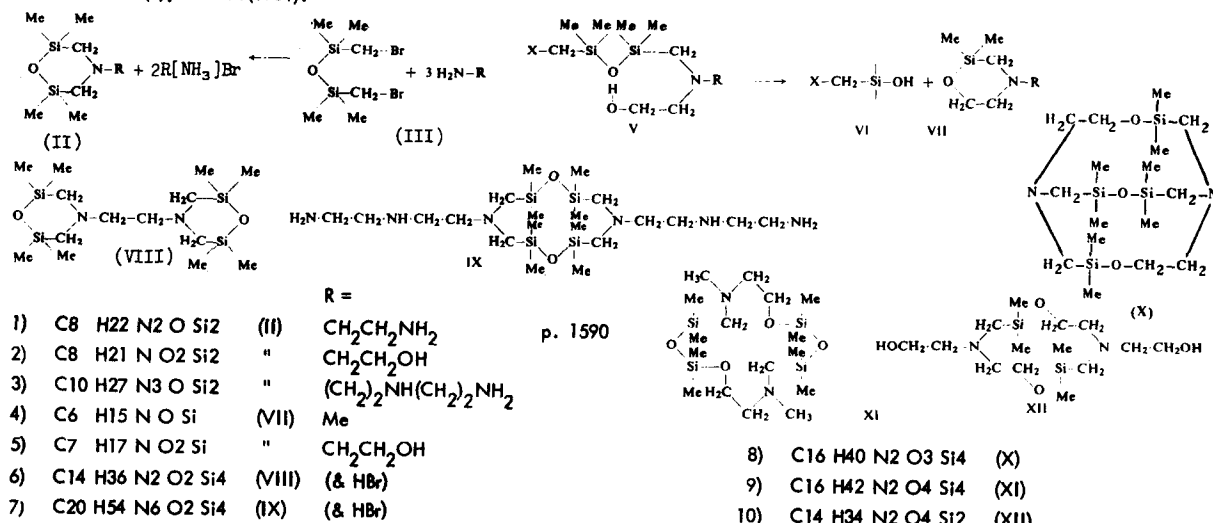


			R =		R' =		R =	
1)	C14 H10 N4 O2	(III)	Ph	H	13)	C14 H12 N4	(XIX)	Me
2)	C8 H6 N4 O2	"	H	"	14)	C14 H10 N4 O2	"	COOH
3)	C9 H8 N4 O2	"	Me	"	15)	C13 H8 N4	(VII)	
4)	C15 H12 N4 O3	"	p-MeO-C ₆ H ₄	"	16)	C14 H12 N4	(X)	
5)	C14 H9 N5 O4	"	p-NO ₂ -C ₆ H ₄	H	17)	C14 H9 N7 O	(IV)	
6)	C9 H7 N5 O4	"	Me	6-NO ₂	18)	C16 H14 N4 O2		Et ester of I
7)	C9 H7 N5 O4	"	"	5-NO ₂	19)	C14 H12 N6 O		hydrazide of I
8)	C9 H7 N5 O4	"	"	4-NO ₂	20)	C9 H6 N2 O4		8-NO ₂ -2-Me-3,1-benzoxazinone-4
9)	C16 H15 N5 O2	(V)	CO ₂ Et		21)	C9 H8 N2 O5		N-Ac-4-NO ₂ -anthranilic acid
10)	C13 H11 N5	"	H		22)	C9 H8 N2 O2		1-Ac-benzimidazolone-4
11)	C14 H10 N2 O2	(XI)	Ph		23)	C15 H12 N2 O3		1-anisoylbenzimidazolone-4
12)	C14 H12 N2 O2	(XII)	"		24)	C9 H8 N2 O5		N-Ac-3-NO ₂ -anthranilic acid
					25)	C26 H19 N11		1,3-bis[2-(5-Ph-1-tetrazolyl)-phenyl]-1-triazine

10831

Si, O, N-HETEROCYCLIC COMPOUNDS.

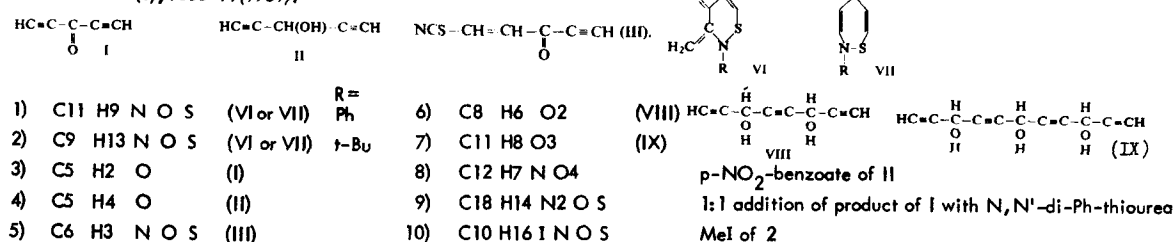
W. Simmler
Farbenfabriken Bayer AG, Leverkusen, Ger. Recd. Feb. 13, 1961.
Chem. Ber. 94(6), 1585-91 (1961).



10832

DIETHYNYL KETONES.

F. Wille, R. Strasser.
Inst. Inorg. Chem., Univ., Munich, Ger. Recd. Mar. 20, 1961.
Chem. Ber. 94(6), 1606-11 (1961).



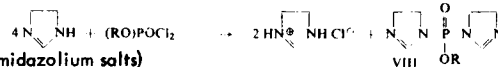
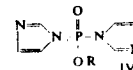
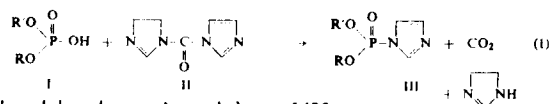
10833

THE CHEMISTRY OF ENERGY-RICH PHOSPHATE. XI. PREPARATION OF PHOSPHORIC ACID IMIDAZOLIDES.

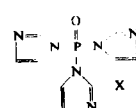
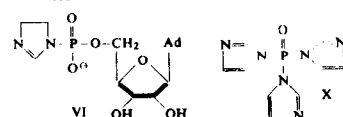
F. Cramer, H. Schaller, H. A. Staab.

Inst. Org. Chem., Techn. Hochschule, Darmstadt, Ger. Recd. Oct. 18, 1960.
Chem. Ber. 94(6), 1612-21(1961).

		R =	R' =		
1)	C ₉ H ₉ N ₂ O ₃ P	(III) Ph	H	(as Na- and cyclohexylammonium salts)	p. 1620
2)	C ₉ H ₈ Cl N ₂ O ₃ P	" 4-Cl-C ₆ H ₄	"	(as Na salt)	
3)	C ₁₃ H ₁₁ N ₂ O ₃ P	" β-naphthyl	"	(as Na- and cyclohexylammonium salts)	
4)	C ₁₃ H ₁₇ N ₂ O ₃ P	" thymyl	"	(as Na- and imidazolium salts)	
5)	C ₁₀ H ₁₁ N ₂ O ₃ P	" benzyl	"	(as Na salt)	
6)	C ₆ H ₁₁ N ₂ O ₄ P	" MeOCH ₂ CH ₂	"	"	
7)	C ₁₃ H ₁₆ N ₇ O ₆ P	" 5'-adenosyl	"	"	
8)	C ₁₅ H ₁₃ N ₂ O ₃ P	" Ph	Ph		
9)	C ₃ H ₅ N ₂ O ₃ P	" H	H	(as di-Na- & imidazolium salts)	
10)	C ₁₂ H ₁₁ N ₄ O ₂ P	(VIII) Ph			
11)	C ₁₆ H ₁₉ N ₄ O ₂ P	" thymyl			
12)	C ₆ H ₇ N ₄ O ₂ P	(IV) H		(as Na- and imidazolium salts)	
13)	C ₉ H ₉ N ₆ O P	(X)			
14)	C ₁₃ H ₁₆ N ₇ O ₆ P	(VI) (as imidazolium salt)			



Ad = Adenine



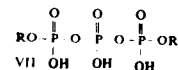
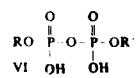
10834

THE CHEMISTRY OF ENERGY-RICH PHOSPHATE. XII. PHOSPHORYLATION USING IMIDAZOLYLPHOSPHONATE AND DI-IMIDAZOLYLPHOSPHINATE SALTS.

H. Schaller, H. A. Staab, F. Cramer.

Inst. Org. Chem., Techn. Hochschule, Darmstadt, Ger. Recd. Oct. 18, 1960.
Chem. Ber. 94(6), 1621-33(1961).

		R =	R' =		
1)	C ₆ H ₈ N O ₃ P	(A) Ph	H	(as cyclohexylammonium salt)	
2)	C ₁₀ H ₁₆ N O ₃ P	" thymyl	"	(as NH ₄ salt)	
3)	C ₁₂ H ₁₇ Cl N O ₃ P	" 4-Cl-C ₆ H ₄	cyclohexyl	(as cyclohexylammonium salt)	
4)	C ₇ H ₉ O ₄ P	(B) Me	Ph	(as Na salt)	
5)	C ₉ H ₁₃ O ₄ P	" i-Pr	"	(as cyclohexylammonium salt)	
6)	C ₂ H ₇ O ₄ P	" Me	Me	(as imidazolium salt)	
7)	C ₂₀ H ₂₈ O ₇ O ₂	(VI) thymyl	thymyl	(as diimidazolium and dicyclohexylammonium salts)	
8)	C ₁₂ H ₁₂ O ₇ P ₂	" Ph	Ph	(as diimidazolium salt)	
9)	C ₁₆ H ₁₄ O ₇ P ₂	" β-naphthyl	"	(as dicyclohexylammonium salt)	
10)	C ₁₆ H ₂₀ O ₇ P ₂	" thymyl	"	(as di-Na and dicyclohexylammonium salt)	
11)	C ₁₂ H ₁₁ Cl O ₇ P ₂	" Ph	4-Cl-C ₆ H ₄	(as dicyclohexylammonium salt)	
12)	C ₁₀ H ₁₆ O ₇ P ₂	" thymyl	H	(as tricyclohexylammonium salt)	
13)	C ₁₆ H ₁₉ Cl O ₇ P ₂	" "	4-Cl-C ₆ H ₄	(as dicyclohexylammonium salt)	p. 1631
14)	C ₁₂ H ₁₃ O ₁₀ P ₃	(VII) Ph	Ph	(as tricyclohexylammonium salt)	p. 1632 p. 1631



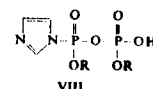
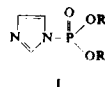
10835

THE CHEMISTRY OF ENERGY-RICH PHOSPHATE. XIII. PHOSPHORYLATION USING IMIDAZOLYLPHOSPHORIC ACID DI-ESTERS AND DIIMIDAZOLYLPHOSPHINIC ACID MONO-ESTERS.

F. Cramer, H. Schaller.

Inst. Org. Chem., Techn. Hochschule, Darmstadt, Ger. Recd. Oct. 18, 1960.
Chem. Ber. 94(6), 1634-40(1961).

		R =	R' =		
1)	C ₁₃ H ₁₇ N ₂ O ₃ P	(I) thymyl	H		
2)	C ₂₃ H ₃₀ N ₂ O ₆ P ₂	(VIII) " thymyl	(as imidazolium salt)		
3)	C ₁₂ H ₁₈ N O ₃ P	PhOP(O)(OH)NHC ₆ H ₁₁	(as cyclohexylammonium salt)		
4)	C ₁₇ H ₁₈ N ₂ O ₃	Cbo-Ala anilide	Cbo = carbobenzoxy		
5)	C ₁₄ H ₁₈ N ₂ O ₅	Cbo-Ala-Ala			



10836

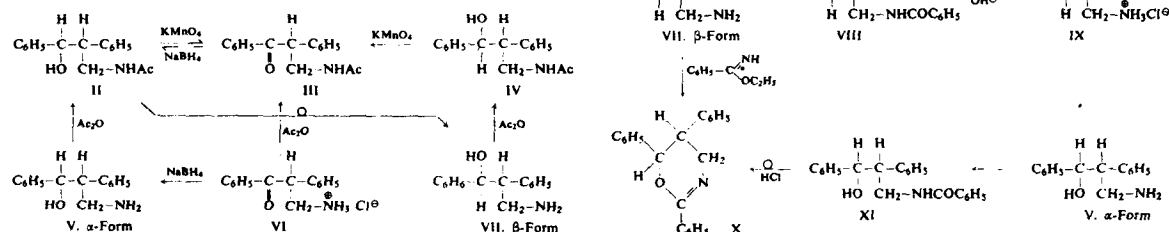
PHOSPHORUS NITROGEN COMPOUNDS. XII. A NEW PHOSPHONITRIDE CHLORIDE P₃NCI₁₂.

M. Becke-Goehring, W. Lehr.

Univ., Heidelberg, Ger. Recd. Feb. 15, 1961.
Chem. Ber. 94(6), 1591-4(1961).

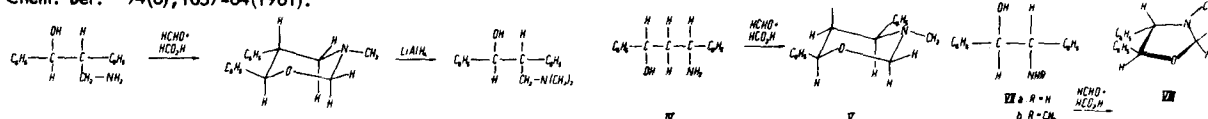
- 1) CL₁₂ N P₃ (Cl₃P=N-PCl₃)(PCl₃) p. 1593

AMINOALCOHOLS. XV. STEREOSPECIFIC SYNTHESIS AND CONFIGURATIONAL STUDIES OF DL-3-AMINO-1,2-DIPHENYL-1-PROPANOL (RING CLOSURE REACTION OF AMINO ALCOHOLS WITH BENZIMIDIC ACID ESTERS).
G. Drefahl, H. H. Hoerhold.
Inst. Org. Chem., Univ., Jena, E. Ger. Recd. Oct. 20, 1960.
Chem. Ber. 94(6), 1641-56(1961).

$$\text{C}_6\text{H}_5\text{---}\overset{\text{HO}}{\underset{\text{H}}{\text{C}}}\text{---}\overset{\text{H}}{\underset{\text{H}}{\text{C}}}\text{---}\text{C}_6\text{H}_5 \xrightarrow{\text{HCl}} \text{C}_6\text{H}_5\text{---}\overset{\text{HO}}{\underset{\text{H}}{\text{C}}}\text{---}\overset{\text{H}}{\underset{\text{H}}{\text{C}}}\text{---}\text{C}_6\text{H}_5 \xrightarrow{\text{HCl}} \text{C}_6\text{H}_5\text{---}\overset{\text{C}_6\text{H}_5\text{COO}}{\underset{\text{H}}{\text{C}}}\text{---}\overset{\text{H}}{\underset{\text{H}}{\text{C}}}\text{---}\text{C}_6\text{H}_5$$


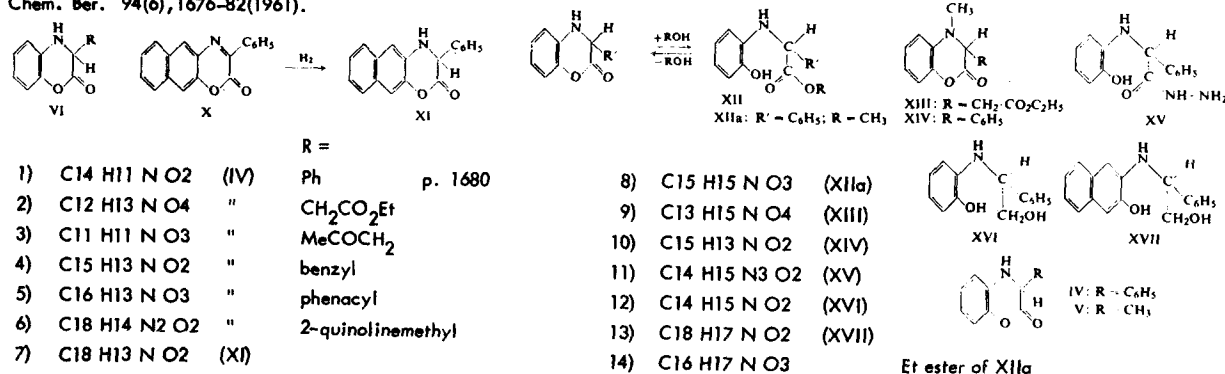
- | | | | | | | | | | |
|----|--------------|--------|-------------------|---------|-----|---------------|-------|---|---------|
| 1) | C17 H19 N O2 | (II) | | p. 1652 | 7) | C15 H17 N O | (VII) | (& HCl) | p. 1652 |
| 2) | C15 H17 N O | (V) | (& HCl) 2 isomers | p. 1651 | 8) | C22 H21 N O2 | (XI) | | p. 1651 |
| 3) | C15 H15 N O | (VI) | (as HCl) | | 9) | C17 H17 N O2 | | N-Ac deriv. of VI | p. 1651 |
| 4) | C22 H21 N O2 | (VIII) | | p. 1653 | 10) | C17 H19 N O2 | | " " VII | p. 1652 |
| 5) | C22 H21 N O2 | (IX) | (as HCl) | p. 1654 | 11) | C22 H21 N O S | | thiobenzoyl deriv. of VII | p. 1654 |
| 6) | C22 H19 N O | (X) | (& HCl) | p. 1653 | 12) | C15 H16 N2 O | | N-(2-HO-2-Ph-ethyl)benzamidine | p. 1656 |
| | | | | | 13) | C22 H22 N2 O | | DL-erythro-N-[3-OH-2,3-di-Ph-Pr]benzamidine | |

AMINO ALCOHOLS. XVI. ALKYLATION OF AMINO ALCOHOLS WITH FORMALIN AND FORMIC ACID.
G. Drefahl, H. H. Hoerhold.
Inst. Org. Chem., Univ., Jena, E. Ger. Recd. Oct. 20, 1960.
Chem. Ber. 94(6), 1657-64 (1961).

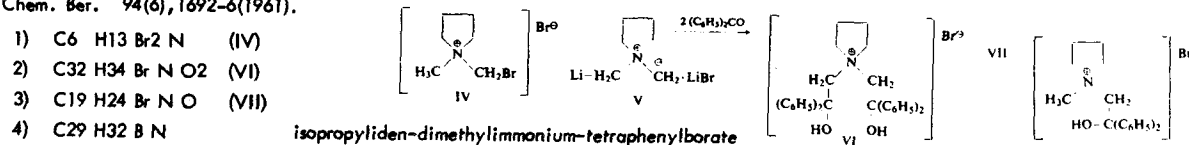


- | | | | | | |
|---------------------------------------|-------|-------------|--|--|---------|
| 1) C ₁₇ H ₁₉ NO | (II) | (& picrate) | 4) C ₁₆ H ₁₇ NO | (VIII) (as HCl) | p. 1663 |
| 2) C ₁₇ H ₂₁ NO | (III) | | 5) C ₁₈ H ₂₄ INO | MeI of DL-(erythro & threo)-3-Me ₂ N-1,2-di-Ph-propanol | |
| 3) C ₁₇ H ₁₉ NO | (V) | (& picrate) | 6) C ₁₆ H ₁₉ NO | DL-erythro-2-Me ₂ N-1,2-di-Ph-ethanol | p. 1663 |

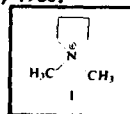
1,4-OXAZINES. II. CONVERSION OF 1,4-BENZOXAZINONES-2 IN BENZMORPHOLONES-2 AND N-SUBSTITUTED AMINO ALCOHOLS.
E. Biekert, D. Hoffmann, F. J. Meyer.
Max-Planck Inst. Biochem., Munich, Ger. Recd. Nov. 28, 1960.
Chem. Ber. 94(6), 1676-82(1961).



YLIDES OF THE N,N-DIMETHYLPYRROLIDINIUM SYSTEM.
G. Wittig, W. Tochtermann.
Inst. Org. Chem., Univ., Heidelberg, Ger. Recd. Mar. 13, 1961.
Chem. Ber. 94(6), 1692-6(1961).



DEGRADATION OF N,N-DIMETHYLPYRROLIDINIUM BROMIDE WITH ORGANO-LITHIUM COMPOUNDS TO ETHYLENE AND DIMETHYL-VINYL-AMINE.
F. Weygand, H. Daniel.
Org.-Chem. Inst., Techn. Hochschule, Munich, Ger. Recd. Dec. 24, 1960.
Chem. Ber. 94(6), 1688-92(1961).



10842

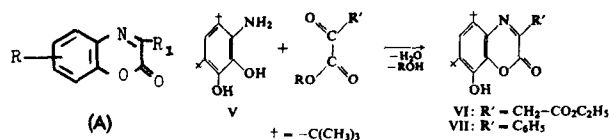
1,4-OXAZINES. I. SYNTHESIS OF CONDENSED 1,4-OXAZINONES-2 BY REACTION OF o-AMINOPHENOLS WITH KETO-ESTERS.

E. Biekert, D. Hoffmann, F. J. Meyer.

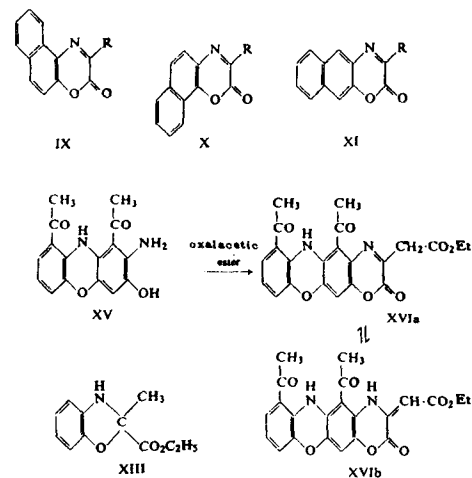
Max-Planck Inst. Biochem., Munich, Ger.

Recd. Nov. 28, 1960.

Chem. Ber. 94(6), 1664-75(1961).



	R =	R ₁ =
1) C ₁₁ H ₉ N O ₃	(A) H	MeCOCH ₂
2) C ₁₂ H ₁₁ N O ₃	" 7-Me	"
3) C ₁₂ H ₁₁ N O ₃	" 6-Me	"
4) C ₁₂ H ₁₁ N O ₄	" 8-MeO	"
5) C ₉ H ₇ N O ₂	" H	Me
6) C ₁₀ H ₉ N O ₃	" 8-MeO	"
7) C ₁₄ H ₉ N O ₂	" H	Ph
8) C ₁₅ H ₁₁ N O ₂	" 6-Me	"
9) C ₁₆ H ₁₃ N O ₃	" 6-Me, 8-MeO	"
10) C ₁₇ H ₁₃ N O ₃	" 5-Me, 7-Ac	"
11) C ₂₂ H ₂₅ N O ₃	" 8-OH, 5,7-di-t-Bu	"
12) C ₁₄ H ₈ N ₂ O ₄	" H	2-NO ₂ -C ₆ H ₄
13) C ₁₅ H ₁₀ N ₂ O ₄	" 6-Me	"
14) C ₁₄ H ₆ Cl ₂ N ₂ O ₄	" 6,8-di-Cl	"
15) C ₁₅ H ₁₁ N O ₂	" H	benzyl
16) C ₁₃ H ₁₃ N O ₄	" "	(CH ₂) ₂ CO ₂ Et
17) C ₁₆ H ₁₁ N O ₃	" "	PhCOCH ₂
18) C ₁₆ H ₁₇ N O ₆	" "	CH(CO ₂ Et)CH ₂ COOEt
19) C ₁₈ H ₁₂ N ₂ O ₂	" "	2-quinolyl-CH ₂
20) C ₁₂ H ₁₁ N O ₄	" "	CH ₂ CO ₂ Et
21) C ₁₃ H ₁₃ N O ₄	" 7-Me	"
22) C ₁₃ H ₁₃ N O ₄	" 6-Me	"
23) C ₁₄ H ₁₅ N O ₄	" 6,7-di-Me	"
24) C ₁₄ H ₁₅ N O ₄	" 5,7-di-Me	"
25) C ₁₄ H ₁₅ N O ₄	" 6,8-di-Me	"
26) C ₁₃ H ₁₃ N O ₅	" 8-MeO	"
27) C ₁₄ H ₁₃ N O ₅	" 7-Ac	"
28) C ₁₄ H ₁₃ N O ₅	" 5-Ac	"
29) C ₁₃ H ₁₁ N O ₆	" 5-COOH	"
30) C ₁₅ H ₁₅ N O ₆	" 6-CO ₂ Et	"
31) C ₁₂ H ₁₁ N O ₅	" 5-OH	"
32) C ₁₂ H ₁₁ N O ₅	" 7-OH	"
33) C ₁₂ H ₁₁ N O ₅	" 6-OH	"



	R =	R ₁ =
34) C ₂₀ H ₂₇ N O ₅	(A) 5,7-di-t-Bu, 8-OH	CH ₂ CO ₂ Et
35) C ₁₂ H ₁₀ Cl N O ₄	" 7-Cl	"
36) C ₁₂ H ₁₀ Cl N O ₄	" 6-Cl	"
37) C ₁₂ H ₉ Cl ₂ N O ₄	" 6,8-di-Cl	"
38) C ₁₂ H ₈ Cl ₃ N O ₄	" 5,6,8-tri-Cl	"
39) C ₁₂ H ₁₀ N ₂ O ₆	" 7-NO ₂	"
40) C ₁₂ H ₁₂ N ₂ O ₆ S	" 6-NH ₂ SO ₂	"
41) C ₁₈ H ₁₁ N O ₂	(XI) Ph	
42) C ₁₆ H ₁₃ N O ₄	(IX) CH ₂ -COOEt	
43) C ₁₆ H ₁₃ N O ₄	(X) "	
44) C ₁₆ H ₁₃ N O ₄	(XI) "	
45) C ₁₁ H ₁₃ N O ₃	(XIII) "	
46) C ₂₂ H ₁₈ N ₂ O ₇	(XVIa, XVIb)	
47) C ₉ H ₉ N O ₃	free acid from XIII	

10843

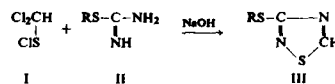
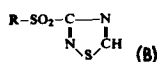
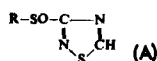
1,2,4-THIODIAZOLES. XIII. SYNTHESIS AND PROPERTIES OF 3-ALKYLMERCAPTO-1,2,4-THIODIAZOLES.

J. Goerdeler, M. Budnowski.

Chem. Inst., Univ., Bonn, Ger.

Recd. Nov. 30, 1960.

Chem. Ber. 94(6), 1682-8(1961).



	R =		R =
1) C ₃ H ₄ N ₂ S ₂	(III) Me (AgNO ₃ , HgCl ₂ salts)	11) C ₅ H ₈ N ₂ O S ₂	(A) n-Pr
2) C ₄ H ₆ N ₂ S ₂	" Et "	12) C ₇ H ₁₂ N ₂ O S ₂	" i-Am
3) C ₅ H ₈ N ₂ S ₂	" i-Pr	13) C ₃ H ₄ N ₂ O ₂ S ₂	(B) Me
4) C ₅ H ₈ N ₂ S ₂	" n-Pr	14) C ₆ H ₁₀ N ₂ O ₂ S ₂	" t-Bu
5) C ₆ H ₁₀ N ₂ S ₂	" n-Bu	15) C ₅ H ₈ N ₂ O ₂ S ₂	" n-Pr
6) C ₆ H ₁₀ N ₂ S ₂	" t-Bu (AgNO ₃ & HgCl ₂ salts)	16) C ₇ H ₁₂ N ₂ O ₂ S ₂	" i-Am
7) C ₇ H ₁₂ N ₂ S ₂	" i-Am	17) C ₈ H ₆ N ₂ S	3-Ph-1,2,4-thiodiazole (AgNO ₃ & HgCl ₂ salts)
8) C ₉ H ₈ N ₂ S ₂	" benzyl (AgNO ₃ & HgCl ₂ salts)		
9) C ₃ H ₄ N ₂ O S ₂	(A) Me		
10) C ₄ H ₆ N ₂ O S ₂	" Et		

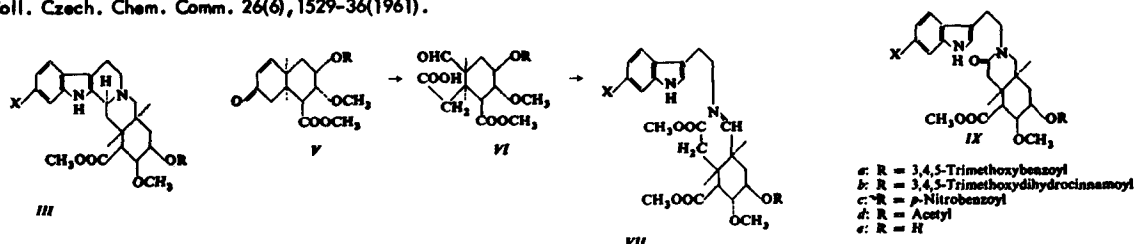
10844

SYNTHETIC STUDIES OF HYPOTENSIVE ALKALOIDS XVII. SIMPLIFIED METHOD OF SYNTHESIS OF (±) - DESPERIDINE AND RELATED SUBSTANCES.

J. Weichert, K. Pelz, L. Bláha.

Forschungsinst. Pharm. Biochem., Prague, C.S.R. Recd. Aug. 20, 1960.

Coll. Czech. Chem. Comm. 26(6), 1529-36(1961).



	X=		X=
1) C33 H40 N2 O10 (VIIa)	H	7) C29 H31 N3 O7 (IIIc)	H
2) " (IXa)	MeO-	8) C23 H28 O9 (Va)	p. 1533
3) C34 H42 N2 O9 (IXb)	H	9) C25 H32 O9 (Vb)	
4) C29 H31 N3 O8 (IXc)	H	10) C20 H21 N O8 (Vc)	
5) C33 H40 N2 O9 (IIIa)	MeO	11) C22 H28 O11 (VIa)	
6) C34 H42 N2 O8 (IIIb)	H	12) C23 H30 O11	Me ester of VIa

10845

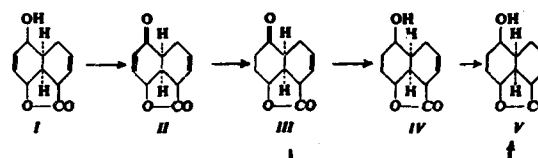
SYNTHETIC STUDIES OF HYPOTENSIVE ALKALOIDS. XVIII. MICROBIOLOGICAL REDUCTION OF (±)-5-OXO-8-β-HYDROXY-*cis*-1,4,5,8,9,10-HEXAHYDRO-1β-NAPHTHOIC ACID LACTONE.

M. Protiva, A. Capek, J. O. Jilek, B. Kakac, M. Tadra.

Forschungsinst. Pharm. Biochem. Prague, C.S.R. Recd. Sept. 17, 1960.

Coll. Czech. Chem. Comm. 26(6), 1537-41(1961).

1) C11 H12 O3 (III)	p. 1539
2) C11 H14 O3 (IV)	p. 1540
3) C11 H16 O3 (V)	
4) C12 H15 N3 O3	semicarbazone of III p. 1539



10846

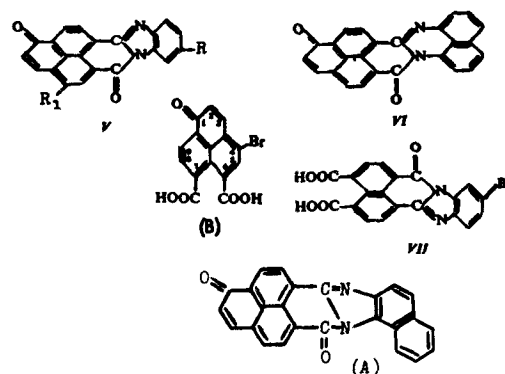
IMIDAZOLE-DYES V- CONDENSATION OF "PYRENIC ACID" WITH AROMATIC α -AND *peri*-DIAMINES.

J. Arlent, J. Dvorak, V. Stepanek.

Forschungsinst. Org. Synth. Pardubice-Rybitvi, C.S.R. Recd. May 3, 1960.

Coll. Czech. Chem. Comm. 26(6), 1542-50(1961).

1) C21 H10 N2 O2 (V)	R=H, R1=H	p. 1548
2) C21 H9 Cl N2 O2	" Cl "	
3) C23 H14 N2 O3	" EtO "	
4) C21 H9 Br N2 O2	" H Br	
5) C25 H12 N2 O2 (VI)		
6) C25 H12 N2 O2 (A)		
7) C20 H9 Br N2 O5 (VII)		
8) C15 H5 Br O5 (B)		p. 1547
9) C21 H9 Br N2 O2	bromination prod. of 1	p. 1549
10) C21 H8 Br2 N2 O2	" " " 9	
11) C20 H7 Br N2 O4	anhydride of 7	
12) C18 H6 N2 O7	prod. from oxid. of 10	



10847

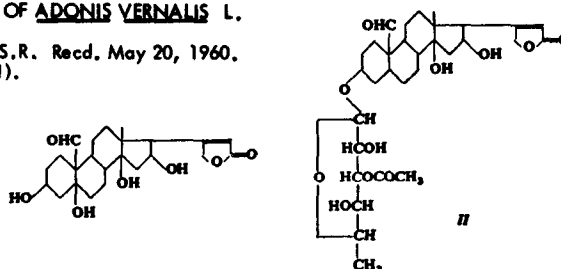
CARDIAC GLYCOSIDES. III. CARDENOLIDS OF *ADONIS VERNALIS* L.

J. Pitra, Z. Cekan.

Forschungsinst. Natur-Arzneimittel, Prague, C.S.R. Recd. May 20, 1960.

Coll. Czech. Chem. Comm. 26(6), 1551-58(1961).

1) C23 H32 O7 (I)	p. 1555
2) C31 H44 O11 (II)	p. 1553
3) C27 H36 O9	di-Ac of I
4) C23 H33 N O7	oxime of I
5) C21 H44 O11	Ac-adonitoxin



10848

PREPARATION OF NON-SPECIFIED C^{14} LABELED COMPOUNDS BY BIOSYNTHESIS I. APPARATUS FOR THE BIOSYNTHESIS AND PREPARATION OF NON-SPECIFIED LABELED CARBOHYDRATES.

J. Liebster, J. Kopoldova, J. Kozel, M. Dobiasova.

Biol. Inst. Czechoslov. Akad. Wissenschaften, Prague, C.S.R. Recd. May 3, 1960.

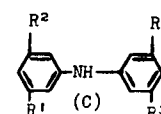
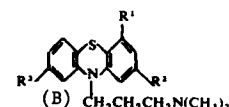
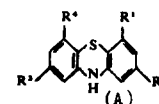
Coll. Czech. Chem. Comm. 26(6), 1582-90(1961).

1) C6 H12 O6 C^{14} labeled glucose	p. 1586
2) " " fructose	
3) C5 H10 O5 " xylose	
4) C6 H12 O6 " galactose	
5) C6 H12 O5 C^{14} labeled rhamnose	
6) C5 H10 O5 " arabinose	
7) C12 H22 O11 " maltose	
8) " " unidentified sugar	
9) [C6 H12 O6] _n " unidentified polysaccharide	

10849

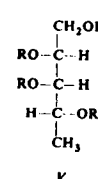
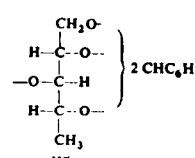
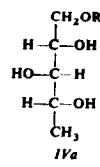
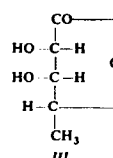
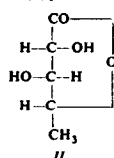
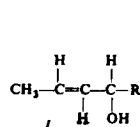
PHENOTHIAZINE-DERIVATIVES II. 1,3,6-TRISUBSTITUTED AND 1,3,6,8-TETRASUBSTITUTED PHENOTHIAZINE-DERIVATIVES.
J. Hebky, J. Kejha, M. Karasek.
Forschungsinst. Pharm. Biochem. Prague, C. S. R. Recd. Oct. 6, 1960.
Coll. Czech. Chem. Comm. 26(6), 1559-67(1961).

	R ¹ =	R ² =	R ³ =	R ⁴ =	
1) C12 H6 Cl3 N S	(A) Cl	Cl	Cl	H	p. 1563
2) C13 H9 Cl2 N S	"	"	"	Me	H
3) "	"	"	"	H	Me
4) C14 H12 Cl N S	"	Me	Me	Cl	H
5) "	"	"	"	H	Cl
6) C15 H15 N S	"	"	"	Me	H
7) C12 H5 Cl4 N S	"	Cl	Cl	Cl	Cl
8) C14 H11 Cl2 N S	"	"	"	Me	Me
9) C16 H17 N S	"	Me	Me	"	"
10) C17 H17 Cl3 N2 S	(B) Cl	Cl	Cl		(as HCl) p. 1564
11) C18 H20 Cl2 N2 S	"	"	"	Me	"
12) C19 H23 Cl N2 S	"	Me	Me	Cl	"
13) C20 H26 N2 S	"	"	"	Me	"
14) C12 H8 Cl3 N	(C) Cl	Cl	Cl	H	p. 1562
15) C13 H11 Cl2 N	"	"	"	Me	"
16) C14 H14 Cl N	"	Me	Me	Cl	"
17) C15 H17 N	"	"	"	Me	"
18) C12 H7 Cl4 N	"	Cl	Cl	Cl	Cl
19) C14 H13 Cl2 N	"	"	"	Me	Me
20) C16 H19 N	"	Me	Me	"	"
21) C13 H4 Cl5 N O S		10-carboxylic acid chloride of 7			p. 1565
22) C15 H10 Cl3 N O S	"	"	"	"	8
23) C17 H16 Cl N O S	"	"	"	"	9
24) C18 H16 Cl4 N2 O2 S		3'-di-Me-amino-Pr ester from 21			(as HCl)
25) C20 H22 Cl2 N2 O2 S	"	"	"	"	22
26) C22 H28 N2 O2 S	"	"	"	"	23



10850

LACTONES V. STEREOCHEMISTRY OF THE HYDROXYLATION OF ANGELACTINIC ACID.
R. Lukeš, J. Jary, K. Kefurt.
Lab. Heterocycl. Verbindungen, Tschechoslov. Akad. Wissensch., Prague ČSSR. Recd. Dec. 13, 1960.
Coll. Czech. Chem. Comm. 26(6), 1568-72(1961).



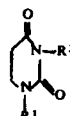
1) C5 H12 O4 (V) R = H p. 1510

2) C13 H20 O8 (V) R = Ac

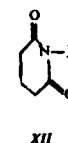
10851

NUCLEIC ACIDS COMPONENTS AND THEIR ANALOGUES. XI. INFRARED SPECTROSCOPY OF URACIL, 6-AZURACIL AND THEIR DERIVATIVES IN THE CARBONYL GROUP STRETCHING VIBRATION REGION.
M. Horak, J. Gut.
Inst. Org. Chem. Biochem., Czech. Acad. Sci., Prague. Recd. June 30, 1960.
Coll. Czech. Chem. Comm. 26(6), 1680-93(1961).

1) C5 H6 D N O2	(XII)	p. 1682
2) C5 H7 D N2 O2	(XIIIa)	
3) C6 H10 N2 O2	(XIIIc)	
4) C11 H13 N O2		Et pyruvate anil



XIIIa, R¹ = CH₃; R² = D
XIIIc, R¹ = R² = CH₃



10852

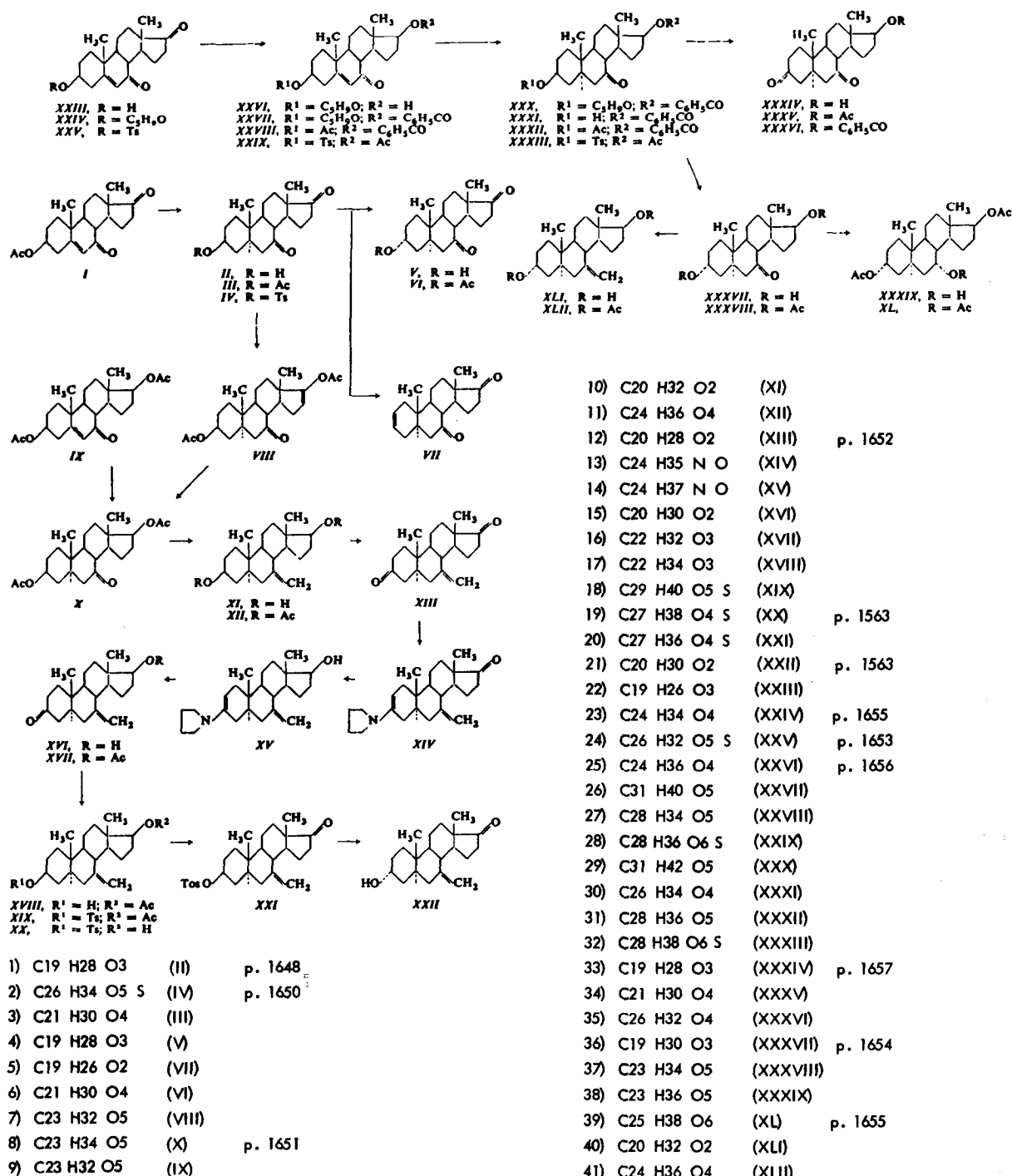
PREPARATION OF C¹⁴ LABELED COMPOUNDS BY BIOSYNTHESIS II. ISOLATION OF NON-SPECIFIED C¹⁴ LABELED PHOTOSYNTHETIC PRODUCTS FROM THE ALGAE CHLORELLA VULGARIS.
J. Liebster, J. Kopolcova, M. Dobiasova, J. Kozel.
Biol. Inst. Czechoslovak. Akad. Wissensch., Prague. Recd. May 13, 1960.
Coll. Czech. Chem. Comm. 26(6), 1694-99(1961).

1) C16 H32 O2	C ¹⁴ labeled palmitic acid	p. 1697
2) C18 H34 O2	" oleic acid	
3) C18 H36 O2	" stearic acid	
4) C18 H32 O2	C ¹⁴ labeled linoleic acid	
5) C18 H30 O2	" linolenic acid	

J. Joska, J. Fajkos, F. Sorm.

Inst. Org. Chem. Biochem. Czech. Acad. Sci., Prague. Recd. Dec. 27, 1960.

Coll. Czech. Chem. Comm. 26(6), 1646-57(1961).

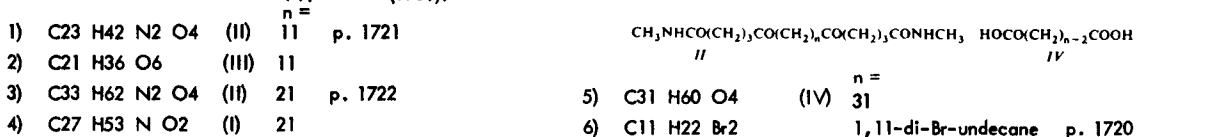


EFFECT OF THE GRIGNARD REAGENT ON THE AMIDO GROUP XXXII. PREPARATION OF HENTRIACONTANE-1,31-DICARBOXYLIC ACID.

R. Lukeš, L. Havlíčková, V. Dudek.

Inst. Org. Chem., Techn. Hochschule Chem., Prague. Recd. Oct. 18, 1960.

Coll. Czech. Chem. Comm. 26(6), 1719-22(1961).



10855

PREPARATION OF C^{14} LABELED COMPOUNDS BY BIOSYNTHESIS III. SEPARATION OF C^{14} LABELED AMINO ACIDS FROM THE HYDROLYSATE OF THE PROTEIN OF THE ALGAE CHLORELLA VULGARIS.

J. Liebster, M. Dobiasova, J. Kopoldova, J. Ekl.
Biol. Inst. Tschechoslovak. Akad. Wissensch., Prague. Recd. May 13, 1960.
Coll. Czech. Chem. Comm. 26(6), 1700-7(1961).

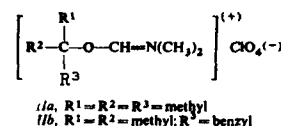
- | | | | | | |
|----------------|--------------------------------|---------|------------------|-----------------------------|--|
| 1) C4 H7 N O4 | C^{14} labeled aspartic acid | p. 1705 | 9) C6 H13 N O2 | C^{14} labeled isoleucine | |
| 2) C5 H9 N O2 | " " proline | | 10) " | " " leucine | |
| 3) C3 H7 N O3 | " " serine | | 11) C9 H11 N O2 | " " phenylalanine | |
| 4) C4 H9 N O3 | " " threonine | | 12) C9 H11 N O3 | " " tyrosine | |
| 5) C5 H9 N O4 | " " glutamic acid | | 13) C6 H9 N3 O2 | " " histidine | |
| 6) C3 H7 N O2 | " " alanine | | 14) C6 H14 N2 O2 | " " lysine | |
| 7) C2 H5 N O2 | " " glycine | | 15) C6 H14 N4 O2 | " " arginine | |
| 8) C5 H11 N O2 | " " valine | | | | |

10856

SYNTHETIC REACTIONS OF DIMETHYLFORMAMIDE. IX. SYNTHESIS OF ESTERS OF FORMIC ACID.

Z. Arnold.
Inst. Org. Chem. Biochem. Czechoslovak Acad. Sci., Prague. Recd. Sept. 22, 1960.
Coll. Czech. Chem. Comm. 26(6), 1723-26(1961).

- | | | |
|--------------------|-------|---------|
| 1) C7 H16 Cl N O5 | (IIa) | p. 1725 |
| 2) C13 H20 Cl N O5 | (IIb) | |

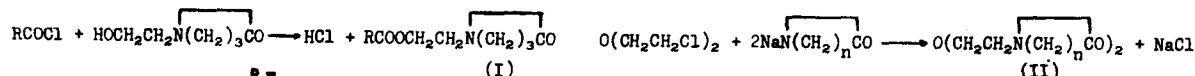


Izvest. Akad. Nauk SSSR, Otdel. Khim., May, 1961

10857

STUDIES OF LACTONES AND LACTAMS. 19. SYNTHESIS OF ESTERS OF N-(β -HYDROXYETHYL)PYRROLIDONE.

M. F. Shostakovskii, F. P. Sidelkovskaya, M. G. Zelenskaya.
N. D. Zelinskii Inst. Org. Chem., Acad. Sci., Moscow. Recd. Apr. 20, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 910-3.



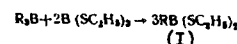
- | | | | | | | | |
|----------------|-----|----|-----------------|-----|------|------------------|------|
| 1) C7 H11 N O3 | (I) | H | 4) C10 H17 N O3 | (I) | n-Pr | | |
| 2) C8 H13 N O3 | " | Me | 5) C11 H19 N O3 | " | n-Bu | 7) C14 H24 N2 O3 | (II) |
| 3) C9 H15 N O3 | " | Et | 6) C12 H21 N O3 | " | n-Am | 8) C16 H28 N2 O3 | " |
| | | | | | | | n = |
| | | | | | | | 4 |
| | | | | | | | 5 |

10858

SYNTHESIS OF ALKYLTHIOBORIC ACID ESTERS FROM BORON TRIALKYLS AND THIOBORATES.

B. M. Mikhailov, T. A. Shchegoleva, E. M. Shashkova.
Inst. Org. Chem., Acad. Sci., Moscow. Recd. Sept. 3, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 916-7.

- | | | | | |
|----------------|-----|------|--------|-----|
| 1) C7 H27 B S2 | (I) | n-Pr | p. 916 | R = |
| 2) C7 H27 B S2 | " | i-Pr | | R = |
| 3) C8 H29 B S2 | (I) | i-Bu | | |

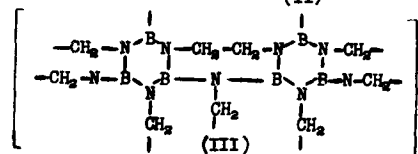
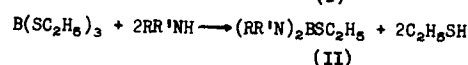
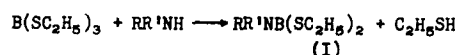


10859

REACTIONS OF TRIETHYLTHIOBORATE WITH AMINES.

T. A. Shchegoleva, E. M. Shashkova, B. M. Mikhailov.
Inst. Org. Chem., Acad. Sci., Moscow. Recd. Oct. 3, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 918-9

- | | | | |
|--------------------------------|-------|------|-----------|
| | R = | R' = | |
| 1) C6 H16 B N S2 | (I) | Et | H p. 918 |
| 2) C6 H16 B N S2 | " | Me | Me |
| 3) C10 H16 B N S2 | " | Ph | H p. 919 |
| 4) C6 H17 B N2 S | (II) | Et | " p. 918 |
| 5) C6 H17 B N2 S | " | Me | Me p. 919 |
| 6) (C9 H18 B6 N9) _n | (III) | | |

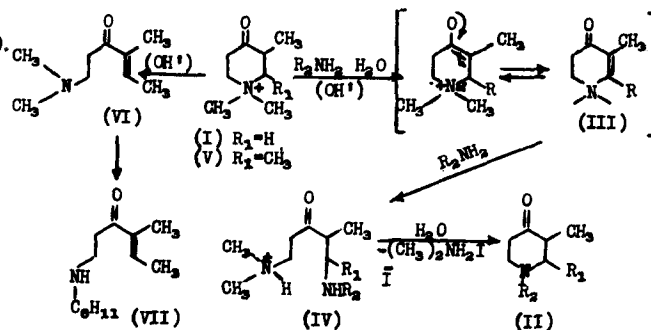


10860

A NEW SYNTHESIS OF N-ALKYL-4-PIPERIDONES

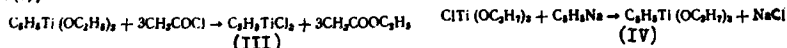
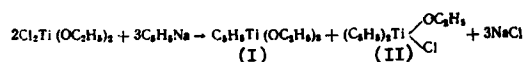
E. A. Mistryukov, N. I. Aromova, V. F. Kucherov.
Inst. Org. Chem., Acad. Sci., Moscow. Recd. Oct. 28, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 932-3.

- | | | | |
|---------------|---------|------------|---------------|
| | $R_2 =$ | $R_1 =$ | |
| 1) C10 H19 NO | (II) | t-Bu | H (& picrate) |
| 2) C12 H21 NO | " | cyclohexyl | " (& HCl) |
| 3) C13 H17 NO | " | benzyl | " (& picrate) |
| 4) C14 H19 NO | " | " | Me (as HCl) |
| 5) C9 H17 NO | (VI) | " | " |
| 6) C13 H23 NO | (VII) | " | (as picrate) |



MONO- η -CYCLOPENTADIENYL DERIVATIVES OF TITANIUM.

A. N. Nesmeyanov, O. V. Nogina, A. M. Berlin.
Inst. Element Org. Compds., Acad. Sci., Moscow. Recd. June 8, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 804-7.



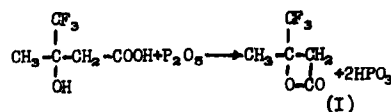
- | | | | |
|----|-----------------|-------|--------|
| 1) | C11 H20 O3 Ti | (I) | p. 805 |
| 2) | C12 H15 Cl O Ti | (II) | p. 806 |
| 3) | C5 H5 Cl3 Ti | (III) | |
| 4) | C14 H26 O3 Ti | (IV) | |

- | | | |
|---------------------|---------------------|--------|
| 5) C5 H5 Ti | cyclopentadienyl Ti | p. 807 |
| 6) C11 H19 Cl O2 Ti | $C_5H_5TiCl(OPr)_2$ | |
| 7) C8 H12 Cl2 O Ti | $C_5H_5TiCl_2(OPr)$ | |

10862

FLUORINE-CONTAINING β -LACTONES. 2. β -TRIFLUOROMETHYL- β -METHYLPROPIOLACTONE.

I. L. Knunyants, Yu. A. Cheburkov.
Inst. Element. Org. Compds., Acad. Sci., Moscow. Recd. Mar. 21, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 808-10.

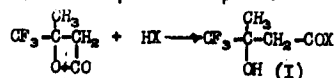


- 1) C5 H5 F3 O2 (I) p. 810

10863

FLUORINE CONTAINING β -LACTONES. 3. RING OPENING IN β -TRIFLUOROMETHYL- β -METHYL- β -PROPIOLACTONE.

I. L. Krunyants, Yu. A. Cheburkov.
Inst. Element. Org. Compds, Acad. Sci., Moscow. Recd. Mar. 21, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 811-3.



- | | | | | |
|----|----|-----|---------|--------------------|
| | | | X = | |
| 1) | C6 | H9 | F3 O3 | (I) OMe p. 812 |
| 2) | C5 | H8 | F3 N O2 | " NH ₂ |
| 3) | C7 | H12 | F3 N O2 | " NMe ₂ |

- | | | | | |
|----|-----------------|-----|----------------------|--------|
| | | | X = | |
| 4) | C11 H12 F3 N O2 | (I) | NHPh | |
| 5) | C10 H16 F3 N O2 | " | piperidino | |
| 6) | C12 H14 F3 N O2 | " | PhCH ₂ NH | p. 813 |

10864

IMIDES OF PHOSPHORUS-CONTAINING ACIDS 5. REACTION OF TRIALKYL PHOSPHITES WITH HYDRAZOIC ACID.

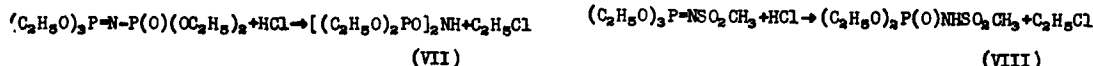
M. I. Kabachnik, V. A. Gilyarov.
Inst. Element. Org. Compds., Acad. Sci., Moscow. Recd. Apr. 1, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5) 816-8.

- 1) C3 H10 N O3 P (MeO)₂P(O)NHMe p. 817

10865

IMIDES OF PHOSPHORUS-CONTAINING ACIDS 6. TRIALKYL-N-ACYLIMIDOPHOSPHATES.

M. I. Kabachnik, V. A. Gilyarov.
Inst. Element. Org. Compds., Acad. Sci., Moscow. Recd. Apr. 6, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 819-23.



- | | | | | | |
|-------------------|-------------------------|--------|--------------------|-------------------------|--------|
| 1) C4 H11 N3 O3 P | $(EtO)_2P(O)N_3$ | p. 822 | 5) C10 H25 N O6 P2 | $(EtO)_3P=NP(O)(OEt)_2$ | |
| 2) C2 H6 N3 O3 P | $(MeO)_2P(O)N_3$ | | 6) C7 H18 N O5 P S | $(EtO)_3P=NSO_2Me$ | |
| 3) C H3 N3 O2 S | $MeSO_2N_3$ | | 7) C8 H21 N O6 P2 | (VII) | p. 823 |
| 4) C5 H15 N O6 P2 | $(MeO)_2P=NP(O)(OMe)_2$ | | 8) C5 H14 N O5 P S | (VIII) | |

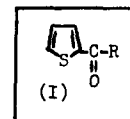
10866

SYNTHESIS OF FLUORINATED KETONES FROM N, N-DIALKYLAMIDES OF FLUORINATED ACIDS AND LITHIUM ORGANIC COMPOUNDS.

N. A. Zaitsevs, E. M. Panov, K. A. Kocheshkov.
Ya. Karpov Phys. Chem. Inst., USSR. Recd. June 1, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 831-5.

R =

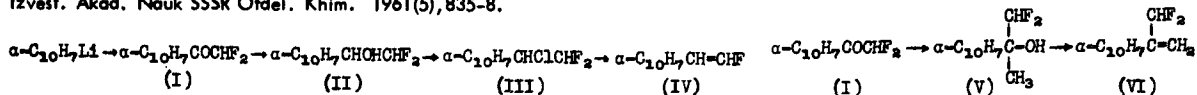
- | | | | | |
|-----------------|----------------------|--------|-----------------|-------------------------|
| 1) C6 H4 F2 O S | (I) CHF ₂ | p. 833 | 3) C8 H6 Cl F O | CHClFCOPh |
| 2) C6 H3 F3 O S | " CF ₃ | p. 834 | 4) C6 H10 F2 O | CHF ₂ COBu-n |



10867

SYNTHESIS OF VINYLNAPHTHALENES FLUORINATED IN THE SIDE CHAIN.

G. V. Kazennikova, T. V. Talalaeva, A. V. Zimin, A. P. Simonov, K. A. Kocheshkov.
L. Ya. Karpov Phys. Chem. Inst., USSR. Recd. June 1, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 835-8.



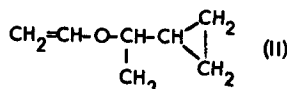
- | | | | | | |
|-----------------|-------|--------|---------------|------|--|
| 1) C12 H8 F2 O | (I) | p. 837 | | | |
| 2) C12 H10 F2 O | (II) | | | | |
| 3) C12 H9 CL F2 | (III) | | | | |
| | | | 4) C12 H9 F | (IV) | |
| | | | 5) C13 H10 F2 | (V) | |

10868

POLYMERIZATION OF THE VINYL ETHER OF METHYLCYCLOPROPYLCARBINOL.

M. F. Shostakovskii, E. P. Gracheva, A. P. Meshcheryakov, V. G. Glukhovtsev.
Inst. Org. Chem., Acad. Sci., Moscow. Recd. Oct. 12, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 924-6.

- 1) $(C_7H_{12}O)_n$ polymer of (II) p. 924



10869

REACTIONS OF ETHYLENE WITH TRICHLORO- AND TETRACHLOROETHYLENE.

A. B. Belyavskii, R. Kh. Freidlina.

Inst. Element. Org. Compds., Acad. Sci., Moscow. Recd. Apr. 29, 1960.

Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 838-42.

- | | | |
|--|--|--------|
| 1) C ₄ H ₅ Cl ₃ | Cl ₂ C=CHCH ₂ CH ₂ Cl | p. 840 |
| 2) C ₄ H ₇ Cl O ₂ | Cl(CH ₂) ₃ COOH | p. 841 |
| 3) C ₆ H ₁₁ Cl O ₂ | Cl(CH ₂) ₅ COOH | |
| 4) C ₁₂ H ₁₆ Cl N O | Cl(CH ₂) ₅ CONHPh | |
| 5) C ₇ H ₁₃ Cl O ₂ | Me ester of 3 | |
| 6) C ₄ H ₅ Br ₂ Cl ₃ | BrCl ₂ CCHBrCH ₂ CH ₂ Cl | |
| 7) C ₄ H ₆ Br Cl O ₂ | ClCH ₂ CH ₂ CHBrCOOH | |
| 8) C ₁₀ H ₁₁ Br Cl N O | ClCH ₂ CH ₂ CHBrCONHPh | |
| 9) C ₆ H ₄ Cl ₈ | CCl ₃ CCl ₂ (CH ₂) ₂ CCl=CCl ₂ | p. 842 |
| 10) C ₆ H ₅ Cl ₇ O ₂ | Cl ₃ CCl ₂ (CH ₂) ₂ CCl ₂ COOH | |
| 11) C ₆ H ₄ Cl ₆ | Cl ₂ C=CCl(CH ₂) ₂ CCl=CCl ₂ | |
| 12) C ₆ H ₆ Cl ₄ O ₄ | HO ₂ CCCl ₂ (CH ₂) ₂ CCl ₂ CO ₂ H | |
| 13) C ₄ H ₄ Cl ₆ | chlorination product of 1,1,2,4-tetrachloro-1-butene | |
| 14) C ₈ H ₇ Cl ₄ N O ₆ | product obtained upon treating polymer of 1,1,2-trichloro-1,3-butadiene with nitric acid | |

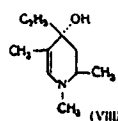
10870

STEREOCHEMISTRY OF HETEROCYCLIC COMPOUNDS. 5. POSSIBLE CONFIGURATION OF STEREOISOMERS OF 1,2,5-TRIMETHYL-4-ETHYNYL-4-PIPERIDOL AND SOME OF ITS TRANSFORMATION PRODUCTS.

N. I. Shvetsov, B. V. Unikovskii, I. A. Mokhir, V. F. Kucherov.

N. D. Zelinskii Inst. Org. Chem., Acad. Sci., Moscow. Recd. Mar. 29, 1960.

Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 843-9.



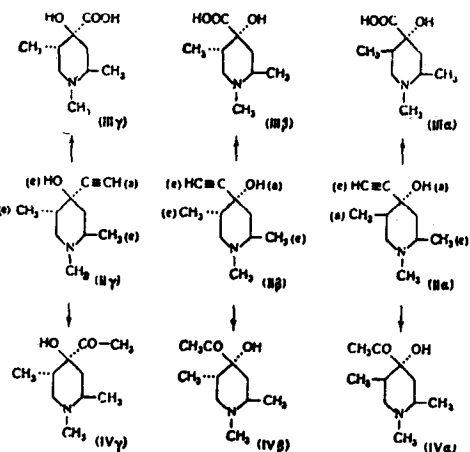
- | | | |
|---|--|--|
| 1) C ₁₀ H ₂₁ N O | (IIa) | |
| 2) C ₁₀ H ₁₉ N O | (VIII) | |
| 3) C ₁₁ H ₂₄ I N O | MeI of (II α, β, γ) | |
| 4) C ₁₀ H ₁₇ N O ₂ | dehydration of (III α, β) (as HCl) | |
| 5) C ₁₀ H ₁₇ N O | dehydration product of (IV β) (as HCl) | |

p. 846

p. 847

p. 846

p. 848



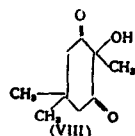
10871

CHEMISTRY OF DIHYDRORESORCINOL. 7. REACTION OF CYCLIC β-DICARBONYLIC COMPOUNDS WITH HYDROGEN PEROXIDE IN BASIC MEDIUM.

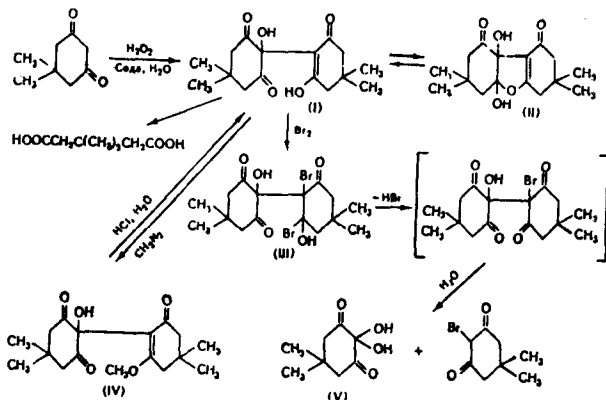
S. I. Zavyalov, A. F. Vasilyev, L. P. Vinogradova.

N. D. Zelinskii Inst. Org. Chem., Acad. Nauk, Moscow. Recd. May 3, 1960.

Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 927-9.



- | | | |
|---|--------|--------|
| 1) C ₁₆ H ₂₂ O ₅ | (II) | p. 852 |
| 2) C ₁₆ H ₂₂ Br ₂ O ₅ | (III) | p. 853 |
| 3) C ₁₇ H ₂₄ O ₅ | (IV) | |
| 4) C ₉ H ₁₄ O ₃ | (VIII) | |



10872

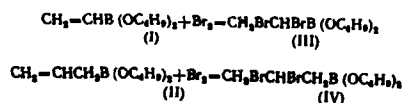
β-DECOMPOSITION OF BUTYL ESTERS OF α,β-DIBROMOETHYLBORIC AND β,γ-DIBROMOPROPYLBORIC ACIDS.

B. M. Mikhailov, P. M. Aronovich.

Inst. Org. Chem., Acad. Sci., Moscow. Recd. Oct. 24, 1960.

Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 927-9.

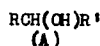
- | | | |
|---|-------|--------|
| 1) C ₁₀ H ₂₁ B Br ₂ O ₂ | (III) | p. 928 |
| 2) C ₁₁ H ₂₃ B Br ₂ O ₂ | (IV) | |



10873

FREE RADICAL ADDITION OF PRIMARY ALCOHOLS TO α -OLEFINS.

G. I. Nikishin, V. D. Vorobev, A. D. Petrov.

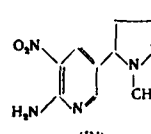
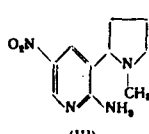
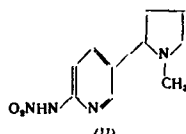
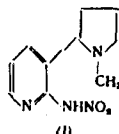
N. D. Zelinskii Inst. Org. Chem., Acad. Sci., Moscow. Recd. May 10, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 882-6.

	R =	R' =		R =	R' =
1) C ₁₅ H ₃₂ O	(A) n-Bu	C ₁₀ H ₂₁	p. 883	8) C ₁₇ H ₃₆ O	(A) n-heptyl n-nonyl
2) C ₁₈ H ₃₈ O	" "	C ₁₃ H ₂₇		9) C ₁₅ H ₃₂ O	" n-octyl n-hexyl
3) C ₁₄ H ₃₀ O	" n-Am	C ₈ H ₁₇		10) C ₁₇ H ₃₆ O	" " n-octyl
4) C ₁₆ H ₃₄ O	" "	C ₁₀ H ₂₁		11) C ₁₆ H ₃₄ O	" n-nonyl n-hexyl
5) C ₁₃ H ₂₈ O	" n-hexyl	n-hexyl		12) C ₁₇ H ₃₆ O	" " n-heptyl
6) C ₁₄ H ₃₀ O	" "	n-heptyl		13) C ₁₇ H ₃₆ O	" n-hexyl n-decyl
7) C ₁₅ H ₃₂ O	" n-heptyl	"		14) C ₁₈ H ₃₈ O ₂	9, 10-octadecanediol p. 886

10874

PRODUCTS OF NITRATION OF α - AND α' -AMINONICOTINES.

Ya. L. Goldfarb, L. V. Antik, V. A. Petukhov.

N. D. Zelinskii Inst. Org. Chem., Acad. Sci., Moscow. Recd. May 4, 1959,
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 887-94.

- | | |
|---|---|
| 1) C ₁₀ H ₁₄ N ₄ O ₂ (I) (& picrate) p. 891 | |
| 2) C ₁₀ H ₁₄ N ₄ O ₂ (II) " | 4) C ₁₀ H ₁₄ N ₄ O ₂ (IV) (& picrate) |
| 3) C ₁₀ H ₁₄ N ₄ O ₂ (III) " | 5) C ₆ H ₁₃ N O Et ₂ NCOMe p. 893 |

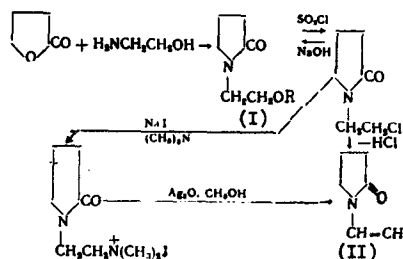
10875

VINYLPIRROLIDONE SYNTHESIS.

S. N. Ushakov, U. V. Davidenkova, V. V. Lushchik.

Inst. Macromolecular Comps., Acad. Sci., Moscow. Recd. Apr. 9, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 901-5.

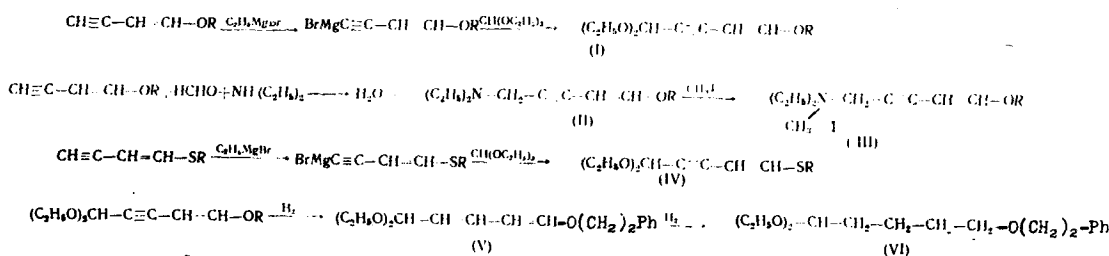
- | | | |
|--|-----|--------|
| | R = | |
| 1) C ₆ H ₁₁ N O ₂ (I) | H | p. 904 |
| 2) C ₈ H ₁₃ N O ₃ " | Ac | |
| 3) C ₆ H ₉ N O (II) | | |



10876

DIACETYLENE DERIVATIVES. 8. REACTIONS OF ETHYNYLVINYL AND THIOETHYNYLVINYL ETHERS WITH CARBONYL COMPOUNDS.

M. F. Shostakovskii, A. V. Bogdanova, G. I. Plotnikova.

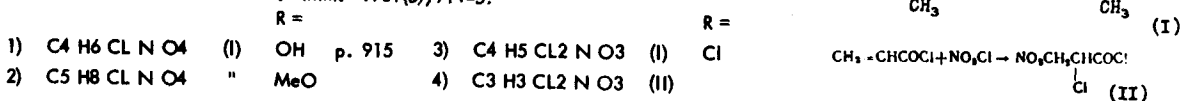
N. D. Zelinskii Inst. Org. Chem. Acad. Sci., Moscow. Recd. Jan. 19, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 905-9.

- | | | | | | | | |
|---|-----------------------------------|--------|--|------------------|--|--|-----|
| | R = | | | R = | | | R = |
| 1) C ₁₃ H ₂₂ O ₃ (I) | Bu | p. 908 | 5) C ₁₆ H ₂₁ N O (II) | benzyl | | 9) C ₁₁ H ₁₈ O ₂ S (IV) | Et |
| 2) C ₁₇ H ₂₂ O ₃ " | PhCH ₂ CH ₂ | | 6) C ₁₄ H ₂₆ I N O (III) | Bu | | 10) C ₁₃ H ₂₂ O ₂ S " | Bu |
| 3) C ₁₃ H ₂₃ N O (II) | Bu | p. 909 | 7) C ₂₀ H ₃₄ I N O " | perhydronaphthyl | | 11) C ₁₇ H ₂₄ O ₃ (V) | |
| 4) C ₁₉ H ₃₁ N O " | perhydronaphthyl | | 8) C ₁₇ H ₂₄ I N O " | benzyl | | 12) C ₁₇ H ₂₈ O ₃ (VI) | |

10877

ADDITION OF HYDROGEN CHLORIDE TO ACRYLO- AND METHACRYLONITRILES AND THEIR DERIVATIVES.

S. S. Novikov, G. A. Shvekhgeimer, N. F. Pyatakov.

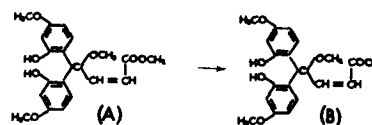
N. D. Zelinskii Inst. Org. Chem., Acad. Sci., Moscow. Recd. Aug. 15, 1960.
Izvest. Akad. Nauk SSSR Otdel. Khim. 1961(5), 914-5.

- | | | | | |
|--|-----|--------|--|-----|
| | R = | | | R = |
| 1) C ₄ H ₆ Cl N O ₄ (I) | OH | p. 915 | 3) C ₄ H ₅ Cl ₂ N O ₃ (I) | Cl |
| 2) C ₅ H ₈ Cl N O ₄ " | MeO | | 4) C ₃ H ₃ Cl ₂ N O ₃ (II) | |

10878

INVESTIGATION OF THE STRUCTURE OF A PRODUCT FROM THE CONDENSATION OF MALEIC ANHYDRIDE WITH RESORCINOL.
Y. Graff, J. Calando, M.-H. Gardin.
Faculté des Sciences de Rennes, Centre propédeutique de Nantes, 16, quai Moncoussu, Nantes(L.-A.). Recd. Mar. 17, 1961.
Bull. Soc. Chim. France. 1961(6), 1106-9.

- 1) C₂₀H₂₂O₇ (A) p. 1108
2) C₁₉H₂₀O₇ (B) p. 1109

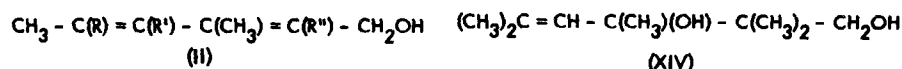
**10879**

ACTION OF AN H₂-H₂S MIXTURE ON ANHYDROUS COBALT SULFATE; PREPARATION OF Co₉S₈.
D. Delafosse, M. Alboni, P. Barret.
Lab. de Chim., M.P.C., Fac. des Sci., 2 Boulevard Gabriel, Dijon, France. Recd. Feb. 18, 1961.
Bull. Soc. Chim. France. 1961(6), 1110-1.

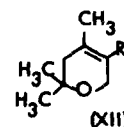
- 1) Co₉S₈ Co₉S₈ p. 1110.

10880

SOME PRIMARY α, γ-DIETHYLENIC ALCOHOLS AND THEIR ISOMERIZATION INTO 2,3-DIHYDRO-α-PYRANS.
J. Colonge, J. Varognat.
Ecole Supérieure Chim. Industrielle de Lyon, France. Recd. Apr. 1, 1961.
Bull. Soc. Chim. France. 1961(6), 1125-8.



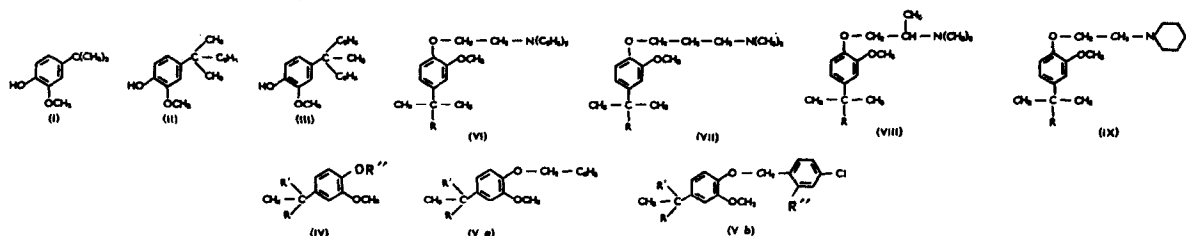
(XIV)



- | | | | | | | | | | | | |
|-------------------------------------|------|----|-----|------|---------|--|-------|--------------------------|-----|---------|---------|
| 1) C ₇ H ₁₂ O | (II) | R= | R'= | R''= | p. 1125 | 8) C ₁₀ H ₁₈ O | (II) | R= | R'= | R''= | |
| 2) C ₈ H ₁₄ O | " | H | H | H | | 9) " " | " | H | Me | Et | |
| 3) " | " | " | " | Me | | 10) C ₈ H ₁₄ O | (XII) | H | " | " | p. 1127 |
| 4) " | " | Me | H | " | | 11) C ₉ H ₁₆ O | " | Me | " | " | |
| 5) C ₉ H ₁₆ O | " | " | " | Et | | 12) C ₁₀ H ₁₈ O | " | Et | " | " | |
| 6) " | " | " | Me | Me | | 13) C ₁₀ H ₂₀ O ₂ | (XIV) | | | | |
| 7) " | " | Me | H | " | | 14) C ₁₀ H ₁₈ O | | dehydration prod. of XIV | | p. 1128 | |
| | | | | | | 15) C ₁₇ H ₂₃ N O ₂ | | mono-Ph-urethane of 14 | | | |

10881

ON THE TERTIO-ALKYLATION OF GUIACOL.
N. Dat-Xuong, N. P. Buu-Hoi, B. Khac-Diep.
Inst. Chim. Substances Naturelles de Centre National, Recherche Scientifique, Gif-sur-Yvette, Seine-et-Oise, France. Recd. Mar. 18, 1961.
Bull. Soc. Chim. France. 1961(6), 1136-40.



- | | | | | | | | | | | | |
|--|------|----|-----|-----------|---------|---|--------|-------------------------------------|--|---------|---------|
| 1) C ₁₃ H ₂₀ O ₂ | (IV) | R= | R'= | R''= | p. 1138 | 18) C ₁₇ H ₂₉ N O ₂ | (VI) | Me | | | |
| 2) C ₁₅ H ₂₄ O ₂ | " | Me | Me | Et | | 19) C ₁₆ H ₂₇ N O ₂ | (VII) | " | | | |
| 3) C ₂₇ H ₄₈ O ₂ | " | " | " | Bu | | 20) " | (VIII) | " | | | |
| 4) C ₁₃ H ₂₀ O ₂ | " | Et | " | hexadecyl | | 21) C ₁₇ H ₂₇ N O ₃ | (IX) | " | | | |
| 5) C ₁₄ H ₂₂ O ₂ | " | " | " | Me | | 22) C ₁₈ H ₃₁ N O ₂ | (VI) | Et | | | |
| 6) C ₁₇ H ₂₈ O ₂ | " | " | " | Et | | 23) C ₁₇ H ₂₉ N O ₂ | (VII) | " | | | |
| 7) C ₁₆ H ₂₆ O ₂ | " | " | " | Am | | 24) " | (VIII) | " | | | |
| 8) C ₂₈ H ₅₀ O ₂ | " | " | " | Bu | p. 1139 | 25) C ₁₈ H ₂₉ N O ₃ | (IX) | " | | | |
| 9) C ₁₇ H ₂₈ O ₂ | " | " | " | hexadecyl | | 26) C ₁₂ H ₁₈ O ₂ | (II) | | | | p. 1138 |
| 10) C ₁₈ H ₂₁ Cl O ₂ | (Vb) | Me | Me | H | | 27) C ₁₃ H ₂₀ O ₂ | (III) | | | | |
| 11) C ₁₈ H ₂₀ Cl ₂ O ₂ | " | " | " | Cl | | 28) C ₁₁ H ₁₅ Br O ₂ | | α-Br deriv. of I | | | |
| 12) C ₁₉ H ₂₃ Cl O ₂ | " | " | " | H | | 29) C ₁₂ H ₁₇ Br O ₂ | | " II | | | |
| 13) C ₁₉ H ₂₂ Cl ₂ O ₂ | " | " | " | Cl | | 30) C ₁₃ H ₁₉ Br O ₂ | | " III | | | |
| 14) C ₂₀ H ₂₅ Cl O ₂ | " | Et | " | H | | 31) C ₁₉ H ₃₃ N O ₂ | | β-NEt ₂ -Et ether of III | | p. 1139 | |
| 15) C ₂₀ H ₂₄ Cl ₂ O ₂ | " | " | " | Cl | | 32) C ₁₂ H ₁₈ O ₅ S | | sulfonic acid deriv. of II | | p. 1138 | |
| 16) C ₁₈ H ₂₂ O ₂ | (Va) | Me | Me | | | 33) C ₁₃ H ₂₀ O ₅ S | | " " III | | | |
| 17) C ₂₀ H ₂₆ O ₂ | " | Et | Et | | | 34) C ₁₁ H ₁₆ O ₅ S | | " " I | | | |