Synthesis and analysis of structural features of phenoxazine analogues needed to reverse vinblastine resistance in multidrug resistant (MDR) cancer cells

A series of twentyone 2-chloro-N\textsuperscript{10}-substituted phenoxazines has been synthesised and characterized by spectral methods. All the compounds have been examined for their anti-MDR activity against Rh 30 and KBCH\textsuperscript{R}-8.5 cells. From amongst the compounds examined, six of them have potentiated the cytotoxicity of vinblastine by >80-fold.

Electron localization and oxidant/monomer effect in alkoxy polyanilines

Via dc conductivity, magnetic susceptibility and ESR measurements, it is shown that increased oxidant/monomer ratio in alkoxy polyanilines leads to increased disorder between ordered regions.
The behaviour of some nucleophiles towards 2-([o-benzoylamino-β-2-thiophenylvinyl]benzoxazin-4(3H)-one

The title compound 3 has been reacted with nitrogen nucleophiles under different conditions to afford compounds 4-8. Also, its reaction with vicinal aminobenzyl alcohol has been discussed.

Dalal B Guirgis

Diels-Alder reaction of pyran-2(3H)-ones: Part IV*-Diels-Alder reaction of 4,6-disubstituted pyran-2(3H)-ones with 1,4-naphthoquinone and N-phenylmaleimide under Dry State Adsorbed Condition (DSAC) on montmorillonite K10, fyllro-24, bentonite and pyrophyllite clays. Fyllro-24 is found to be the best. Montmorillonite K10 and bentonite are impregnated with AlCl₃, ZnCl₂ and FeCl₃ using their aqueous (AA) and nonaqueous (OA) solutions. For the nonaqueous impregnation after washing with water a new catalyst is obtained (OA). Among these, FeCl₃ impregnated (OA) type catalyst is found to be the best.

Chitra R Karnath, Ajit B Shinde & Shriniwas D Samant*

Synthesis and antibacterial activity of some novel 4-oxo-1, 3-thiazolidines, 2-oxazetidines and 5-oxoimidazolines: Part VI

Thirty nine novel heterocyclic compounds (3, 4, 6 and 7) have been prepared and tested for in vitro antibacterial activity against E. coli, S. aureus and Salmonella typhi para A. A number of compounds show promising activity.

N C Desai*, Dipika Dave, M D Shah & G D Vyas

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CONTENTS

283 Steroidal alkaloids from *Veratrum taliiense*

Three known and two novel 4 and 5 steroidal alkaloids have been isolated from *Veratrum taliiense* with their chemotaxonomic significance discussed in brief.

C X Zhou, R X Tan*, W C Ye & Z D Min

287 New oleanane triterpenes from root bark of *Calotropis procera* (Ait.) R. Br.

Three new oleanane-type triterpenes, calotropoleanyl ester 1, proceroleanenol-A 2 and proceroleanenol-B 3, isolated from the root bark of *Calotropis procera* have been identified as olean-13(18)-en-3β-yl acetate, olean-13(18)-ene-9α-ol and olean-5, 13(18)-dien-3α-ol, respectively.

S H Ansari* & M Ali

Notes

291 A short and enantioselective synthesis of (S)-*N*-tosyl-1-naphthylglycine

Prodeep Phukan & A Sudalai*

(iii) INDIAN J CHEM, 39B (4) 2000
An efficient and regiospecific esterification of dioic acids using PTSA

Regiospecific mono alkyl esters of dioic acids have been obtained in excellent yield using PTSA catalyst. This method is mild and simpler than the previous methods.

\[
\text{O} \quad \text{O} \\
\| \quad + \quad \text{R-OH} \\
\| \\
\text{PTS (catalytic)} \\
\| \\
\text{R-T, Stirring} \\
\| \\
\text{O} \quad \text{O} \\
\| \quad \text{R} \\
\| \\
\text{R} = \text{Methyl, Ethyl, n-propyl, n-butyL, allyl.}
\]

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A Rama Devi* & S Rajaram


\[
\begin{align*}
\text{X} & \quad \text{R}^1 \quad \text{R}^2 \\
\text{O} & \quad \text{O} \\
\text{LAH} & \\
\text{O} & \quad \text{R}^1 \\
\text{O} & \quad \text{R}^2 \\
\text{OH} & \quad \text{R}^3 \\
\end{align*}
\]

B B Lohray*, Vidya Bhushan, A Sekar Reddy & V Venugopal Rao

A novel one pot reductive acetylation of nitroarenes

Nitroarenes are reductively acetylated in one pot to the corresponding N-arylacetamides and N-(acetyloxy)-N-arlyacetamides with Ac₂O and Zn in the presence of acidic Al₂O₃ in dichloromethane at room temperature.

\[
\begin{align*}
\text{ArNO₂} & \quad \text{Ac₂O-Zn-Al₂O₃} \\
\text{Ar} & \quad \text{H} \\
\text{COCH₃} & \quad \text{COCH₃} \\
\end{align*}
\]

Robindra N Baruah

Synthesis of some new 1-methyl-3',3'-dichlorospiro[indol-3, 4'-azetidine]-2(3Hf), 2'-diones and bis[1-methyl-3', 3'-dichlorospiro[indol-3, 4'-azetidine]-2(3Hf), 2'-diones

The title spirodichloroazetidinones have been prepared by cyclocondensation of isatin-3-anils or isatin dimines with dichloroacetyl chloride in the presence of triethylamine.

\[
\begin{align*}
\text{N} & \quad \text{O} \\
\text{N} & \quad \text{O} \\
\text{Cl} & \quad \text{Cl} \\
\text{O} & \quad \text{O} \\
\text{Cl} & \quad \text{Cl} \\
\end{align*}
\]

Javad Azizian*, Yaghob Sarrafi, Morteza Mehrdad & Khosrow Jaddi
Oxidation of urazoles to their corresponding triazolinediones under mild and heterogeneous conditions

A combination of sodium hydrogen sulfate and sodium nitrite in the presence of wet SiO₂ has been used as an effective oxidizing agent for the oxidation of urazoles and bis-urazoles to their corresponding triazolinediones at room temperature with excellent yields.

Mohammad Ali Zolfigol*, Shadpour E Mallakpour, Elahe Madrakian & Ezat Ghaemi

Microwave enhanced esterification of α,β-unsaturated acids

A rapid and efficient method for the synthesis of α,β-unsaturated esters by the acid-catalyzed esterification of the corresponding carboxylic acids under microwave irradiation is reported.

Alok Kumar Mitra*, Aparna De & Nilay Karchaudhuri

Direct observation and structural investigation of galactomannans by transmission electron microscope

Two types of galactomannans are observed here. Block-type, the fine structure of the galactomannan has a block-type disposition which is composed of alternately distributed smooth zone and hair zone, e.g. locust bean gum and sophora bean gum; non-block-type, the fine structure of galactomannan in guar gum is basically regular, but not uniform.

Yang Yongli*, Guo Shoujun, Sun Kun, Zhang Ji, Ju Tianzhen & Yao Jian

Synthesis and antimicrobial activity of 2-substituted-6-chloro-8-nitro-4-trichloromethyl-4H-1,3,2-benzoxaﬁosphorin 2-oxides

Synthesis of 2-substituted-6-chloro-8-nitro-4-trichloromethyl-4H-1,3,2-benzodioxaphosphorin 2-oxides 3 by the reaction of 2-(2,2,2-trichloro-1-hydroxyethyl)-4-chloro-6-nitrophenol 1 with various aryl phosphorodi­chloridates and also through monochloride 4 route. Their antimicrobial activity is reported.

D Srinivasulu & C Devendranath Reddy*

A novel naphthalene glucoside from Cassia javanica stem bark

A new glucoside, 3-carbomethoxynaphthal[1,2-b]-3',5'-dimethylpyran-4-O-β-D-glucopyranoside has been isolated from the stem bark of Cassia javanica.

Rashmi Sanghi*, Rahul Singh & J Singh

Authors for correspondence are indicated by (*)