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CONTENTS

Papers

717 Asymmetric synthesis of C11-C23 fragment of Pladienolide B

A gram-scale synthesis of C11-C23 fragment of antitumor natural product Pladienolide B has been carried out.

Sanjida Khatun, Prathama Satyendra Mainkar & Srivari Chandrasekhar*

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723 Diheteroaromatic dianionic oxy-Cope rearrangement route to the synthesis of novel heterocyclic compounds

This new reaction termed as diheteroaromatic dianionic oxy-Cope rearrangement is used for the synthesis of novel heterocyclic compounds 4,5-Diphenyl-3,6-dithia-4,5-dihydro-indacene-4,5-diol (2), 25, 26-Dioxo-12, 23-dithiaheptacyclo[12.10.2.03,7.08,12.018,22]docosa-1(21), 3(7), 5, 8(12), 9, 11, 15(19), 17, 20(24), 21 decacene (4) and 4,11- Dithiapentacyclo[12.7.1.03,7.08,12.018,22]docosa -1(21), 3(7), 5, 8(12), 9, 14(22), 15, 17, 19-nonaene-2,13-dione (6).

C A M A Huq* & S Sivakumar

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Pyrido[2,3-\textit{d}]pyrimidines: A novel tandem Michael cyclization of 6-aminouracils with arylidenecyanoacetate using \textit{BiCl}_3

1,3-Dimethyl-2,4,7-trioxo-5-aryl-1,2,3,4,7,8-hexahydropyrido[2,3-\textit{d}]pyrimidine-6-carbonitriles have been synthesized via tandem Michael cyclization of 6-aminouracils with arylidene ethylenecyanoacetates employing catalytic amount of \textit{BiCl}_3. Under mild reaction conditions, pyrido[2,3-\textit{d}]pyrimidines are obtained in very good yields in one pot.

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Synthesis and biological screening of some novel 2-(1H-pyrazol-1-yl)-acetamides as lidocaine analogue

2-(1H-Pyrazol-1-yl)-acetamides have been synthesized by N-alkylation of pyrazoles with 2-idoacetanilides. The new compounds have been characterized by elemental analysis, \textit{\textsuperscript{1}H NMR}, \textit{\textsuperscript{13}C NMR}, IR, UV-Vis and MS spectra. Acute toxicity, local anesthetic and anti-arrhythmic activities have been assessed for compounds using the established protocols.

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Mircea Iovu, Maria Marinescu, Isabela Tarcomnicu & George Mihai Nitulescu  
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Copper chloride-catalyzed efficient three-component one-pot synthesis of carbamatoalkyl naphthols under solvent-free conditions

A highly efficient synthesis of carbamatoalkyl naphthols by a one-pot three-component condensation of 2-naphthol, aldehydes, and methyl/ethyl/benzyl carbamates in the presence of copper chloride under thermal solvent-free conditions has been performed.

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\text{2-naphthol} + R_1\text{CHO} + \text{NH}_2\text{CO}_2\text{R}_2 \xrightarrow{\text{CuCl}_2\cdot\text{H}_2\text{O} \ (1 \text{ mol\%}) \ 70^\circ\text{C}, \text{ solvent-free}} \rightarrow \text{R}_1\text{NHCO}_2\text{R}_2
\]

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Antioxidant flavone glycosides and other constituents from Premna latifolia leaves

Three chemicals have been isolated from Premna latifolia Roxb. (Verbenaceae) leaves namely apigenin 7-\(\beta\)-d-apiofuranosyl (1\(\rightarrow\)2)-\(\alpha\)-l-rhamnopyranoside 1, apigenin 7-\(\beta\)-d-glucopyranoside-4'-acetate 2 and \(\beta\)-sitosterol-3-\(\beta\)-d-glucoside 3. Compound 1 is new and 2 is being reported for the first time from a higher plant. Both 1 and 2 show significant antioxidant activity against DPPH. Structures of these compounds have been elucidated on the basis of detailed spectral (including 2D-NMR) and chemical studies.

Partha Sarathi Ghosh, Niranjan Das & Biswanath Dinda*
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Aziridination of olefins with bromamine-T in presence of iodine as catalyst

A strategy for achieving synthesis of aziridine employing iodine catalysed aziridination of alkenes with bromamine-T as nitrene source has been described. Ethyl acetate has been found to be the most suitable solvent and the strategy has been extended to various kinds of olefins to produce the corresponding aziridines in high yield.

\[ R = \text{alkene}, \quad R' = \text{alkyl} \]

\[ \text{TsNBrNa} \quad \text{Iodine (0.1 equiv)} \quad \text{EtOAc, RT, 1h} \]

Chinta Mani Sharma, Bishwapran Kashyap & Prodeep Phukan*
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Evaluation of insecticidal activity of some benzofused heterocycles against different insect pests

Mayur M Aitawade, Prakash P Sambavekar, Pandurang B Mohite, Govind B Kolekar, Madhukar B Deshmukh & Prashant V Anbhule*
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Tamarind fruit juice as a natural catalyst: An excellent catalyst for efficient and green synthesis of bis-, tris-, and tetraindolyl compounds in water

An efficient and greener synthesis of bis-, and tris(indolyl)methanes and synthesis of di-bis(indolyl)methanes have been accomplished via two-component one pot condensation between substituted aldehydes and indoles using aqueous tamarind fruit juice as a natural catalysts. The use of water as reaction medium makes this process totally nonpolluting having several advantages such as mild reaction conditions, simple work-up procedures and reduces environmental impact.

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\]
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Synthesis, characterization, cytotoxicity and antimycobacterial screening of some \( p \)-substituted benzyl thiosemicarbazones

In vitro cytotoxic activity against leukemia K562 cell line by MTT assay has been carried out. Significant dose-dependent cytotoxicity in the range (IC\(_{50}\) 3.01-5.67 \( \mu \)M) has been found. Antimycobacterial drug susceptibility testing against \( M. \) smegmatis by REMA assay has been studied.

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\]
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