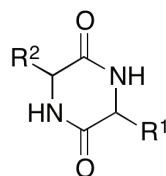


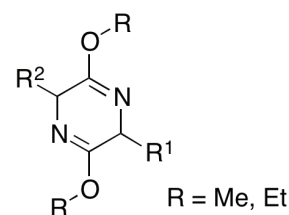
■ REVIEW

1349 **Chemistry of 2,5-Diketopiperazine and Its Bis-Lactim Ether: A Brief Review**

Shigeki Sano* and Michiyasu Nakao



2,5-diketopiperazine
(2,5-DKP)



3,6-dialkoxy-2,5-dihydropyrazine
(bis-lactim ether)

R = Me, Et

2,5-Diketopiperazine

2,5-DKP

Bis-Lactim Ether

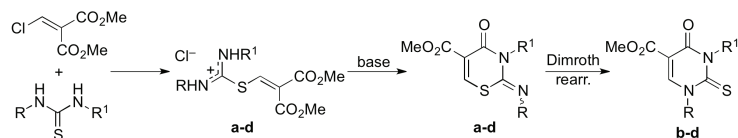
3,6-Dialkoxy-2,5-dihydropyrazine

α -Substituted Serine

■ PAPERS

1377 **New Synthetic Approach Leading to 1- or 1,3-Disubstituted 2-Thiouracil-5-carboxylates via Dimroth Rearrangement of Isomeric Thiazines**

Veronika Hladíková, Richard Kammel, and Jiří Hanusek*



a: R, R¹ = H; b: R, R¹ = Me; c: R = Ph, R¹ = H; d: R = Ph, R¹ = Me

2-Thiouracil-5-carboxylate

2-Imino-1,3-thiazine

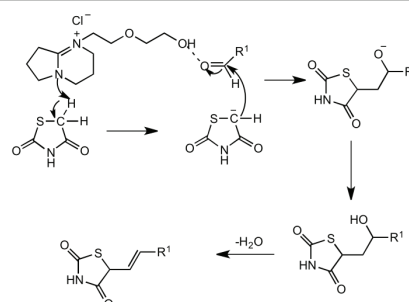
Dimroth Rearrangement

Isothiuronium Salt

Nucleophilic Vinylic Substitution Reaction

1385 **A Simple, Efficient and Green Procedure for Knoevenagel Condensation in Hydroxy-Functionalized Ionic Liquids**

Yuting Liu, Rong Li, and Yanjun Xing*



Ionic Liquid

Amidine

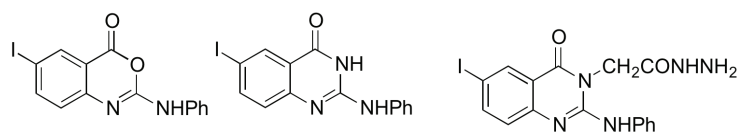
Hydroxy-Functionalized Ionic Liquid

Knoevenagel Condensation Reaction

■ SHORT PAPERS

1399 Transformation of Benzoxazinone Derivatives to Some Interesting Heterocyclic Compounds with Expected Biological Activity

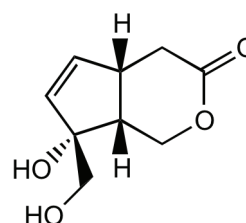
Magda I. Marzouk,* Thoraya A. Farghaly, Maher A. El-Hashash, Soheir A. Shaker, and Shadia M. Hussein



Benzoxazinone Quinazolinone

1417 Structure and Absolute Configuration of the 11-Noriridoid “Chapingolide”

Matilde Villa-García, María Amparo Borja-De-La-Rosa, Holber Zuleta-Prada, Rubén A. Toscano, and Benito Reyes-Trejo*

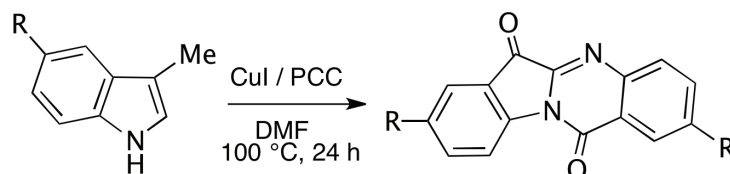


chapingolide

 Icacinaceae *Calatola mollis* Noriridoid Monoterpene Absolute Configuration

1423 Cu-Mediated Oxidative Dimerization of Skatole to Tryptanthrin, an Indolo[2,1-*b*]quinazolinone Alkaloid

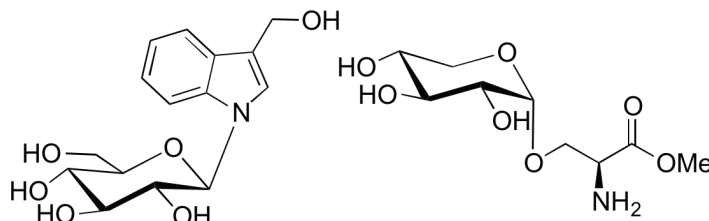
Tomoki Itoh, Takumi Abe, Shuhei Nakamura, and Minoru Ishikura*



Tryptanthrin Indoloquinazolinone Oxidative Dimerization Skatole Gramine

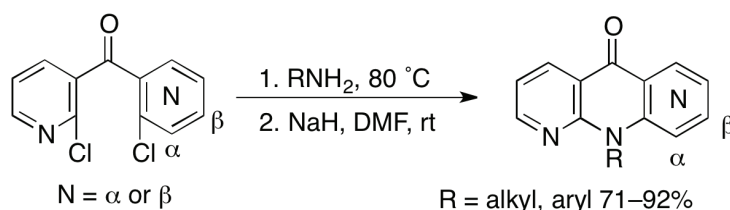
1429 A New *N*-Glucosylated Indole Alkaloid and a New *O*-Serine Glycoside from *Berberis koreana*

Ki Hyun Kim, Hee Rae Kang, Eunjung Moon, Sang Un Choi, Ki Sung Kang, Sun Yeou Kim, and Kang Ro Lee*

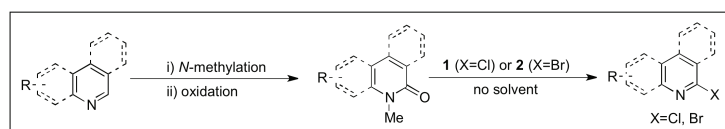

Berberis koreana Berberidaceae Indole Alkaloid Nitric Oxide Anti-Proliferative Activity

1439 Synthesis of 10-Substituted Pyrido[2,3-*b*][1,8]naphthyridin-5(10*H*)-ones (Anthyridin-5(10*H*)-ones) Based on the Reaction of Bis(2-chloropyridin-3-yl)methanones with Primary Amines

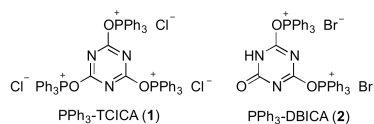
Kazuhiro Kobayashi,* Toshihide Komatsu, Shohei Yuba, Yuuki Chikazawa, and Miyuki Tanmatsu


 Pyrido[2,3-*b*][1,8]naphthyridin-5(10*H*)-one Anthyridinone 2-Chloropyridine-3-carbaldehyde 2-Chloro-3-lithiopyridine

- 1445 Development of a Facile and Inexpensive Route for the Preparation of α -Halobenzopyridines from α -Unsubstituted Benzopyridines**
 Osamu Sugimoto,* Hyuma Iwasaki, and Ken-ichi Tanji



Phosphonium salts (1, 2) as substitutes for POX_3 or PX_5



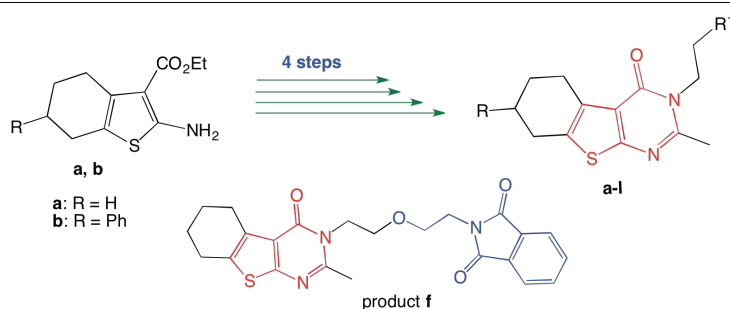
Easily prepared from PPh_3 and haloisocyanuric acids without solvent

Be stable even at high temperature ($\sim 180^\circ\text{C}$)

Easy post-treatment process due to inertness toward water

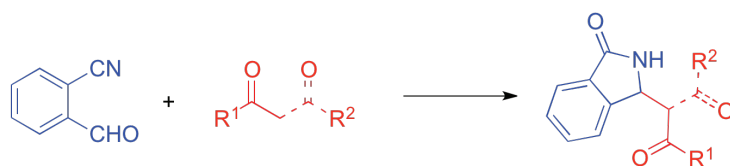
Quinoline Isoquinoline Halogenation Reaction Quinolinone Isoquinolinone

- 1455 An Efficient Synthetic Route towards Novel 3*N*-Substituted Thieno[2,3-*d*]pyrimidin-4(3*H*)-ones**
 Monaem Balti,* Maha Hachicha, and Mohamed Lotfi El Efrif



Thieno[2,3-*d*]pyrimidine

- 1465 $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$ -Promoted Pinner-Dimroth Tandem Reaction: Facile Synthesis of 3-Substituted Isoindolinones**
 Mingxing Liu, Jiarong Li, Qi Zhang, and Daxin Shi*



Isoindolinone Tandem Reaction $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$ 2-Cyanobenzaldehyde

■ NEW HETEROCYCLIC NATURAL PRODUCTS

- 1473 Polyketides**
1477 Aromatics
1490 Terpenes
1502 Steroids
1506 Alkaloids
1519 Miscellaneous

■ TOTAL SYNTHESIS OF HETEROCYCLIC NATURAL PRODUCTS

- 1521 Polyketides
 - 1526 Aromatics
 - 1528 Terpenes
 - 1530 Steroids
 - 1531 Alkaloids
 - 1538 Miscellaneous
-

■ BRUSH UP YOUR HETEROCYCLES

- 1539 Brush Up Your Heterocycles
-

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