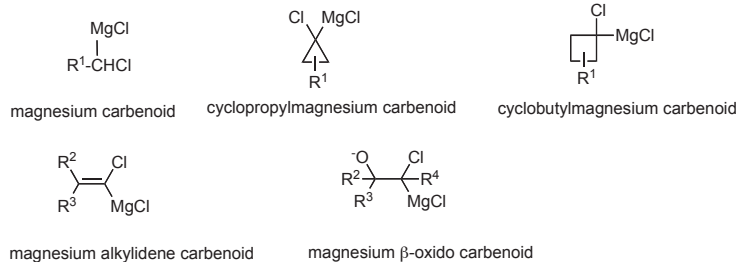


## ■ REVIEW

## 1 Recent Advances in the Chemistry and Synthetic Uses of Magnesium Carbenoids

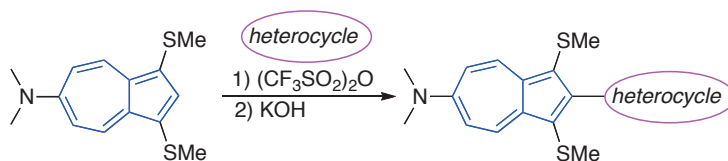
Tsuyoshi Satoh\*


 Magnesium Carbenoid      Cyclopropylmagnesium and Cyclobutylmagnesium Carbenoids      Magnesium Alkylidene and Magnesium  $\beta$ -Oxido Carbenoids

## ■ COMMUNICATION

 35 First Synthesis of 2-Heteroarylazulenes by the Electrophilic Substitution of Azulene with Triflate of *N*-Containing Heterocycles

Taku Shoji,\* Yuta Inoue, Shunji Ito, Tetsuo Okujima, and Noboru Morita

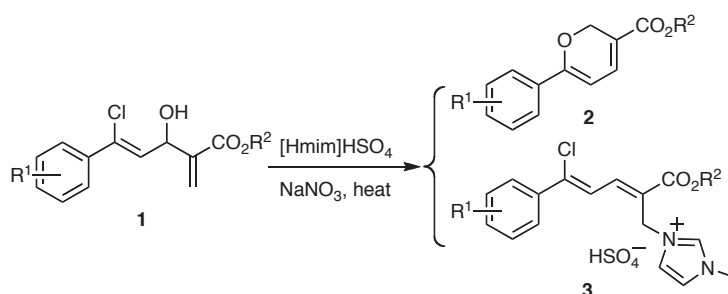


Azulene      2-Heteroarylazulene      Heteroarylation      Electrophilic Substitution      Cross Coupling Reaction

## ■ PAPERS

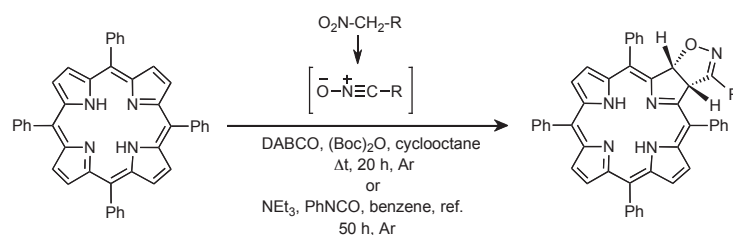
 43 Unexpected Tandem Reaction of New Type Morita-Baylis-Hillman Adducts Promoted by [Hmim]HSO<sub>4</sub>/NaNO<sub>3</sub> System

Weihui Zhong,\* Guan Wang, and Kai Chen


 New Type Morita-Baylis-Hillman Adduct      [Hmim]HSO<sub>4</sub>      Sodium Nitrate      2*H*-Pyran-3-carboxylate      *N*-Heterocyclic Carbene

**57 1,3-Dipolar Cycloaddition Reaction in Porphyrin Systems with Functionalized Alkyl Nitrile Oxides — Synthesis of Isoxazoline-Fused Chlorins**

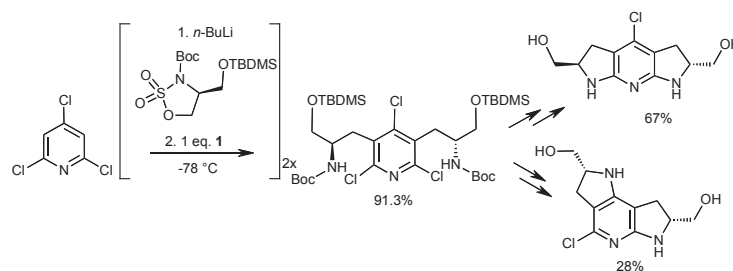
Przemysław Wyrębek, Agnieszka Mikus, and Stanisław Ostrowski\*


 $R = \text{Et, Bu, C}_5\text{H}_{11}, \text{CO}_2\text{Et, CH}_2\text{OBU-}t, \text{CH(OR)}_2, \text{CH}_2\text{CH}_2\text{OCH(OR}^2\text{)R}^1$ 

Porphyrin Chlorin [3+2] Cycloaddition Isoxazoline Nitrile Oxide

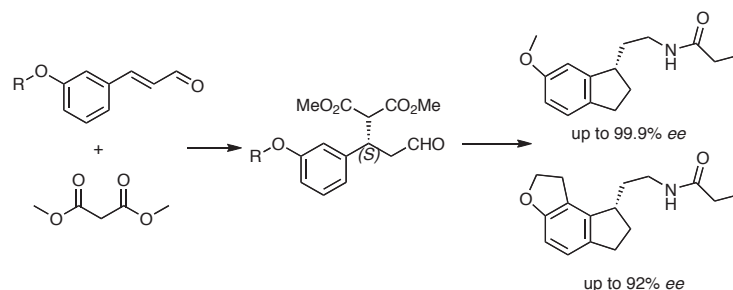
**65 Iterative One Pot Reactions of a Chiral Sulfamidate with 2,4,6-Trichloropyridine: Regiocontrolled Synthesis of Linear and Angular Chiral Dipyrrolidino Pyridines**

Paul Hebeisen,\* André Alker, and Markus Buerkler


 Chiral Sulfamidate Iterative Deprotonation Regioselectivity Intramolecular  $\text{S}_{\text{N}}\text{AR}$  Dipyrrolidino pyridine

**73 Stereoselective Synthesis of Melatonin Receptor Agonist Ramelteon via Asymmetric Michael Addition**

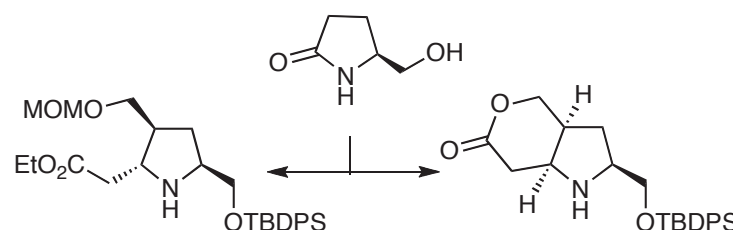
Xuan Zhang, Wei Yuan, Yu Luo, Qing-Qing Huang, and Wei Lu\*



Ramelteon Michael Addition Synthesis Enantioselective Synthesis

**85 Useful Building Blocks for the Stereocontrolled Assembly of 2,3,5-Trisubstituted Pyrrolidines**

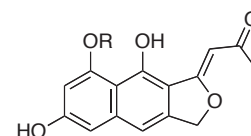
Charles Dylan Turner and Marco A. Ciufolini\*



Amino Acid Bredereck Reagent Conjugate Addition Pyrrolidine Stereoselective Synthesis

**95 Megouraphin Glucosides: Two Yellowish Pigments from the Aphid *Megoura crassicauda***

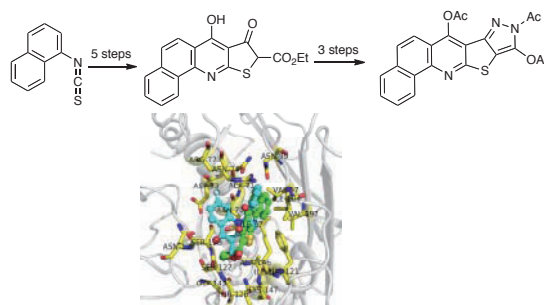
Mitsuyo Horikawa,\* Daisuke Kikuchi, Toshihito Imai, Masami Tanaka, Hiroto Kaku, Takeshi Nishii, Makoto Inai, Shigeru Takahashi, and Tetsuto Tsunoda\*


*Megoura crassicauda*

 megouraphin glucoside A:  $R = \beta\text{-D-glucosyl}$   
 megouraphin glucoside B:  $R = 6'\text{-O-acetyl } \beta\text{-D-glucosyl}$ 

Aphid Pigment Structure Determination Polyketide

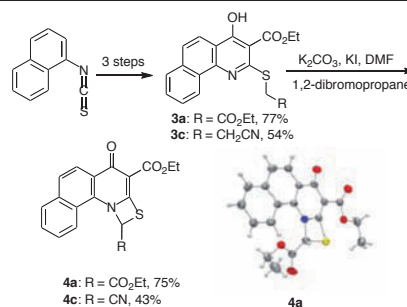
**103 Polycyclic Quinolones (Part 1) — Thieno[2,3-*b*]benzo-*[h]*quinoline Derivatives: Design, Synthesis, Preliminary *in vitro* and *in silico* Studies**

Abeer Ahmed and Mohsen Daneshtalab\*


 Polycyclic Quinolone    Thieno[2,3-*b*]quinoline    Pyrazoloquinoline    Thiazoloquinoline    Docking Study

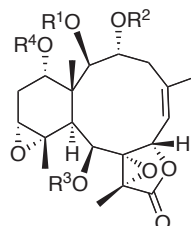
**123 Polycyclic Quinolones (Part 2) — Synthesis of Novel 4-Oxo-1,4-dihydrobenzo[*h*][1,3]thiazeto[3,2-*a*]quinoline Carboxylic Acids *via* Oxidative Cyclization of the Corresponding 2-Mercaptoquinoline Precursors**

Abeer Ahmed, Louise N. Dawe, and Mohsen Daneshtalab\*


 2-Mercaptoquinoline    Thiazeto[3,2-*a*]quinoline    Pseudohalogen    *l*-Dihaloalkane    1,2-Dibromopropane

**135 Briaroxalides: Novel Diepoxybriarane Diterpenes from an Okinawan Gorgonian *Briareum* Sp.**

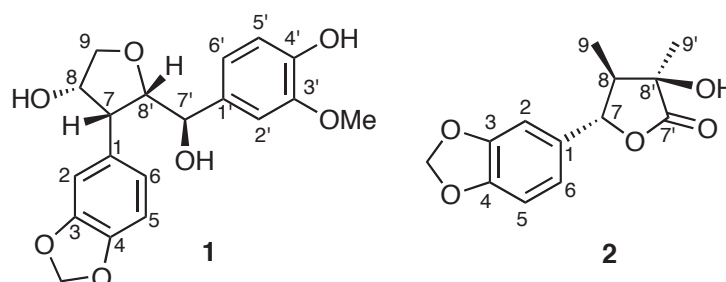
Koichiro Ota, Naoko Okamoto, Hidemichi Mitome, and Hiroaki Miyaoka\*


 briaroxalide A (1) : R<sup>1</sup> = H , R<sup>2</sup> = Ac , R<sup>3</sup> = H , R<sup>4</sup> = Ac  
 briaroxalide B (2) : R<sup>1</sup> = H , R<sup>2</sup> = H , R<sup>3</sup> = Ac , R<sup>4</sup> = Ac  
 briaroxalide C (3) : R<sup>1</sup> = H , R<sup>2</sup> = Ac , R<sup>3</sup> = Ac , R<sup>4</sup> = Ac  
 briaroxalide D (4) : R<sup>1</sup> = H , R<sup>2</sup> = H , R<sup>3</sup> = Ac , R<sup>4</sup> = H  
 briaroxalide E (5) : R<sup>1</sup> = H , R<sup>2</sup> = Ac , R<sup>3</sup> = Ac , R<sup>4</sup> = H  
 briaroxalide F (6) : R<sup>1</sup> = Ac , R<sup>2</sup> = Ac , R<sup>3</sup> = Ac , R<sup>4</sup> = H  
 briaroxalide G (7) : R<sup>1</sup> = Ac , R<sup>2</sup> = H , R<sup>3</sup> = Ac , R<sup>4</sup> = Ac

Briaroxalide    Briarane-Type Diterpenoid    Isolation    Absolute Configuration    X-Ray Diffraction Analysis

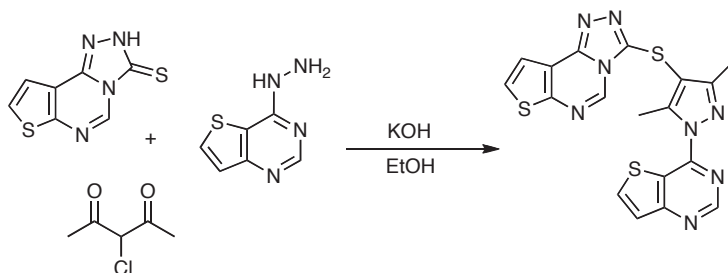
**SHORT PAPERS**
**147 Lignan Derivatives from the Leaves *Nicotiana tabacum* and Their Activities**

Xuemei Gao, Xuesen Li, Xinzhou Yang, Huaixue Mu, Yongkuan Chen, Guangyu Yang,\* and Qiufen Hu\*


*Nicotiana tabacum*    Norlignan    Anti-HIV-1 Activity    Anti-Tobacco Mosaic Virus Activity

**155 A Facile One-Pot Synthesis of Sulfur-Linked Thieno-[1,2,4]triazolo[4,3-*c*]pyrimidine Derivatives Containing Phenylpyrazole or Thienopyrimidinylpyrazole Moiety**

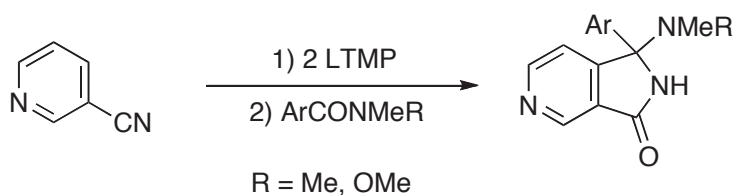
Jina Whang and Yang-Heon Song\*



Thienotriazolopyrimidine    Thienopyrimidinylpyrazole    3-Chloropentane-2,4-dione    One-Pot Reaction    Molecular Hybridization

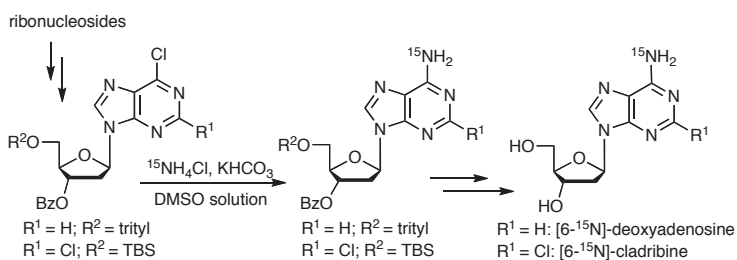
**165 Synthesis of 1-Amino-1-aryl-1,2-dihydropyrrolo-[3,4-*c*]pyridin-3-one Derivatives by the Reaction of 4-Lithiopyridine-3-carbonitrile with Aromatic Tertiary Amides**

Kazuhiro Kobayashi,\* Kazuhiro Nakagawa, and Taketoshi Kozuki


 1,2-Dihydropyrrolo[3,4-*c*]pyridin-3-one    4-Lithiopyridine-3-carbonitrile    Lithium 2,2,6,6-Tetramethylpiperidine    Imino Ether Rearrangement

**171 First Synthesis of [6-<sup>15</sup>N]-Cladribine Using Ribonucleoside as a Starting Material**

Norikazu Sakakibara, Ai Kakoh, and Tokumi Maruyama\*


 Nucleoside Synthesis    Selective Deprotection    <sup>15</sup>N-Labeled Nucleoside    Cladribine    Tracer Experiment

**NEW HETEROCYCLIC NATURAL PRODUCTS**

- 183 Polyketides
- 190 Aromatics
- 210 Terpenes
- 229 Steroids
- 232 Alkaloids
- 246 Miscellaneous

■ TOTAL SYNTHESIS OF HETEROCYCLIC NATURAL PRODUCTS

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251	Polyketides
260	Aromatics
263	Terpenes
265	Steroids
266	Alkaloids
279	Miscellaneous

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**Contributors  
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