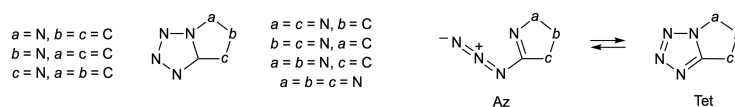


■ ANNOUNCEMENT

- 1 **Heterocycles Award**  
HETEROCYCLES Announcement

■ REVIEW

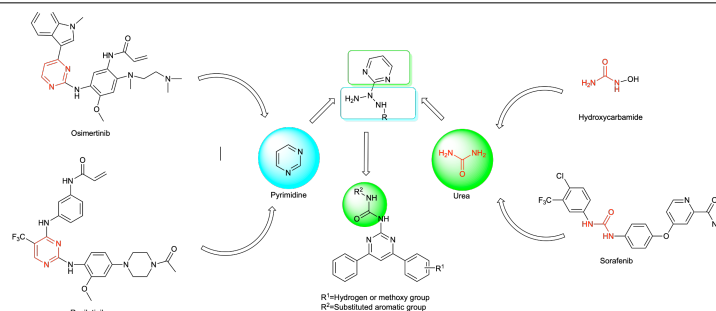
- 3 **The Azalogues of Pyrrolotetrazole – An Overview**  
Dietrich Moderhack\*



Azolutetrazole    Azido-Tetrazole Tautomerism    DFT Calculation    Ring Transformation    Electrophilic Substitution

■ PAPERS

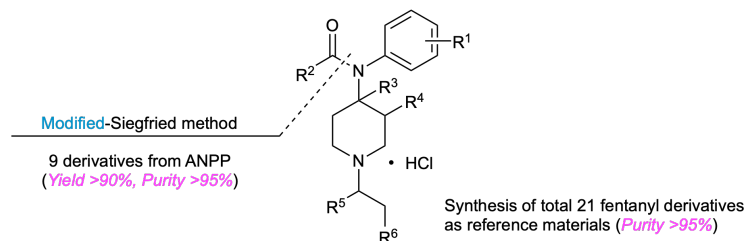
- 67 **Design, Synthesis and Biological Evaluation of Pyrimidinamine Derivatives Containing Urea Moiety**  
Weiqin Liu, Mi Hou, Qin Wang, Huayuan Tan, Litao Ji, Congyu Wang, Xuesha Long, Zhenchao Wang,\* and Guiping Ouyang\*



Pyrimidinamine Derivative    Urea    Biological Evaluation

**82 Comprehensive Synthesis of 20 Fentanyl Derivatives for Their Rapid Differentiation by GC-MS Analysis**

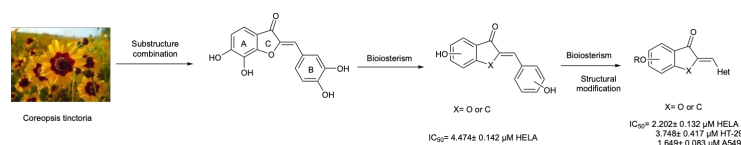
Takashi Kurohara, Takahito Ito, Genichiro Tsuji,\*  
Takashi Misawa,\* Hidetomo Yokoo, Maiko Kawamura,  
Takuji Shoda, Ruri Hanajiri-kikura, and Yosuke Demizu



Fentanyl    Comprehensive Synthesis    HPLC Analysis    GC-MS Analysis

**94 Synthesis and Antitumor Activity of Heterocyclic Aurone and Its Analogue Indanone Derivatives**

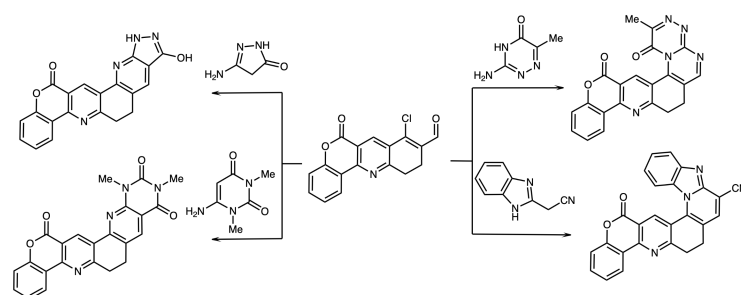
Heng Wu, Ayitila Maimaitijiang, Dan Tang, Baoxing Xie,  
Chao Niu,\* and Haji Akber Aisa\*



Heterocyclic Aurone    Indanone Derivative    Antitumor Activity    Molecular Docking    ADMET

**117 Synthesis and Characterization of Some Novel Heteroannulated Chromeno[4,3-*b*]quinolines**

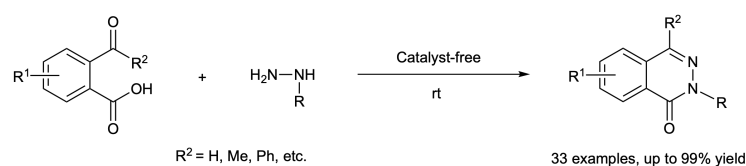
Najla A. Alshaye and Magdy A. Ibrahim\*



Chromeno[4,3-*b*]quinoline    Chromeno[4,3-*b*]pyrazolo[3,4-*f*]quinoline    Chromeno[3',4':5,6]pyrido[2,3-*h*]quinazoline    β-Chloroaldehyde

**135 Catalyst-Free Green Synthesis of Phthalazinones at Room Temperature**

Kang Lv, Zixi Xie, Xi Chen, Weiwei Yao,\* and Mengtao Ma\*

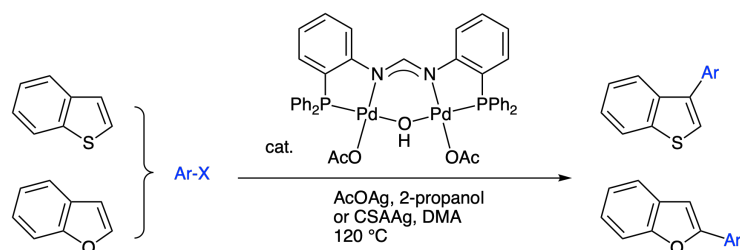


Phthalazinone    Catalyst-Free    Synthesis    Room Temperature

## ■ SHORT PAPERS

**151 Direct Arylation of Benzothiophene and Benzofuran Catalyzed by a Dinuclear Palladium Complex**

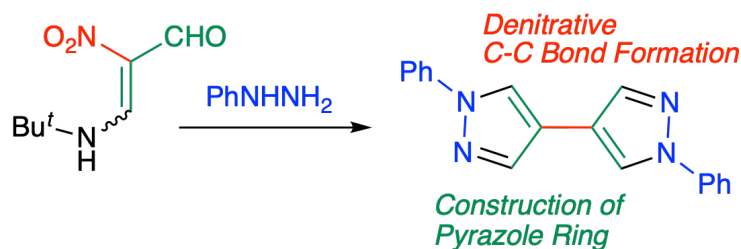
Takuma Mochizuki, Keiryu Seto, Yuma Sugiyama, and Naofumi Tsukada\*



Palladium Benzothiophene Benzofuran C-H Activation

**160 Simultaneous Denitrative C–C Bond Formation and Construction of Pyrazole Ring Leading to 1,1'-Diphenyl-4,4'-bipyrazole**

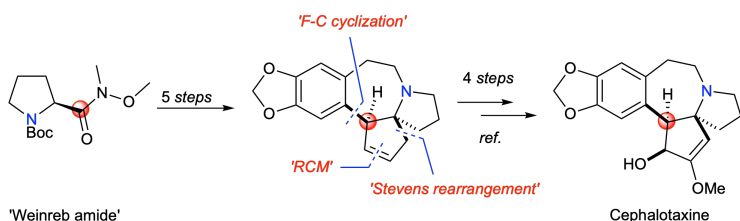
Kento Iwai, Nana Hatayama, and Nagatoshi Nishiwaki\*



Bipyrazole Nitroenamine Nitromalonaldehyde Nitropyrazole Denitrative Homo-Coupling

**166 Concise Synthesis of (±)-Cephalotaxine**

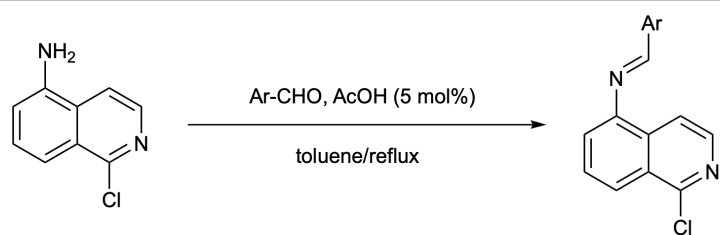
Jian Zhang,\* Huili Ding, Yuxue Fan, Hui Chen, Hongxia Dai,\* and Ming Jing



Weinreb Amide Stevens Rearrangement Cephalotaxine Total Synthesis

**174 Synthesis and Biological Activity of Aminoisoquinoline Schiff Bases**

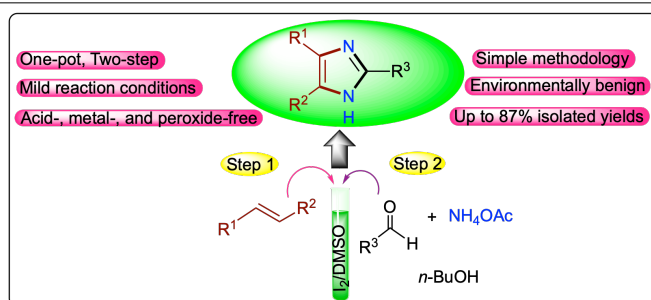
He Li, Jiangyu Ji, Chi Liu, Chang Dong, Yapeng Zhang, Jinghan Hong, Runlai Li,\* and Zhenming Zhang\*


 12 examples  
Yields 60%-95%

Schiff Base Aminoisoquinoline Antibacterial Activity

**186 Acid, Metal and Peroxide-Free Synthesis of 2,4,5-Trisubstituted Imidazoles Commencing from Internal Alkenes Using an Iodine/DMSO System**

Nonhlelo Majola and Vineet Jeena\*



Internal Alkene Imidazole Iodine DMSO

■ TOTAL SYNTHESIS OF HETEROCYCLIC NATURAL PRODUCTS

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- 201 Polyketides
  - 202 Aromatics
  - 204 Terpenes
  - 209 Steroids
  - 210 Alkaloids
  - 217 Miscellaneous
- 

■ BRUSH UP YOUR HETEROCYCLES

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- 221 Brush Up Your Heterocycles
-

**Contributors  
To This Issue**

94	Aisa, Haji Akber	174	Zhang, Zhenming
117	Alshaye, Najla A.		
166	Chen, Hui		
135	Chen, Xi		
166	Dai, Hongxia		
82	Demizu, Yosuke		
166	Ding, Huili		
174	Dong, Change		
166	Fan, Yuxue		
82	Hanajiri-kikura, Ruri		
160	Hatayama, Nana		
174	Hong, Jinghan		
67	Hou, Mi		
117	Ibrahim, Magdy A.		
82	Ito, Takahito		
160	Iwai, Kento		
186	Jeena, Vineet		
174	Ji, Jiangyu		
67	Ji, Litao		
166	Jing, Ming		
82	Kawamura, Maiko		
82	Kurohara, Takashi		
174	Li, He		
174	Li, Runlai		
174	Liu, Chi		
67	Liu, Weiqin		
67	Long, Xuesha		
135	Lv, Kang		
135	Ma, Mengtao		
94	Maimaitijiang, Ayitila		
186	Majola, Nonhlelo		
82	Misawa, Takashi		
151	Mochizuki, Takuma		
3	Moderhack, Dietrich		
160	Nishiwaki, Nagatoshi		
94	Niu, Chao		
67	Ouyang, Guiping		
151	Seto, Keiryu		
82	Shoda, Takuji		
151	Sugiyama, Yuma		
67	Tan, Huayuan		
94	Tang, Dan		
82	Tsuji, Genichiro		
151	Tsukada, Naofumi		
67	Wang, Congyu		
67	Wang, Qin		
67	Wang, Zhenchao		
94	Wu, Heng		
94	Xie, Baoxing		
135	Xie, Zixi		
135	Yao, Weiwei		
82	Yokoo, Hidetomo		
166	Zhang, Jian		
174	Zhang, Yapeng		