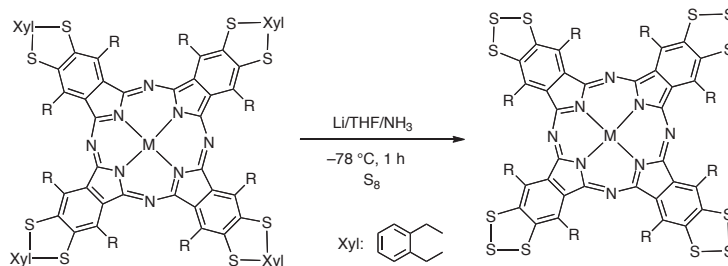


■ REVIEWS

245 Phthalocyanines and Related Compounds with Chalcogen Functional Groups

Takeshi Kimura*

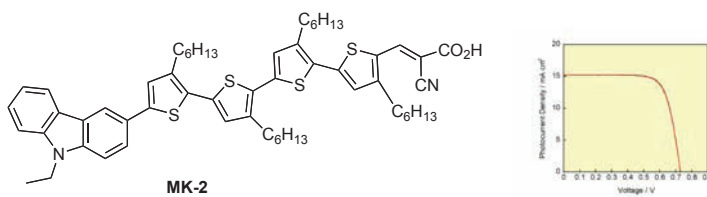


R = C₆H₁₇, M = 2H, Ni

Phthalocyanine Tetraazaporphyrin Tetrathiafulvalene Benzotrithiole Thiophene

275 Development of Carbazole Dyes for Efficient Molecular Photovoltaics

Nagatoshi Koumura* and Kohjiro Hara



MK-2

$\eta = 8.3\%$

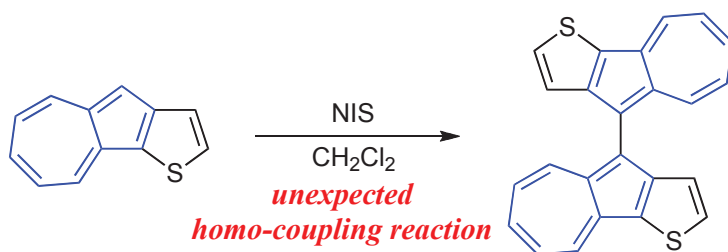
$J_{SC} = 15.2 \text{ mA cm}^{-2}$,
 $V_{OC} = 0.73 \text{ V}$, $FF = 0.75$

Dye-Sensitized Solar Cell Organic Dye Carbazole Donor Oligohexylthiophene Linker

■ COMMUNICATION

303 Synthesis of Novel Thiophene-Fused 1,1'-Biazulene Derivative by the Reaction of Azuleno[1,2-*b*]thiophene with *N*-Iodosuccinimide

Taku Shoji,* Erika Shimomura, Yuta Inoue, Mitsuhsa Maruyama, Atsuyo Yamamoto, Kunihide Fujimori, Shunji Ito, Masafumi Yasunami, and Noboru Morita

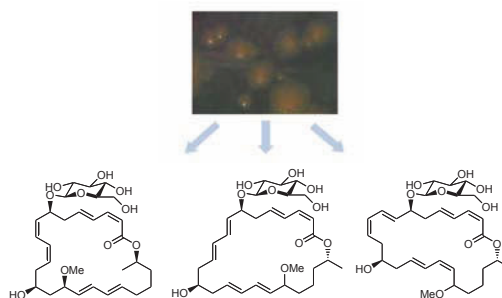


Azulene 1,1'-Biazulene Coupling Reaction UV-Vis Spectrum Cyclic Voltammetry

■ PAPERS

307 Glycosylated Methoxy-Macrolactins from a Marine Sediment Bacterium *Bacillus subtilis*

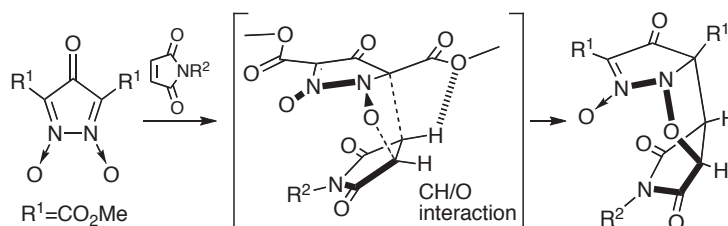
Hee Jae Shin,* Fakir Shahidullah Tareq, Ji Hye Kim,
Min Ah Lee, Hyi-Seung Lee, Yeon-Ju Lee, and
Jong-Seok Lee



Macrolactin Marine Bacterium Antimicrobial Antifungal Macrolide

319 Role of CH/O and CH/ π Interactions in Structural Stability. Effect on *Endo* Selectivity in 1,3-Dipolar Reaction of Electron-Deficient 4-Oxo-4*H*-pyrazole 1,2-Dioxide with *N*-Substituted Maleimides

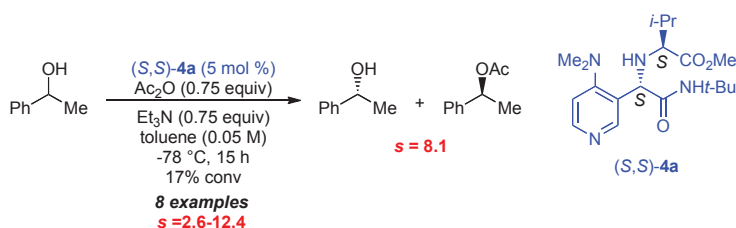
Koki Yamaguchi, Kazunobu Harano, and Masashi Eto*



4-Oxo-4*H*-pyrazole 1,2-Dioxide 1,3-Dipolar Cycloaddition CH/O Interaction Charge Transfer DFT Calculation

329 Kinetic Resolution of Secondary Alcohols by Chiral DMAP Derivatives Prepared by the Ugi Multicomponent Reaction

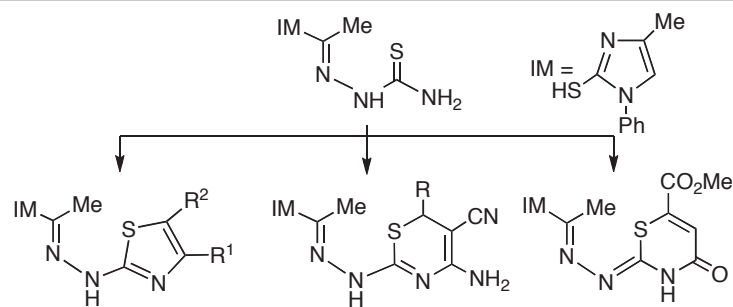
Hiroki Mandai,* Shunsuke Irie, Masaru Akehi, Kazunobu Yuri,
Masaaki Yoden, Koichi Mitsudo, and Seiji Suga*



Kinetic Resolution Chiral DMAP Derivative Ugi Reaction Non-Enzymatic Reaction

341 Synthetic Utility of Ethylideneethiosemicarbazide: Synthesis and Anticancer Activity of 1,3-Thiazines and Thiazoles with Imidazole Moiety

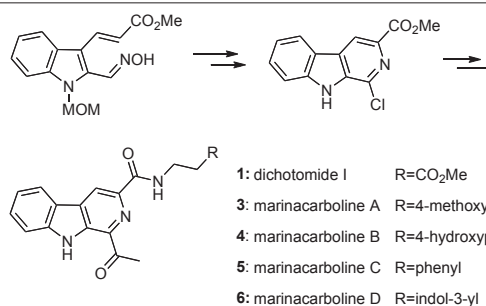
Sobhi M. Gomha, Sayed M. Riyadh,* Ikhlass M. Abbas,
and Mohammed A. Bauomi



Ethylideneethiosemicarbazide Hydrazonoyl Halide 1,3-Thiazine Thiazole

357 First Total Syntheses of 1,3-Disubstituted β -Carboline Alkaloids, Dichotomide I and Marinacarbolines A-D

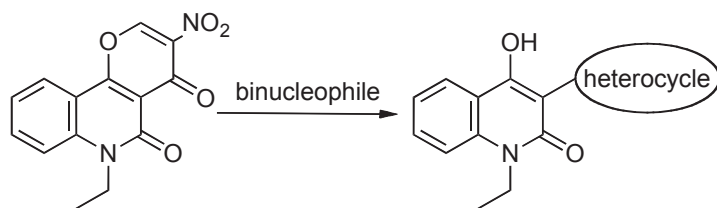
Shinji Tagawa, Tominari Choshi,* Asuka Okamoto,
Takashi Nishiyama, Shiroh Watanabe, Noriyuki Hatae,
and Satoshi Hibino*



Dichotomide I Marinacarbolines A-D 1,3-Disubstituted β -Carboline Microwave Thermal Electrocyclic Reaction

369 Synthesis of Some Novel Binuclear Heterocyclic Compounds from 6-Ethyl-3-nitropyrano[3,2-*c*]-quinoline-4,5(6*H*)-dione

Hany M. Hassanin* and Dalia Abdel-Kader

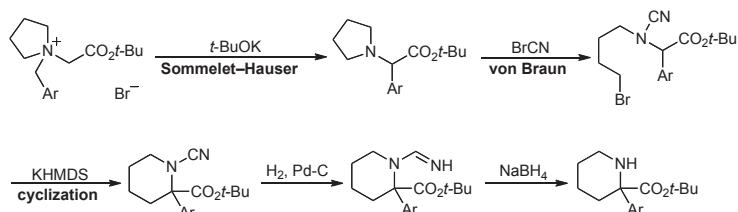


heterocycle = pyrazole, pyrimidine, pyridine, diazepine, thiazepine

Pyranoquinolinone Pyrazole Pyridine Pyrimidine Diazepine

SHORT PAPERS
381 A Unique and Simple Preparative Method for α -Arylpipecolinic Acid Esters via Base-Induced Sommelet-Hauser Rearrangement

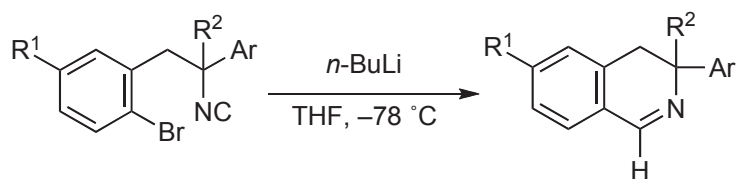
Eiji Tayama,* Ryota Sato, Motoshi Ito, Hajime Iwamoto, and Eietsu Hasegawa



Rearrangement von Braun Reaction Cyclization Pipecolinic Acid Tetraalkylammonium Ylide

389 Synthesis of 3,4-Dihydroisoquinolines by Cyclization of 1-Bromo-2-(2-isocyanoalkyl)benzenes with Butyllithium

Kazuhiro Kobayashi,* Naoki Matsumoto, and Kota Matsumoto

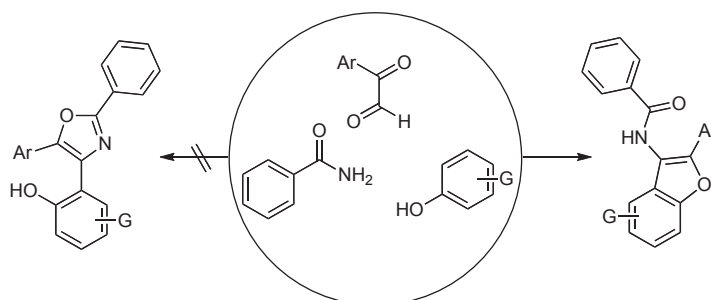

 $R^1 = \text{H, Cl, OMe}; R^2 = \text{Me, Et, Ph}$

43–58%

3,4-Dihydroisoquinoline Isocyanide Aryllithium Bromine-Lithium Exchange Imidoyllithium

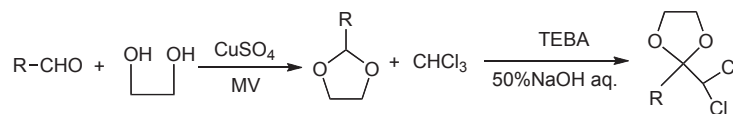
399 Zirconium Catalyzed Chemoselective Synthesis of New Amido-Substituted Benzo[*b*]furans via a One-Pot Reaction

Bahador Karami,* Saeed Khodabakhshi, and Hamid Reza Vahabinia


 Benzo[*b*]furan Benzamide Arylglyoxal Zirconium Oxochloride Octahydrate Phenol

407 **Microwave-Assisted Synthesis and Crystal Structure of Novel 2-Dichloromethyl-1,3-dioxolanes**

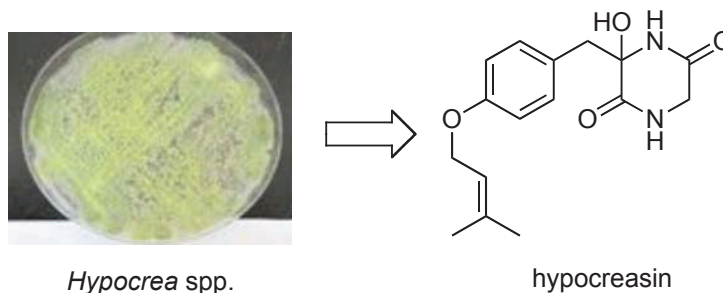
Fei Ye, Ying Li, Ying Fu,* Shuang Gao, and Li-Xia Zhao



Microwave-Assisted Synthesis Crystal Structure Dichloromethyldioxolane Herbicide Safener

417 **Melanogenesis-Modulating Diketopiperazine Derivatives from *Hypocrea* spp.**

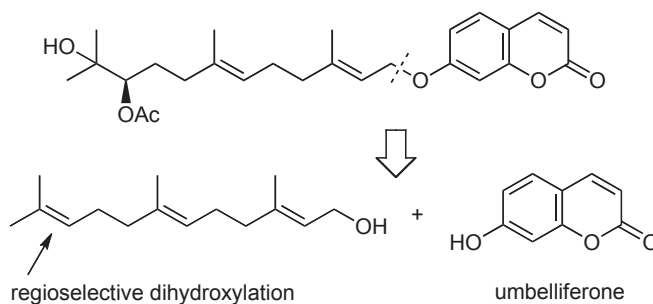
Tetsuro Kawabata,* Chiaki Uchida, Hikaru Kato, Tomoyuki Tsubata, Fumihide Takano, and Tomihisa Ohta



Diketopiperazine Derivative Melanogenesis-Modulating

423 **A Practical Synthesis of a Hydroxylated Sesquiterpene Coumarin 10'*R*-Acetoxy-11'-hydroxyumbelliprenin by Regioselective Dihydroxylation**

Yasunao Hattori, Genki Kinami, Kenta Teruya, Kazuto Nosaka, Kazuya Kobayashi, and Kenichi Akaji*



Sesquiterpene Coumarin Regioselective Dihydroxylation

■ NEW HETEROCYCLIC NATURAL PRODUCTS

- 429 Polyketides
- 433 Aromatics
- 444 Terpenes
- 454 Steroids
- 455 Alkaloids
- 471 Miscellaneous

Contributors To This Issue

- | | | | |
|-----|---------------------|-----|--------------------------|
| 341 | Abbas, Ikhlass M. | 357 | Tagawa, Shinji |
| 369 | Abdel-Kader, Dalia | 417 | Takano, Fumihide |
| 423 | Akaji, Kenichi | 307 | Tareq, Fakir Shahidullah |
| 329 | Akehi, Masaru | 381 | Tayama, Eiji |
| 341 | Bauomi, Mohammed A. | 423 | Teruya, Kenta |
| 357 | Choshi, Tominari | 417 | Tsubata, Tomoyuki |
| 319 | Eto, Masashi | 417 | Uchida, Chiaki |
| 407 | Fu, Ying | 399 | Vahabinia, Hamid Reza |
| 303 | Fujimori, Kunihide | 357 | Watanabe, Shiroh |
| 407 | Gao, Shuang | 319 | Yamaguchi, Koki |
| 341 | Gomha, Sobhi M. | 303 | Yamamoto, Atsuyo |
| 275 | Hara, Kohjiro | 303 | Yasunami, Masafumi |
| 319 | Harano, Kazunobu | 407 | Ye, Fei |
| 381 | Hasegawa, Eietsu | 329 | Yoden, Masaaki |
| 369 | Hassanin, Hany M. | 329 | Yuri, Kazunobu |
| 357 | Hatae, Noriyuki | 407 | Zhao, Li-Xia |
| 423 | Hattori, Yasunao | | |
| 357 | Hibino, Satoshi | | |
| 303 | Inoue, Yuta | | |
| 329 | Irie, Shunsuke | | |
| 381 | Ito, Motoshi | | |
| 303 | Ito, Shunji | | |
| 381 | Iwamoto, Hajime | | |
| 399 | Karami, Bahador | | |
| 417 | Kato, Hikaru | | |
| 417 | Kawabata, Tetsuro | | |
| 399 | Khodabakhshi, Saeed | | |
| 307 | Kim, Ji Hye | | |
| 245 | Kimura, Takeshi | | |
| 423 | Kinami, Genki | | |
| 389 | Kobayashi, Kazuhiro | | |
| 423 | Kobayashi, Kazuya | | |
| 275 | Koumura, Nagatoshi | | |
| 307 | Lee, Hyi-Seung | | |
| 307 | Lee, Jong-Seok | | |
| 307 | Lee, Min Ah | | |
| 307 | Lee, Yeon-Ju | | |
| 407 | Li, Ying | | |
| 329 | Mandai, Hiroki | | |
| 303 | Maruyama, Mitsuhsa | | |
| 389 | Matsumoto, Kota | | |
| 389 | Matsumoto, Naoki | | |
| 329 | Mitsudo, Koichi | | |
| 303 | Morita, Noboru | | |
| 357 | Nishiyama, Takashi | | |
| 423 | Nosaka, Kazuto | | |
| 417 | Ohta, Tomihisa | | |
| 357 | Okamoto, Asuka | | |
| 341 | Riyadh, Sayed M. | | |
| 381 | Sato, Ryota | | |
| 303 | Shimomura, Erika | | |
| 307 | Shin, Hee Jae | | |
| 303 | Shoji, Taku | | |
| 329 | Suga, Seiji | | |