

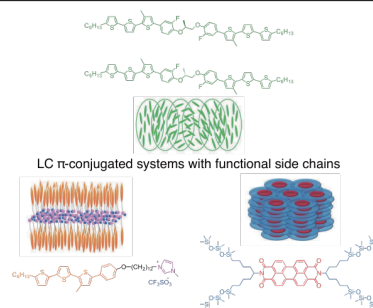
■ ANNOUNCEMENT

1 Heterocycles Award

■ REVIEWS

3 Nanostructure Formation Based on the Functionalized Side Chains in Liquid-Crystalline Heteroaromatic Compounds

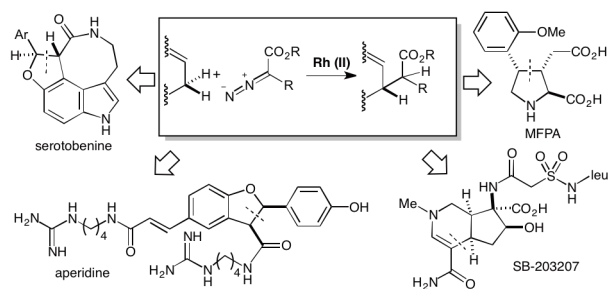
Atsushi Seki and Masahiro Funahashi*



Liquid Crystal Liquid-Crystalline Semiconductor Nanosegregation Side Chain Carrier Transport

31 Applications of C-H Insertion Reaction in Total Synthesis of Biologically Active Heterocyclic Natural Products

Toshiyuki Kan,* Tomohiro Asakawa, and Makoto Inai

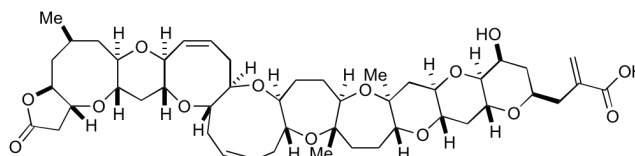


C-H Insertion Reaction Total Synthesis Dihydrobenzofuran Natural Product Including Nitrogen Desymmetrization

■ PAPERS

45 Brevisulcatic Acids from a Marine Microalgal Species Implicated in a Toxic Event in New Zealand

Raku Irie, Rina Suzuki, Kazuo Tachibana, Patrick T. Holland, D. Tim Harwood, Feng Shi, Paul McNabb, Veronica Beuzenberg, Fumiaki Hayashi, Huiping Zhang, and Masayuki Satake*

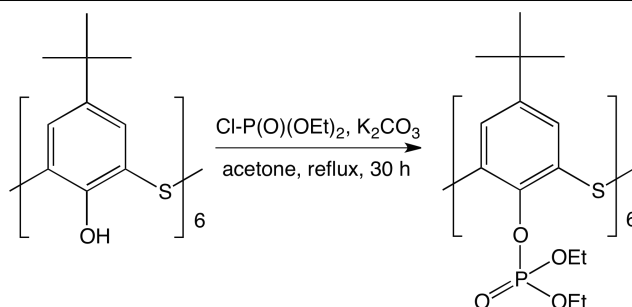


brevisulcatic acid-5 (BSX-5)

Ladder-Frame Polyether Marine Toxin Structural Elucidation

55 Solvent Extraction Ability of New Diethyl Phosphate-Modified Thiocalix[6]arene towards PGM Solution

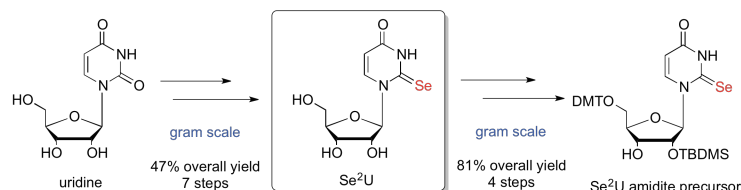
Kunda Uma Maheswara Rao, Takashi Kimuro, Manabu Yamada, Yoshihiko Kondo, and Fumio Hamada*



Solvent Extraction *tert*-Bu-Thiocalix[6]arene Diethyl Chlorophosphate

64 An Efficient Synthesis of 2-Selenouridine and Its Phosphoramidite Precursor

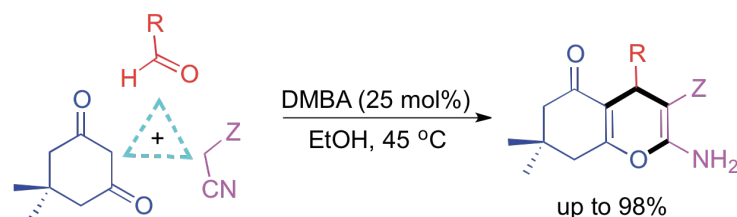
Masakazu Kogami, Darrell R. Davis, and Mamoru Koketsu*



Selenium Modified Nucleoside Se²U

75 Facile and Efficient Access to Tetrahydrobenzo[*b*]pyrans Catalyzed by *N,N*-Dimethylbenzylamine

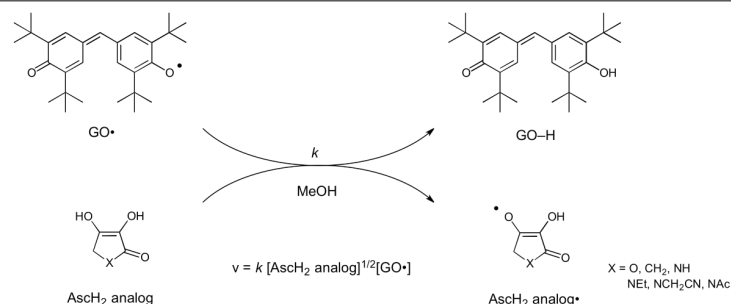
Hamzeh Kiyani* and Mozghan Sadat Jalali



N,N-Dimethylbenzylamine Tetrahydrobenzo[*b*]pyran Three-Component Reaction Dimedone Cyano Compound

86 Radical Scavenging Activity of Ascorbic Acid Analogs Containing a Carbonyl Conjugated Ene-Diol Structure

Shogo Nomura, Keiko Inami, and Masataka Mochizuki*

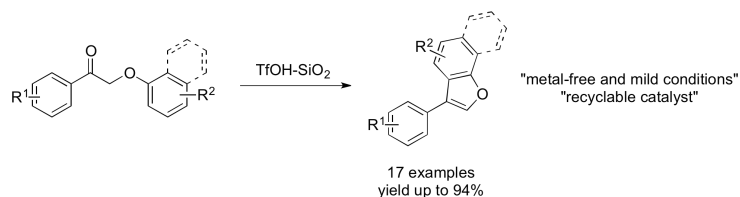


Antioxidant Ascorbic Acid Radical Scavenging Activity Galvinoxyl Radical Electron Donating Effect

X = O, CH₂, NH
NEt, NCH₂CN, NAc

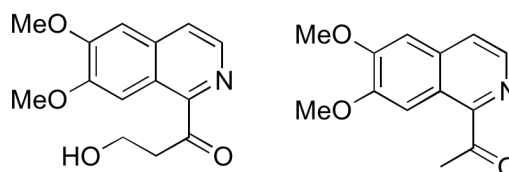
■ SHORT PAPERS

- 103 TfOH-SiO₂ as an Efficient and Recyclable Catalyst for Synthesis of 3-Arylbenzofurans**
Baolong Wang, Jiaying Hu, Fanglin Zhang, and Hua Zheng*



Immobilized Catalyst TfOH-SiO₂ 3-Arylbenzofuran

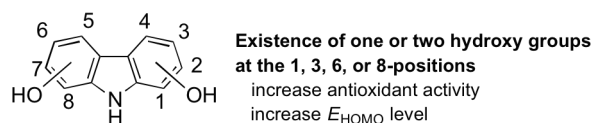
- 114 Isoquinoline Alkaloids from the Twigs of *Cassia fistula* and Their Anti-Tobacco Mosaic Virus Activity**
Hai-Yan Wu, Qiang Liu, Zhen-Hua Yu, Wei-Yao Hu, Ke-Liang Yan, Ye-De Wang, Kun Zhou, Wei Dong, Min Zhou,* and Qiu-Fen Hu*



Isoquinoline Alkaloid *Cassia fistula* Anti-Tobacco Mosaic Virus Activity

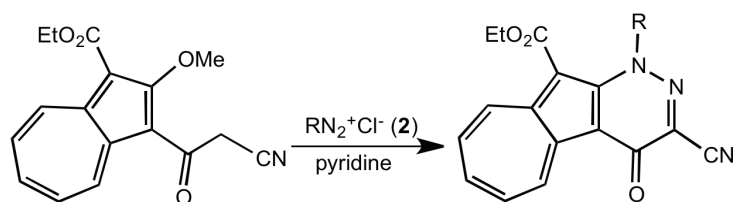
- 120 Antioxidant Effects of the Hydroxy Groups in the Simple Phenolic Carbazoles**

Yuhzo Hieda, Noriyuki Hatae, Makoto Anraku, Nobuyasu Matsuura, Kazuhide Uemura, Satoshi Hibino, Tominari Choshi,* Hisao Tomida, Osamu Hori, and Haruto Fujioka*



Phenolic Carbazole Antioxidant Activity DPPH Radical ABTS[•] Radical HOMO Energy

- 133 An Efficient One-Pot Synthesis of Azuleno[2,1-*b*]pyridazines**
Dao-Lin Wang,* Jian Ma, Xiao-Ce Shi, and Jian-Ying Wu



Azulene Azuleno[2,1-*b*]pyridazine Aryldiazonium Salt Domino Reaction Cyanoacetyl-2-methoxyazulene-3-carboxylate

■ TOTAL SYNTHESIS OF HETEROCYCLIC NATURAL PRODUCTS

- 141 Polyketides
 - 145 Aromatics
 - 153 Terpenes
 - 156 Alkaloids
 - 167 Miscellaneous
-

■ BRUSH UP YOUR HETEROCYCLES

- 169 Brush Up Your Heterocycles
-

**Contributors
To This Issue**

120	Anraku, Makoto	103	Zheng, Hua
31	Asakawa, Tomohiro	114	Zhou, Kun
45	Beuzenberg, Veronica	114	Zhou, Min
120	Choshi, Tominari		
64	Davis, Darrell R.		
114	Dong, Wei		
120	Fujioka, Haruto		
3	Funahashi, Masahiro		
55	Hamada, Fumio		
45	Harwood, D. Tim		
120	Hatae, Noriyuki		
45	Hayashi, Fumiaki		
120	Hibino, Satoshi		
120	Hieda, Yuhzo		
45	Holland, Patrick T.		
120	Hori, Osamu		
103	Hu, Jiaying		
114	Hu, Qiu-Fen		
114	Hu, Wei-Yao		
31	Inai, Makoto		
86	Inami, Keiko		
45	Irie, Raku		
75	Jalali, Mozhgan Sadat		
31	Kan, Toshiyuki		
55	Kimuro, Takashi		
75	Kiyani, Hamzeh		
64	Kogami, Masakazu		
64	Koketsu, Mamoru		
55	Kondo, Yoshihiko		
114	Liu, Qiang		
133	Ma, Jian		
120	Matsuura, Nobuyasu		
45	McNabb, Paul		
86	Mochizuki, Masataka		
86	Nomura, Shogo		
55	Rao, Kunda Uma Maheswara		
45	Satake, Masayuki		
3	Seki, Atsushi		
45	Shi, Feng		
133	Shi, Xiao-Ce		
45	Suzuki, Rina		
45	Tachibana, Kazuo		
120	Tomida, Hisao		
120	Uemura, Kazuhide		
103	Wang, Baolong		
133	Wang, Dao-Lin		
114	Wang, Ye-De		
114	Wu, Hai-Yan		
133	Wu, Jian-Ying		
55	Yamada, Manabu		
114	Yan, Ke-Liang		
114	Yu, Zhen-Hua		
103	Zhang, Fanglin		
45	Zhang, Huiping		