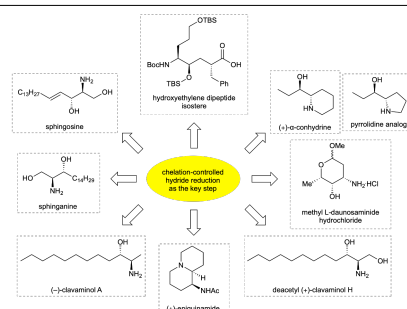


■ REVIEWS

215 Total Synthesis of Natural Products and Medicinal Molecules via Chelation-Controlled Diastereoselective Hydride Reduction of Amino Ketones

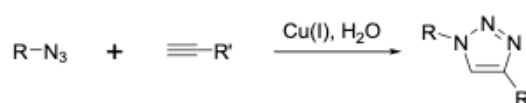
Tian Jin,* Lu Zhao, Chichong Lu,* Zhe-Bin Zheng, and Won-Hun Ham*



anti-β-Amino Alcohol Chelation-Controlled Hydride Reduction High Yield Excellent Diastereoselectivity Natural Product

229 Click Chemistry toward the Synthesis of Anticancer Agents

Ashutosh Pal* and Bimal Krishna Banik*

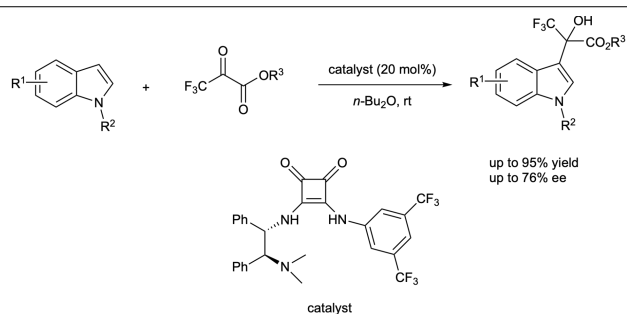


Click Chemistry Triazole Azide Alkyne

■ COMMUNICATION

267 Heterogeneously Organocatalytic, Enantioselective Friedel-Crafts Alkylation of Indole with 3,3-Trifluoropyruvate

Pei Wang,* Jinhui Ni, Yong An, Xiaojiang Chen, Weiwei Zhang, Yang Zhang, and Guorong Ma

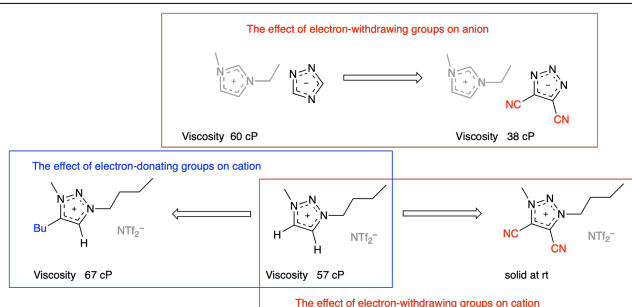


Friedel-Crafts Alkylation Heterogeneous Catalysis Indole Trifluoropyruvate Organocatalysis

■ PAPERS

275 Substituent Effects on Physical Properties of Azole Based Ionic Liquids

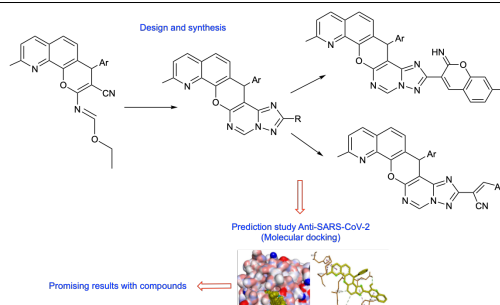
Satoshi Kitaoka,* Shinnosuke Nishinaka, and Kaoru Nobuoka



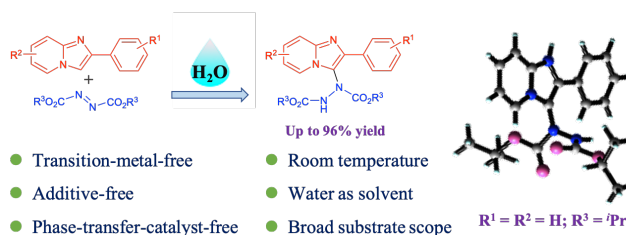
Ionic Liquid Green Chemistry Azole

288 Design and Synthesis of New Quinoline Linked to Pyranotriazolopyrimidines Conjugates as Novel Targets to Discover Promising Anti-SARS-COV-2

Faisal K. Algethami,* Salma Jilzi, Mansour Znati, Naoufel Ben Hamadi, Anis Romdhane, Mohamed R. Elamin, Lotfi Khezami, and Hichem Ben Jannet*


 Quinoline-Pyranotriazolopyrimidine Click Chemistry Microwave Irradiation *In Silico* Molecular Docking Anti-SARS-CoV-2 M^{pro}
310 Metal-Free C3-H Hydrazination of Imidazo[1,2-a]pyridine with Azodiformates in Water at Room Temperature

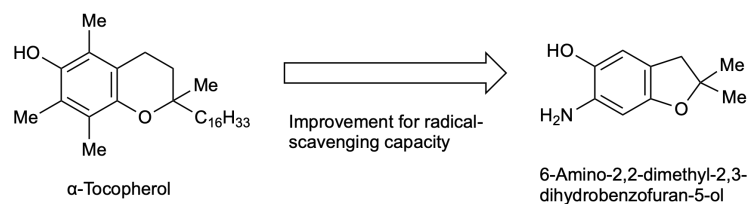
Huijie Qiao,* Liting Yang, Wuxuan Sun, Ya Chen, Jialin Wang, Yunwei Wang, and Haobo Dong



Hydrosolvent Room Temperature C-H Bond Functionalization Metal-Free Imidazo[1,2-a]pyridine

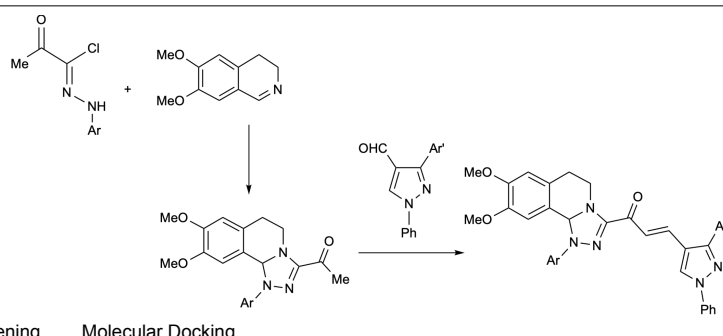
326 Synthesis and Radical Scavenging Activity of Substituted Dihydrobenzofuran-5-ols

Keiko Inami,* Hiromasa Minami, Tsunahito Hayashi, Yuta Okayama, and Masataka Mochizuki


 2,3-Dihydrobenzofuran-5-ol Radical Scavenging Activity Hydroxyl Radical α -Tocopherol Antioxidant

339 Synthesis, Cytotoxicity and Docking Simulation of Bioactive [1,2,4]Triazolo[3,4-a]dihydroisoquinoline Chalcone Derivatives

Mohamed A. M. Teleb, Nourhan Hassan, Hamdi M. Hassaneen,* Huwaida M. E. Hassaneen, Yara N. Laboud, and Fatma M. Saleh

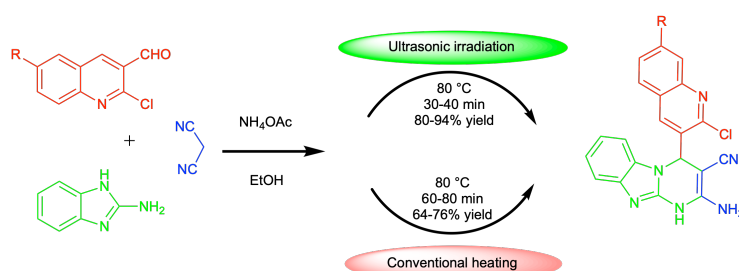


Isoquinoline Chalcone Hydrazonoyl Halide Antitumor Screening Molecular Docking

■ SHORT PAPERS

353 Rapid, Environmentally Greener and Ultrasound-Assisted One-Pot Synthesis of Quinoline, Benzimidazole and Pyrimidine Combined Moiety as Potential Antimicrobial Agents

Tejal D. Bhatt and Hitendra S Joshi*



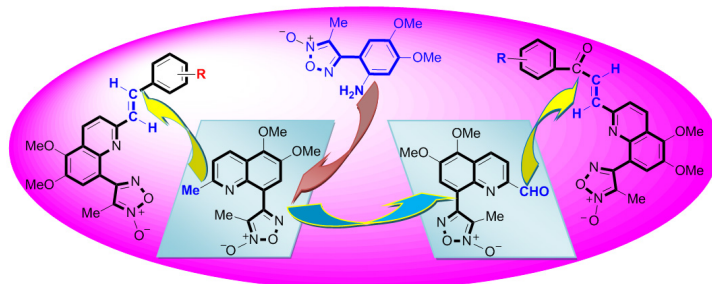
Ultrasonic-Assisted Synthesis

2-Amino-4-(substituted-quinoline)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile

Antimicrobial Activity

365 Synthesis and NMR Spectroscopic Characteristics of Novel Polysubstituted Quinolines Incorporating Furoxan Moiety

Trinh Thi Huan, Le Thi Hoa, and Nguyen Huu Dinh*



Quinoline

Furoxan

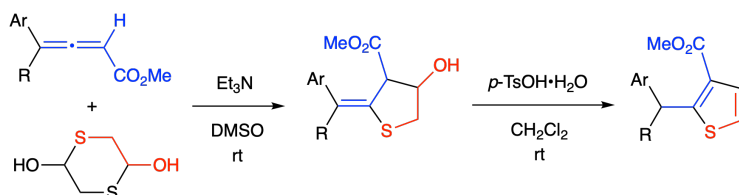
Styrylquinoline

Quinoline Chalcone

Hybrid Compound

379 Synthesis of Novel 2,3-Disubstituted Thiophenes via Tandem Thia-Michael/Aldol Reaction of Allenyl Esters

Michiyasu Nakao, Munehisa Toguchi, Ken Horikoshi, Syuji Kitaie, and Shigeki Sano*



Thia-Michael/Aldol Reaction

2,3,4-Trisubstituted Tetrahydrothiophene

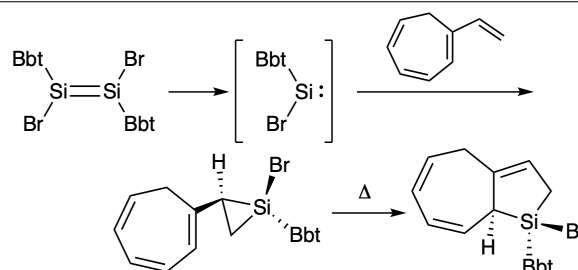
2,3-Disubstituted Thiophene

Allenyl Ester

1,4-Dithiane-2,5-diol

389 Reaction of an Overcrowded 1,2-Diaryl-1,2-dibromodisilene with 1-Vinylcyclohepta-1,3,5-triene: Isolation of a 2-Vinylsilacyclopropane Derivative and Its Thermal Conversion to a Silacyclopent-3-ene Derivative

Taku Oshiro, Yoshiyuki Mizuhata,* and Norihiro Tokitoh*



$$\text{Bbt} = 2,6\text{-}[\text{CH}(\text{SiMe}_3)_2]_2\text{-4-}[\text{C}(\text{SiMe}_3)_3]\text{-C}_6\text{H}_2$$

Silicon

Silylene

Buta-1,3-diene

Cycloaddition

■ TOTAL SYNTHESIS OF HETEROCYCLIC NATURAL PRODUCTS

- 397 Polyketides
 - 399 Aromatics
 - 401 Terpenes
 - 405 Alkaloids
 - 413 Miscellaneous
-

■ BRUSH UP YOUR HETEROCYCLES

- 415 Brush Up Your Heterocycles
-

Contributors To This Issue

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