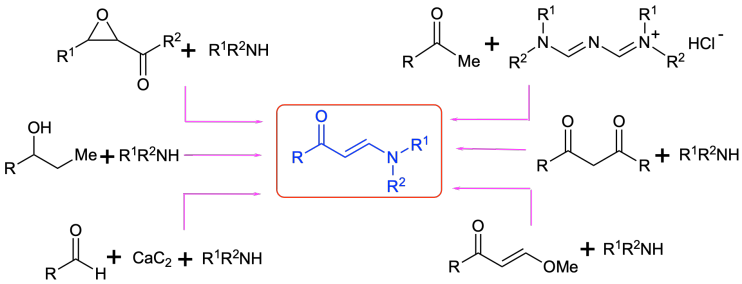
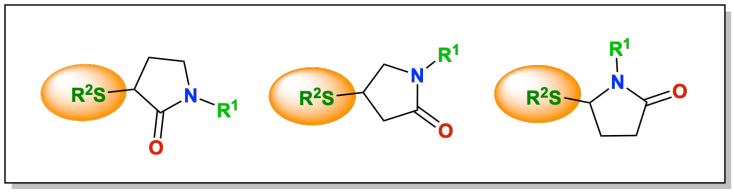
■ REVIEWS

1443 Recent Trends in the Synthesis of Enaminones
Al-Shimaa Badran, Najla A. Alshaye, Zeinab Hussain,* Aya Ahmed, and Magdy A. Ibrahim



Enaminone *Bis*-enaminone Active Methylene Ketone β-Diketone Condensation and Addition Reactions

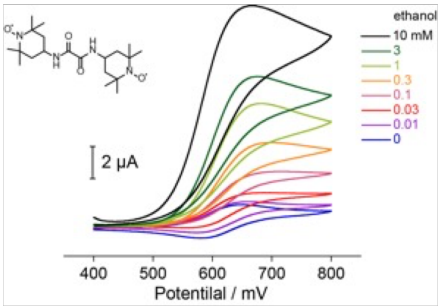
1478 Thiofunctionalized γ-Lactams
Alla I. Vaskevych* and Mykhailo Vovk



γ-Lactam Thiofunctional Derivative Synthesis Method Intramolecular Cyclization Alkaloid

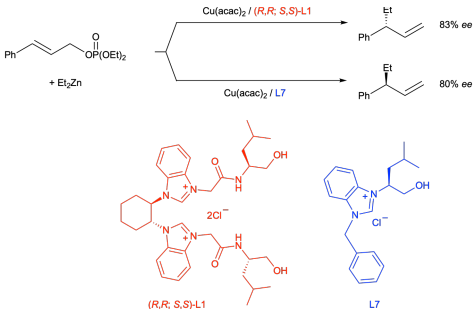
■ PAPERS

1515 Application of Highly Active TEMPO Derivatives for Electrochemical Analysis
Fumiya Sato, Masayuki Kumano, Haruka Nakano, Kyoko Sugiyama, Tsutomu Fujimura, Katsuhiko Sato,* and Kazuhiro Watanabe*



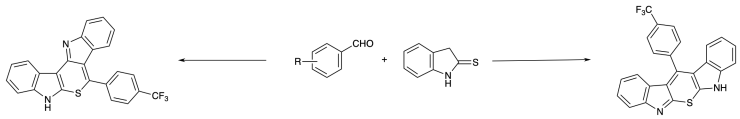
Nitroxyl Radical TEMPO Electrochemical Reaction Electrochemical Analysis Vancomycin

1525 Chiral Benzimidazolium N-Heterocyclic Carbene Ligands with Hydroxyamide- or Hydroxyalkyl-Functionalized Wingtip for Cu-Catalyzed Asymmetric Allylic Alkylation
Satoshi Sakaguchi* and Shota Takayanagi



N-Heterocyclic Carbene Benzimidazolium Compound Allylic Alkylation Asymmetric Catalyst Ligand Design

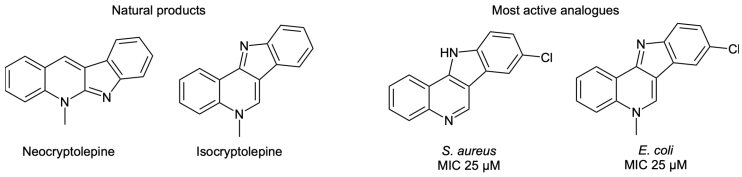
1537 **New Reactions of Indoline-2-thiones and Aryl Aldehydes: Microwave-Induced One Step Synthesis of Structurally Diverse Thiopyrano-Diindoles**
Krisztián Biró, János Tatai, and Miklós Nyerges*



Indole Thio Compound Intramolecular Cyclization Microwave

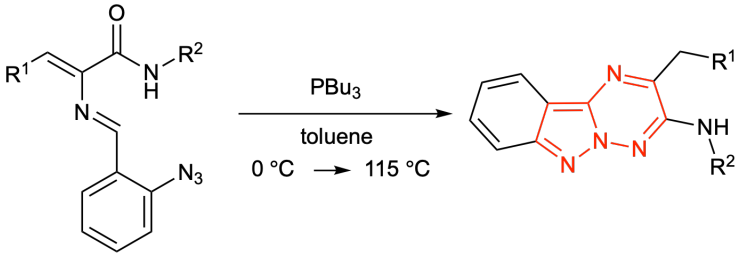
■ SHORT PAPERS

1559 **Mapping the Antimicrobial Activity of Indoloquinoline and Neocryptolepine Analogues**
Katja S. Håheim, Marte Albrigtsen, Kirsti Helland, Jeanette H. Andersen, and Magne O. Sydnes*



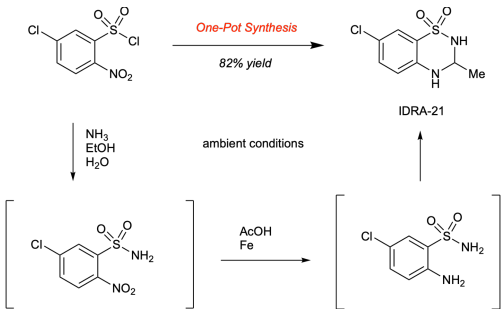
Indoloquinoline Neocryptolepine Antimicrobial Activity

1570 **A Convenient Synthesis of 1,2,4-Triazino[2,3-*b*]indazol-3-amine Derivatives via Tandem Abnormal Staudinger/Aza-Wittig/Isomerization Reaction**
Hai Xie,* Xiu-Ting Qin, Ji Li, Ya-Li Zhang, Jin-Yu Li, and Lei Zhang*



1,2,4-Triazino[2,3-*b*]indazol-3-amine Abnormal Staudinger Reaction Aza-Wittig Reaction Isomerization Reaction Synthesis

1580 **Facile Preparation of the Nootropic Agent IDRA-21 and Related Heterocycles via a One-Pot Iron-Mediated Redox Annulation**
Kyosuke Kaneda,* Hirotoshi Kabasawa, Syun Nabeki, Uki Matsui, Hiroki Sugiyama, and Takehiro Yamagishi



3,4-Dihydrobenzothiadiazine 1,1-Dioxide IDRA-21 Iron-Redox Annulation One-Pot Synthesis Facile Preparation

■ TOTAL SYNTHESIS OF HETEROCYCLIC NATURAL PRODUCTS

1589 Polyketides
1590 Aromatics
1592 Terpenes
1594 Steroids
1595 Alkaloids
1600 Miscellaneous

■ BRUSH UP YOUR HETEROCYCLES

1601 Brush Up Your Heterocycles

Contributors To This Issue

1443 Ahmed, Aya
1559 Albrigtsen, Marte
1443 Alshaye, Najla A.
1559 Andersen, Jeanette H.
1443 Badran, Al-Shimaa
1537 Biró, Krisztián
1515 Fujimura, Tsutomu
1559 Håheim, Katja S.
1559 Helland, Kirsti
1443 Hussain, Zeinab
1443 Ibrahim, Magdy A.
1580 Kabasawa, Hirotoshi
1580 Kaneda, Kyosuke
1515 Kumano, Masayuki
1570 Li, Ji
1570 Li, Jin-Yu
1580 Matsui, Uki
1580 Nabeki, Syun
1515 Nakano, Haruka
1537 Nyerges, Miklós
1570 Qin, Xiu-Ting
1525 Sakaguchi, Satoshi
1515 Sato, Fumiya
1515 Sato, Katsuhiko
1580 Sugiyama, Hiroki
1515 Sugiyama, Kyoko
1559 Sydnes, Magne O.
1525 Takayanagi, Shota
1537 Tatai, János
1478 Vaskevych, Alla I.
1478 Vovk, Mykhailo
1515 Watanabe, Kazuhiro
1570 Xie, Hai
1580 Yamagishi, Takehiro
1570 Zhang, Lei
1570 Zhang, Ya-Li