Protodepalladation as a Strategic Elementary Step in Catalysis

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Advances in Catalytic Aerobic Oxidations by Activation of Dioxgen-Monoxygenase Enzymes and Biomimetics

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Stereoselective Synthesis of Tetrahydrofuran Lignans

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C. Kuhakarn
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2,5-diaryltetrahydrofurans
2-aryl-4-benzyltetrahydrofurans
3,4-dibenzyltetrahydrofurans

Direct Trifluoromethylthiolation Reactions Involving Radical Processes

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Macrocyclic Hosts in Asymmetric Phase-Transfer Catalyzed Reactions

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Enantioselective Synthesis of 4-Amino-3-hydroxybenzopyran Flavanol Derivatives from Chalcones

Facile incorporation of stereochemical and appendage diversity for biological evaluation

An Azirine Strategy for the Synthesis of Alkyl 4-Amino-5-(trifluoromethyl)-1H-pyrrole-2-carboxylates

A-Iodosuccinimide-Mediated Oxidative Coupling of Indoles and Phenol: A Synthetic Study toward the Benzofuroindoline Moiety of Bipleiophylline
Synthesis 2018, 50, 4829–4836
DOI: 10.1055/s-0037-1610181

Divergent Reactivity of Indole-Tethered Ynones with Silver(I) and Gold(I) Catalysts: A Combined Synthetic and Computational Study

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Sequential Pyridine Dearomatization–Mizoroki–Heck Cyclization for the Construction of Fused (Dihydropyrido)isoindolinone Ring Systems

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Microwave-Assisted Syntheses of Thiophene-Based Ionic Liquids: Structural Design and Optimization

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Efficient Synthesis of Sulfinate Esters and Sulfinamides via Activated Esters of \( p \)-Toluenesulfonic Acid

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S. L. Waggoner
E. Jacobsen
C. G. Hamaker
S. R. Hitchcock*
Illinois State University, USA

One-Pot Telescoped Synthesis of Thiazole Derivatives from \( \beta \)-Keto Esters and Thioureas Promoted by Tribromoisocyanuric Acid

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M. C. S. de Mattos*
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Large-Scale Flow Photochemical Synthesis of Functionalized trans-Cyclooctenes Using Sulfonated Silica Gel

A. Darko*
S. J. Boyd
J. M. Fox*
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Synthesis of Spiro Barbiturates and Meldrum’s Acid Derivatives via a [2+2+2] Cyclotrimerization

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G. Sreevani  
Indian Institute of Technology-Bombay, Powai, India

First Example of C–H Functionalisation in the 6-Nitroazolo[5,1-c]triazine Series

E. B. Gorbunov*  
E. N. Ulomsky  
E. K. Voinkov  
R. A. Drokin  
D. N. Lyapustin  
G. L. Rusinov  
V. L. Rusinov  
V. N. Charushin  
O. N. Chupakhin  
Postovsky Institute of Organic Synthesis, Russian Federation

Diversity-Oriented Synthesis via Catalyst-Free Addition of Ketones to [e]-Fused 1H-Pyrrole-2,3-diones

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S. O. Kasatkina  
M. V. Dmitriev  
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Perm State University, Russian Federation
Synthesis of Functionalized 5-Amino-3(2H)-furanones via Base-Catalyzed Ring-Cleavage/Recyclization of 4-Cyano-3(2H)-furanones in the Presence of Water

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O. A. Shemyakina*
A. V. Stepanov
I. A. Ushakov
T. N. Borodina
A. E. Favorsky Irkutsk Institute of Chemistry, Russian Federation

19 examples
up to 99% yield

R¹ = Alk, Ar, HetAr; R² = Me; R³ = Me, Et; R²–R³ = (CH₂)₅

Chromium-Catalyzed Asymmetric Dearomatization–Addition Reactions of Halomethyloxazoles and Indoles

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H. Ji
W.-M. He*
Y. Xiong
G. Zhang*
Hunan University of Science and Engineering, P. R. of China
Shanghai Institute of Organic Chemistry, P. R. of China

9 examples
up to 70% yield
dr up to 99:1
ee up to 95%

6 examples
up to 69% yield
dr up to 99:1
ee up to 95%

1 example
63% yield
dr 99:1
ee 90%

Dynamic Kinetic Resolution of Phosphinic Acid Derivatives via Nucleophilic Substitution at Phosphorus Center

D. Strzelecka
O. Bał
P. Borowski*
M. Stankevičiūtė
Marie Curie-Skłodowska University in Lublin, Poland

54%
dr 82:18

DKR-like process based on different reactivity of each enantiomer
Visible-Light-Driven Oxidative Mono- and Dibromination of Benzylic sp³ C–H Bonds with Potassium Bromide/Oxone at Room Temperature

\[
\begin{align*}
\text{hv (0.5 W LED)} & \rightarrow \text{Ozone (y equiv)} \\
\text{KBr (x equiv)} & \rightarrow \text{KF}
\end{align*}
\]

F. V. Singh*
S. R. Mangaonkar
VIT Institute, India

Hypervalent Iodine(III)-Catalyzed Synthesis of 2-Arylbenzofurans

C. A. P. Mengersen
C. A. van der Velden
University of the Free State, South Africa

Multigram Synthesis of C₄/C₅ 3,3-Difluorocyclobutyl-Substituted Building Blocks

K. P. Melnykov
D. S. Granat
D. M. Volochnyuk
S. V. Ryabukhin*
O. O. Grygorenko
Enamine Ltd., Ukraine
Taras Shevchenko National University of Kyiv, Ukraine
## One-Pot Synthesis of Tetraazamacrocyclic Complexes from the Arnold Salt

**M. Woźniak**

Institute of Chemistry, Polish Academy of Sciences, Poland

**Synthesis** 2018, 50, 4958–4962
DOI: 10.1055/s-0037-1609915

### Reaction Details

- **Reagents**: $M^{2+}$ salt, NaOH, NH$_3$, NH$_2$ (M = Cu or Ni)
- **Condition**: one-pot in water
- **Yield**: yields up to 86%
- **Scalability**: scalable
- **Time**: short reaction and work-up time

### Illustration

![Synthesis of Tetraazamacrocyclic Complexes](image)

## Synthesis of Indole-Dihydroisoquinoline Sulfonyl Ureas via Three-Component Reactions

**S. E. Pearson**

S. M. Fillery
K. Goldberg
J. E. Demeritt
J. Eden
J. Finlayson
A. Patel

AstraZeneca, UK

**Synthesis** 2018, 50, 4963–4981
DOI: 10.1055/s-0037-1610223

### Reaction Details

- **Reagents**: DIPEA, toluene
- **Concentration of reaction mixture**: concentration of reaction mixture then 50 °C, 1–8 h
- **Yield**: 24–74% yield

### Illustration

![Synthesis of Indole-Dihydroisoquinoline Sulfonyl Ureas](image)

## Synthesis of 1-Carboxamide-1,4-dihydropyridazines via Recyclization of Hydroxypyrrolines with Semicarbazides

**D. A. Shabalin**

E. E. Ivanova
A. V. Kuzmin
M. Yu. Dvorko
E. Yu. Schmidt
B. A. Trofimov

A. E. Favorsky Irkutsk Institute of Chemistry, Russian Federation

**Synthesis** 2018, 50, 4982–4988
DOI: 10.1055/s-0037-1610239

### Reaction Details

- **Reagents**: NH$_3$, HCl, H$_2$O, TFA
- **Condition**: reflux, 2–4 h
- **Yield**: 18–86%

### Illustration

![Synthesis of 1-Carboxamide-1,4-dihydropyridazines](image)