



Release: SOS 4.28, April 2023

Content

New: Science of Synthesis Knowledge Updates

SOS is continuously updated with high-quality content using clearly defined criteria for method selection as well as established editorial processes. The Editorial Board, in conjunction with the volume editors and expert authors, reviews the whole field of synthetic organic chemistry as presented in SOS and evaluates significant developments in synthetic methodology.

This release will see the addition of **one new update volume** comprising approx. **480** printed pages.

SOS Knowledge Updates 2023/1 highlights (titles are clickable links)

The whole volume focuses on modern methods for the synthesis of **alkenes**. All contributions were edited by Prof. Guosheng Liu (Shanghai Institute of Organic Chemistry)

- **Synthesis of alkenes by palladium-catalyzed cross-coupling reactions with carbene precursors**
K. Wang and J. Wang
- **Synthesis of alkenes by cross-coupling and Heck reactions**
C.-Y. Ho and D. Raja
- **Alkyl-Mizoroki–Heck-type reactions**
A. Lei and S. Tang
- **Asymmetric π -allyl substitution reactions**
R. Jiang, P. Yang, and S.-L. You
- **Allylic C-H functionalization**
P.-S. Wang, M. Sayed, and L.-Z. Gong
- **Synthesis of alkenes by α,β -dehydrogenation**
X. Jie and W. Su
- **Synthesis of alkenes via hydrogenation of alkynes and allenes**
X. Liu, B. Liu, and Q. Liu
- **Synthesis of alkenes via metal-catalyzed hydrofunctionalizations**
Z. Cheng, Y. Zheng, and Z. Lu
- **Synthesis of functionalized alkenes by metal-catalyzed coupling of carbonyls with alkynes/allenes**
Z. Lin, R. Tao, and Y. Zhao
- **Synthesis of alkenes via radical addition reactions**
P. Chen and G. Liu

Early View Articles

Read selected new SOS reviews as soon as they have been edited.....no need to wait for a whole volume to be complete.

From now on, new SOS content will be released more often, allowing you earlier access to expert reviews of some of the most exciting and dynamic areas in organic chemistry.

Now available as **Early View**: (titles are clickable links)

- **C–H functionalization catalyzed by low-valent cobalt**

N. Yoshikai

- **C–H functionalization catalyzed by cobalt(III)/Cp* and related complexes**

T. Yoshino and S. Matsunaga

The screenshot shows the Science of Synthesis website interface. At the top, there is a navigation bar with the Thieme logo and the text "Science of Synthesis". Below this, there are tabs for "Query", "Results", "Full Text", "Explore Contents", "Teaching Resources", and "Training & Support". A search bar is prominently displayed with the text "Search by word, author name, DOI etc." and buttons for "Clear", "Draw", "Submit", and "Switch to advanced search". Below the search bar, there is a section titled "Explore Science of Synthesis" with several categorized lists of topics:

- New! Early View**: Synthesis of Alkenes by Palladium-Catalyzed Cross-Coupling Reactions with Carbene Precursors; Synthesis of Alkenes by α,β -Dehydrogenation; Iron-Catalyzed Cross Coupling of Aryl and Vinyl Electrophiles.
- Trends & Innovation**: Advances in Organoboron Chemistry towards Organic Synthesis; Asymmetric Organocatalysis; Base Metal Catalysis; Biocatalysis in Organic Synthesis; C-1 Building Blocks in Organic Synthesis; Catalytic Oxidation in Organic Synthesis; Catalytic Reduction in Organic Synthesis; C-H Activation; Click Chemistry; Cross Coupling and Heck-Type Reactions; Dual Catalysis in Organic Synthesis; Domino Transformations in Organic Synthesis; Dynamic Kinetic Resolution (DKR) and Dynamic Kinetic Asymmetric Transformations (DKAT); Electrochemistry in Organic Synthesis; Flow Chemistry in Organic Synthesis.
- Functional Groups**: X-C≡X; X=C=C-X, X₂C=C-X, C₂X₂ Compounds; Nitriles, Isocyanides, and Derivatives; Acid Halides, Carboxylic Acids, Esters, Anhydrides, Peroxy Acids; Amides and Derivatives, Peptides, Lactams; Thio-, Seleno-, and Tellurocarboxylic Acids, Imidic Acids, Ortho Acids; Ketenes; Ketene Acetals, Yne-X Compounds; Aldehydes; Ketones; Heteroatom Analogues of Aldehydes and Ketones; Quinones and Heteroatom Analogues; Acetals: Hal/X and O/O, S, Se, Te; Acetals: O/N, S/S, S/N, and N/N and Higher Heteroatom Analogues; Arene-X (X = Hal, O, S, Se, Te, N, P); X-Ene-X (X = F, Cl, Br, I, O, S, Se, Te, N, P); Ene-Hal, and Ene-O Compounds; Fluoroalkanes; Ene-X Compounds (X = S, Se, Te, N, P); Chloro-, Bromo-, and Iodoalkanes; Alcohols; Alkyl Ethers; Peroxides.
- Heteroarenes**: Small-Ring Heterocycles, Monocyclic Five-Membered Heteroarenes with One Heteroatom; Fused Five-Membered Heteroarenes with One Heteroatom; Five-Membered Heteroarenes with One Chalcogen and One Additional Heteroatom; Five-Membered Heteroarenes with Two Nitrogen or Phosphorus Atoms; Five-Membered Heteroarenes with Three or More Heteroatoms; Six-Membered Heteroarenes with One Chalcogen; Six-Membered Heteroarenes with One Nitrogen or Phosphorus Atom; Six-Membered Heteroarenes with Two Identical Heteroatoms; Six-Membered Heteroarenes with Two Unlike or More Than Two Heteroatoms, Larger Hetero-Rings.
- Hydrocarbons**: Polynes, Arynes, Erynes, Alkynes; Cumulenes, Allenes; Arenes, Quasialkenes, Annulenes, Polyenes; 1,3-Dienes; Alkenes; Alkanes.

Content Alerts

To be informed every time new content is released, sign up for the *Science of Synthesis Alerts* [here!](#) You will then receive an email whenever new content is added to SOS

The image shows a content alert email template. At the top, it says "Science of Synthesis: Your expert guide to making molecules" and features the Thieme Science of Synthesis logo. Below this is a yellow banner with the SOS logo and the text "We transform synthesis!". The main body of the email is addressed to "Dear SOS User," and says "We're happy to show you the newest content in Science of Synthesis." It is signed "Best regards, Your Science of Synthesis Team". Below the signature, there is a section for a featured article titled "Benzo[*b*]phospholes" by R. A. Aikens and J. A. Joule, with several chemical structures of benzo[*b*]phosphole derivatives. A "Read more" button is located at the bottom of the featured article section.