Release: SOS 4.19, October 2020

What's New?

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 **two new update volumes** comprising approx. **900 printed pages.**

SOS Knowledge Updates 2020/1 and 2020/2 highlights:

In organometallic chemistry, there are updates on **allylsilanes** (K. Okamoto and K. Ohe), **germoles** (T. Müller), and **stannoles** (I.-M. Ramirez y Medina, W. Kipke, J. Makow, and A. Staubitz).

In the area of heterocycle synthesis, new content includes reviews on **benzopyrylium salts** (F. Wu and S. Zhu), **purines** (Y. Liang, Z. Wen, M. Cabrera, A. H. Howlader, and S. F. Wnuk), **pyrimidines** and **quinazolines** (J. M. Campagne and E. Leclerc), **phenazines** (N. B. Ambhaikar), **benzo[*b*]thiophenes** (N. Yoshikai, C. M. Rayner, and M. A. Graham) and **1,2-dioxolanes** (V. M. Dembitsky and I. A. Yaremenko).

Other new content includes chapters on the **synthesis of amides from acylboron compounds** (A. Osuna Gálvez and J. W. Bode), **transamidation and amidation of activated amides and esters** (G. Li and M. Szostak), **aza-Diels-Alder reactions** (W. Maison), **synthesis of amines by rearrangement** (C. I. Ochoa and U. K. Tambar), **1-nitrogen-functionalized 2-haloalkenes** (M. L. Tong, K. Kunz, M. Jaschinski, K. Holzschneider, I. E. Celik, and S. F. Kirsch), **cross-dehydrogenative coupling of terminal alkynes** (T. Tian and Z. Li), **hydrocarbon polymers** (X.-Y. Wang and X.-L. Sun), and **alkane metathesis** (G. Liu and Z. Huang).
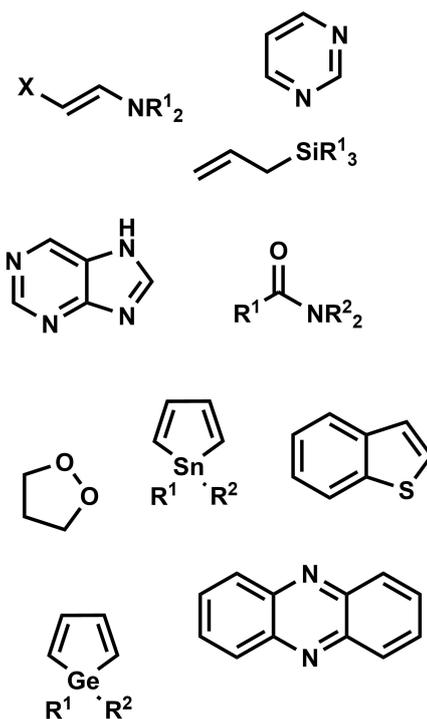
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Software/User Interface

New Drawing Tool: SOS now incorporates the chemical drawing tool Marvin JS from ChemAxon. This intuitive and easy-to-use interface allows quick input of structures and reactions. Structures can still be uploaded as cdx or mol files or can be copy/pasted from ChemDraw using "Copy as SMILES"/Ctrl+V.

The **"Name-to-Structure"** feature, allowing rapid input of complex structures, has been improved.

Improved Structure and Reaction Search Options: Users can now predefine what sort of structure/reaction searches they want to do and can choose between exact, substructure, and "smart" searches. The smart search includes all exact and substructures, but also includes related structures/reactions that may be of interest. Ranking within the hitlists has also been improved.

Substructure Highlighting: When the structure searched for is part of a more complex molecule, in the "single step reactions" view, the substructure is now highlighted, making it easier to see the relevance of the result.

InChIKey Search: As well as drawing structures, the compounds included in SOS can now be searched using InChI (International Chemical Identifier) Keys. InChI Keys (either copy/pasted from "Copy as InChI Key" in ChemDraw or copy/pasted from elsewhere) can be searched using the metadata operator "inchikey:" within the text search.

Name Reaction Search: This feature is available in the advanced search and is currently under development. *Please note that not all name reactions are currently included and not all examples of each reaction are indexed.*

Easier pdf Download: The option to download whole chapters as pdfs has been made more prominent.

Shibboleth/OpenAthens: SOS now supports Shibboleth/OpenAthens to allow easier access to SOS from outside your institution's network.

Internet Explorer: To allow SOS to take advantage of newer technology, Internet Explorer is no longer supported. Please use a more modern browser such as Edge, Chrome, Firefox, Safari, or Opera.

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