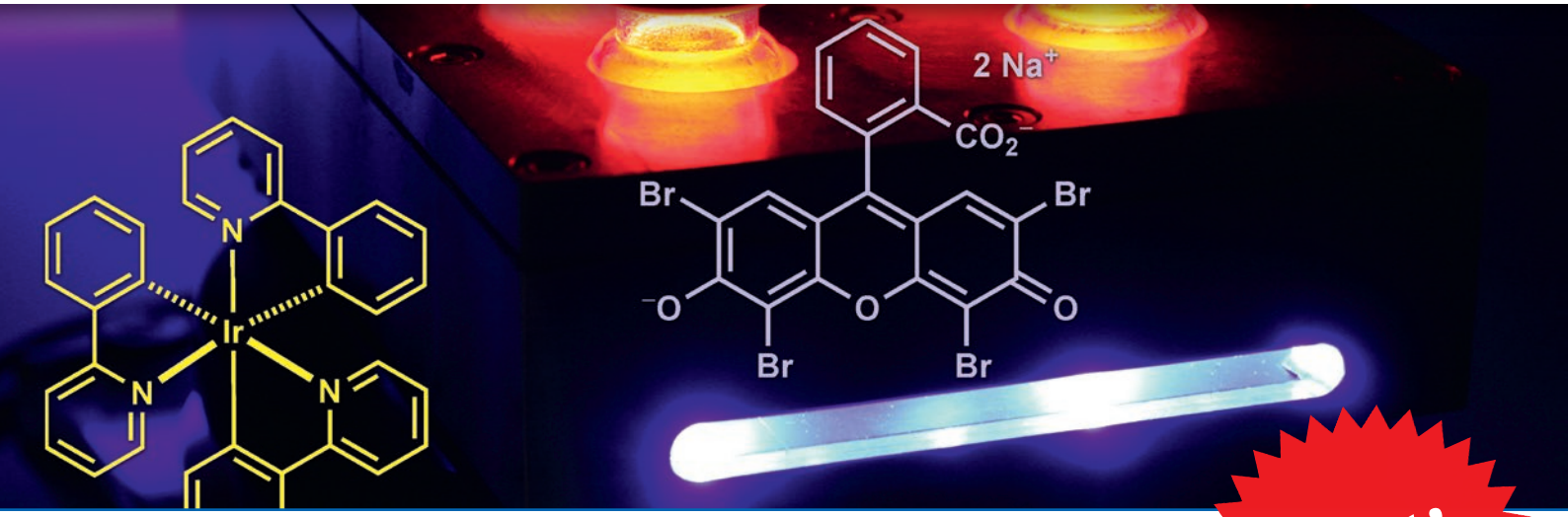


Release: SOS 4.20, March 2021

What's New?

Content

New: Free Radicals: Fundamentals and Applications in Organic Synthesis, Vol. 2

Radical chemistry is undergoing a renaissance, both in the selective generation of organic radicals and in their use in organic synthetic reactions. **Free Radicals: Fundamentals and Applications in Organic Synthesis**, edited by **Louis Fensterbank** and **Cyril Ollivier**, both renowned radical chemists based at the Sorbonne University in Paris, presents these key developments, reviewed by some of the most well-known names in the field, in a readily accessible and practical fashion.

Topics covered in Volume 2 include:

- **Organic Electron Donors in Electron-Transfer Reactions**
- **Samarium-Mediated Reductions**
- **SET Oxidation and Reduction Involving other Metal Complexes**
- **Redox-Active Ligands in Catalysis for SET Processes**
- **Radical–Polar Crossover Reactions**
- **Photochemical Generation of Carbon-Centered Radicals**
- **Radical Cascade Reactions**
- **Selective Radical Fluorinations**
- **Electrochemical Organic Synthesis via Radical Species**
- **Radical Chemistry in Flow**
- **Radical–Radical Cross-Coupling Reactions**
- **Asymmetric Catalysis of Radical Reactions**
- **Reversible Deactivation Radical Polymerization**

Prof. Louis Fensterbank **Dr. Cyril Ollivier**

Note: This release contains Vol. 2; Vol 1 will be included in the next release of Science of Synthesis.

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 2020/3 and 2021/1 highlights:

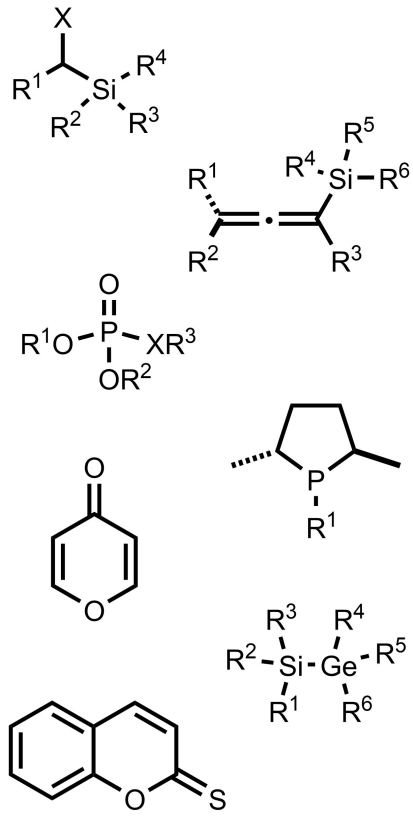
Updates on the synthesis of **α-silyl alcohols, ethers, and amines** (Q.-W. Zhang, K. An, and W. He) and **allenylsilanes** (N. Krause and N. Arisetti), **metalated germanium compounds** (C. Marschner), **germylamines** (C. S. Weinert) and **silylated germanes** and **silylated stannanes** (J. A. Hlina).

Chapters covering the synthesis of a range of chalcogen-containing six-membered heterocyclic systems, including **pyranones and pyranthiones** (F. V. Singh), **2*H*-1-benzopyran-2-ones** and **2*H*-1-benzopyran-2-thiones** (B. Cheng and T. Wang), **1*H*-2-benzopyran-1-ones**, **3*H*-2-benzopyran-3-ones**, **6*H*-dibenzo[*b*,*d*]pyran-6-ones**, **9*H*-xanthen-9-ones**, and **9*H*-xanthene-9-thiones** (W.-C. Gao and J. Tian), **3-oxidopyrylium salts** and their thio and benzo-fused analogues (B. Jiang and C.-F. Zhu), **benzothiopyrylium salts** (J.-M. Lu and L.-X. Shao), **thiopyranones and thiopyranthiones** (Z. Wang, T. Shi, and H.-H. Zhang), **selenopyrylium and benzoselenopyrylium salts** (W. Wei and X. Zhao), and **telluropyrylium and benzotelluropyrylium salts** (Q. Tan)

A new chapter on the **applications of chiral scandium complexes in asymmetric synthesis** (W. Li, X. H. Liu, and X. M. Feng).

Updates on the synthesis of **1-(organochalcogeno)-2-(organooxy)alkenes**, **1-nitrogen-functionalized 2-(organooxy)alkenes**, and **1-phosphorus-functionalized 2-(organooxy)alkenes** (J. Grimmer, S.-C. Krieg, and G. Manolikakes).

Updates on the synthesis of **cyclic phosphines** (D. Gudat), as well as **phosphates and thiophosphates** (B. A. Kashemirov, K. Błażewska, K. Justyna, J. Lyu, and C. E. McKenna).



Software/User Interface

Teaching Resources: We have collected some direct links to Science of Synthesis chapters that are useful as a resource for the preparation and teaching of advanced organic chemistry courses. The articles on particular topics (e.g., types of transformation, named reactions) can be used as a reference resource when preparing course material. They also serve as an excellent starting point for students for further reading around a topic. Furthermore, Science of Synthesis is a useful resource to students who are assigned coursework such as compiling a literature review or when writing an introduction to a thesis. The list of links is available directly **within SOS** or as a **pdf file**.

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