



Signaling Molecules: Hydrogen Sulfide and Polysulfide

Guest Editor:

Prof. Dr. Claus Jacob

Division of Bioorganic Chemistry,
School of Pharmacy, Saarland
University, D-66123
Saarbruecken, Germany

Deadline for manuscript
submissions:

closed (15 May 2019)

Message from the Guest Editor

Dear Colleagues,

During the last decade, various inorganic polysulfides (H_2S_x , $x \geq 2$) have emerged as potential and potent cellular signalling molecules. Numerous (bio)chemical reactions and biological activities have been ascribed to these astonishingly simple reactive sulfur species (RSS), ranging from chemopreventive and antioxidant properties to intricate posttranslational protein modifications and redox signalling.

Indeed, whilst inorganic polysulfides are—chemically speaking—among the most “primitive” molecules, *i.e.* sulfur chains composed exclusively of sulfur and some hydrogen, their reactivity resembles the one of H_2S on the one side and that of organic polysulfides/polysulfanes (RS_xR , $x > 2$).

Since these RSS are intrinsically difficult to detect. As part of this Special Issue, chemistry and biochemistry will join up to solve some of the challenges of sulfur redox biology, from the appearance, activities, and possible applications of H_2S and H_2S_x to the interactions of such species with thiols, disulfides, selenium, cysteine proteins, and redox signalling via the cellular thiolstat.

Prof. Dr. Claus Jacob
Guest Editor





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt

Institute of Pharmaceutical
Biology and Phytochemistry,
University of Münster,
Corrensstrasse 48, D-48149
Münster, Germany

Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 30th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

Author Benefits

Open Access: free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High Visibility: indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [PubMed](#), [MEDLINE](#), [PMC](#), [Reaxys](#), [CaPlus / SciFinder](#), [MarinLit](#), [AGRIS](#), and [other databases](#).

Journal Rank: JCR - Q2 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

Contact Us

Molecules Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/molecules
molecules@mdpi.com
[X@Molecules_MDPI](#)