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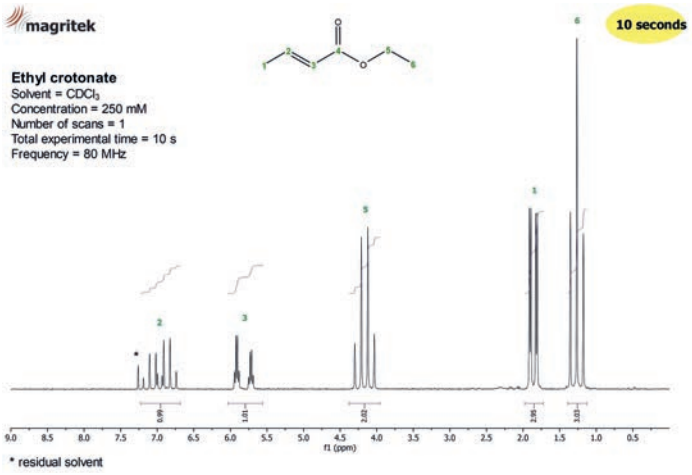
Discover the Benchtop NMR Spectroscopy Solutions from Magritek

Powerful NMR Spectrometers for your Chemistry Lab

Don't waste time anymore sending your samples out to the NMR facility, you can measure them immediately in your chemistry lab with a Spinsolve benchtop spectrometer.

The Spinsolve is a revolutionary multinuclear NMR spectrometer that provides the best performance of any benchtop NMR system available today. With its small footprint, low weight, and the ability to operate alongside other analytical instruments, you can have powerful, high resolution NMR spectroscopy immediately available in your chemistry lab on a standard laboratory bench or even in a fume hood.



^{1}H spectrum of ethylcrotonate measured with a Spinsolve 80 MHz.

The highest performance

Thanks to the unsurpassed homogeneity of Magritek's magnets, Spinsolve systems have an outstanding line shape that is guaranteed to be <0.5 Hz at 50% and <20 Hz at 0.55% of the peak height. By achieving sharp and high peaks we not only deliver the best resolution but also the highest sensitivity. The Spinsolve makes it possible to measure samples with concentrations down to the millimolar range in just minutes.

Spinsolve 80

Spinsolve 80 maintains the highest performance and quality standards you've come to expect from Spinsolve, but now with an unparalleled 80 MHz magnet at its core.

- ✓ Highest field strength (80 MHz) of any benchtop NMR.
- ✓ Outstanding resolution (0.5 Hz/20 Hz).
- ✓ Superior sensitivity (1H dual channel > 200:1 for 1% Ethyl Benzene).
- ✓ Spinsolve 80 is capable of performing even the most advanced multi-nuclear methods with just a single click. Experiments enabled include COSY, DEPT, HSQC-ME, and HMBC.

Spinsolve ULTRA

The Spinsolve ULTRA models have further enhanced line shape (< 0.2 Hz at 50% of the peak height) to provide the optimum

conditions for solvent suppression methods to work. The ULTRA models are ideal to quantify sub-millimolar concentrations of substances dissolved in neat protonated solvents. Besides saturating the signals of the solvent, which can be more than 10.000 larger that the signals of interest, the suppression method offered with the Spinsolve also includes carbon decoupling to eliminate the signal of the carbon satellites of the main solvent signals.

Online reaction monitoring by benchtop NMR

Spinsolve is ideal for chemists in academia and industry who need to carry out reaction completion checks, identification, structure elucidation, quantification, purity measurements, online reaction monitoring and quality control (QA/QC).

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20th Anniversary of *Science of Synthesis*: Your Expert Guide to Making Molecules

2020 marks the 20th anniversary of *Science of Synthesis* (SOS) the online synthetic methodology review compendium used by synthetic chemists worldwide. SOS, the successor to the well-known *Houben-Weyl* series was established in 2000 by an esteemed Editorial Board of international chemistry experts including Nobel Prize winner, Ryoji Noyori. Today under the guidance of Editor-in-Chief, Alois Fürstner, a team of eminent editors' commission quality content from expert authors and ensure the selection of useful and practical methods. Chemists therefore have quick access to thorough and quality overviews on the entire range of organic synthesis topics saving them hours of searching and literature research. SOS is considered the place to begin when writing a thesis, preparing a talk, writing a paper, starting out in a new area of chemistry or preparing consultancy work.

A Place to Begin

SOS is a multi-authored reference work of synthetic methods that offers "a place to begin". It comprises the largest collection of evaluated methods in organic synthesis worldwide. Its elegant, didactic presentation of synthetic methodology means it is an essential treatise for organic chemistry students, lecturers, and researchers.

SOS is organized in a logical hierarchical system based on the target molecule to be synthesized. The critical coverage of methods is supported by information intended to help the user choose the most suitable methods for their application, thus providing a strong foundation from which to develop a successful synthetic route. Within each category of product, illuminating background information such as history, nomenclature, structure, stability, reactivity, properties, safety, and environmental aspects are discussed along with a detailed selection of reliable methods. Each method and variation is accompanied by reaction schemes, tables of examples, experimental procedures, and a background discussion of mechanistic rationale, stereochemistry, scope of the reaction described and its limitations, and functional group compatibility. All published results from journals, books, and patent literature from the early 1800s until the year of publication are considered by the authors, who are among the leading experts in their field.

Evaluation of Methods by Experts

The SOS Editorial Board comprises expert chemists from academia and industry: E. M. Carreira (ETH Zurich), M. Faul (Amgen Inc.), A. Fürstner (Editor-in-Chief, MPI/Mülheim), S. Kobayashi (University of Tokyo), G. Koch (Topadur Pharma, AG), G. A. Molander (University of Pennsylvania), C. Nevado (University of Zurich), B. M. Trost (Stanford University), S.-L. You (Shanghai Institute of Organic Chemistry). The Editorial Board's overarching goal is to make the suite of SOS resources the first and foremost focal point for critically evaluated information on chemical transformations for those individuals involved in the design and synthesis of organic molecules. Over 56 volume editors and 2,000 authors worldwide have contributed to the series over the last 20 years.

Online, Updated, and Topical

The online version (web-based interface) of SOS enables text, structure, substructure, and reaction searching via a simple interface with powerful functionality. Continual updating of the electronic version means that the content of SOS remains pertinent and relevant to the synthetic organic chemist's needs. Also supplementing current content with special topics acknowledges the broad spectrum of organic chemistry today and the need for chemists to appreciate many different peripheral scientific fields in addition to the core subject area. The electronic product is designed so that it:

- Provides an exclusive overview of the synthetic chemistry literature
- Provides easy access to the best and most reliable synthetic methods in organic and organometallic chemistry
- Allows researchers to tailor their structure, text and reaction searches to accommodate their chemical information needs
- Provides personalized support for scientific queries through a professionally staffed (PhD chemists) Editorial Office and technical support desk
- Supports the chemical community by responding to its need for relevant and value-added synthetic chemistry information

The SOS Advisory Board comprises experts who have significant experience of chemical information systems in both industry and academia: G. Baysinger (Stanford University), L. Betschart (ETH Zurich), J. Currano (University of Pennsylvania), C. Keil

(Pfizer), X. Li (CAS, China), Y. Li (MIT), and D. Wrublewski (Caltech). They regularly contribute to discussions regarding the development of the electronic product.

Women in Chemistry Award
In addition to providing an important editorial contribution for the chemistry community, the dynamic and forward-thinking SOS Editorial Board founded the first major international synthetic chemistry award for Women in Chemistry. As a result, the first award was presented to Sarah Reisman (Caltech) at the 21st ESOC in Vienna in 2019.

SOS: *We Transform Synthesis!*
Over 20 years some 96,000 "pages" of evaluated information have been published including over 2 million molecules, 425,000 selected reactions and no less than 54,000 experimental procedures. SOS has proven to be the perfect research companion for the organic synthetic chemist and will continue to provide the chemistry community with valuable synthetic methodology reviews in the years to come! Anyone interested in having free trial access to the online product for two weeks at their institution should contact the publisher.

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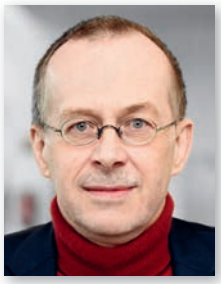

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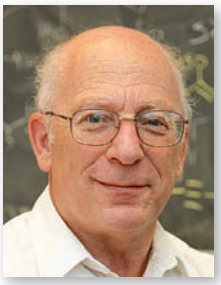

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SusChem Strategic Research and Innovation Agenda (SIRA) 2019: Technology priorities towards 2030 for a better future of Europe

SusChem launched its new SIRA at the SusChem 2019 Stakeholders event "Sustainable Chemistry to solve global challenges: the new SusChem Strategic Research and Innovation Agenda" on 27 November, in Brussels. The document outlines priorities for sustainable chemistry-related research, development and innovation with the aim of building sustainable societies in Europe and globally.

"Sustainable chemistry is absolutely key to the future and the new SusChem SIRA addresses important topics for the future of Europe," commented SusChem Chairman Dr. Markus Steilemann. "This new SIRA will further stimulate the chemical sector to find the right answers to the pressing challenges our world is facing, such as climate change and protecting the environment and human health".
"Over 100 experts, from across Europe and across the innovation ecosystem, were involved in formulating the technology priorities outlined in the new SusChem SIRA" said Vivi Filippousi, SusChem Manager at Cefic, praising the extensive co-creation and collaboration resulting in the new SIRA. "The journey towards the new SIRA was also supported by the SusChem Board members, the SusChem network of National Technology Platforms (NTPs) as well as the European Commission with consistent feedback along the way".
Three interconnected challenge areas are identified in the new SusChem SIRA: circular economy and resource efficiency; a low carbon economy; and environmental and human health. Connecting with these three overarching priorities, SusChem's technology priorities and their specific challenges are clearly articulated in the document. With a horizon of 2030, the SusChem SIRA presents innovation priorities that could be implemented under the next European Commission Framework Programme for Research and Innovation (Horizon Europe) and other large-scale collaborative initiatives. The technology priorities range across Advanced Materials, Advanced Processes as well as the implementation and co-development of Enabling Digital Technologies within the chemical sector and associated sectors and value chain partners. Horizontal topics are equally addressed and highlighted, including sustainability assessment innovation, safe-by-design for chemicals and materials, as well as building on education and skills capacity in Europe.
During the Stakeholders event, discussions focused on digital transformation opportunities in the chemical and industrial biotechnology sector, the future role of Horizon Europe partnerships and platforms, and the requirements to enable the circular economy and the low-carbon energy transition.

EU alignment

"This is an important day for SusChem – you have shaped expectations," said Peter Dröll, Director of Prosperity at the European Commission's Research and Innovation directorate. "Horizon Europe is about sustainability and supporting the economic agenda of the new Commission."
The new SusChem SIRA is clearly aligned with the priorities of the new Commission and, in particular, enabling the Green Deal agenda and broadening the scope and implementation of digital technologies across industry and society to make Europe fit for the digital age. "Impact is key, and it is highlighted throughout the new SusChem SIRA," he concluded.
Marco Mensink, Cefic's Director General encouraged everyone to read the document. "It is full of gems," he said. "It describes a wealth of solutions that the EU chemical sector can provide for a truly sustainable future."

The work starts now

In her closing remarks, Vivi Filippousi recognised the complexities of the road ahead and the even bigger opportunities presented through the new SusChem SIRA saying: "2050 should not be the target for achieving sustainability, but 2030; this will not only require improving existing practices but coming up with new ones."
"The new SIRA is just the beginning. Together, we need to make it real and provide vital sustainable chemistry solutions that can effectively address global challenges."

The new SusChem SIRA is now available:
suschem.org/files/library/SIRA-2020/SusChem_SIRA_07_02_V02_Spread_interactif.pdf

Check out the presentations of the SusChem Stakeholders event 2019:
http://suschem.org/events/suschem-stakeholders-event-2019/presentations

More information

suschem.eu
suschem.ch

SUSCHEM
European Technology Platform for Sustainable Chemistry

SusChem Mission

SusChem's vision is for a competitive and innovative Europe where sustainable chemistry and biotechnology together provide solutions for future generations.
SusChem's mission is to initiate and inspire European chemical and biochemical innovation to respond effectively to global challenges by providing sustainable solutions.
The common objectives between the SusChem European Technology Platform and
SusChem National Technology Platforms network include:

- Bringing together industry, academia, civil society and national governments to address European and global challenges and improve industrial competitiveness;
- Contributing to develop an EU-wide common strategy to support the position of the chemical sector with the European Commission and other European Institutions ("bottom-up" approach);
- Aligning priorities of the ETP and of the NTPs to gain broader support (complementary "top•down" activity);
- Facilitating transnational collaboration within research and innovation projects and the international transmission of skills;
- Facilitating networking, cluster creation, project teams, etc. to enhance participation in EU funding programmes, especially for SMEs.