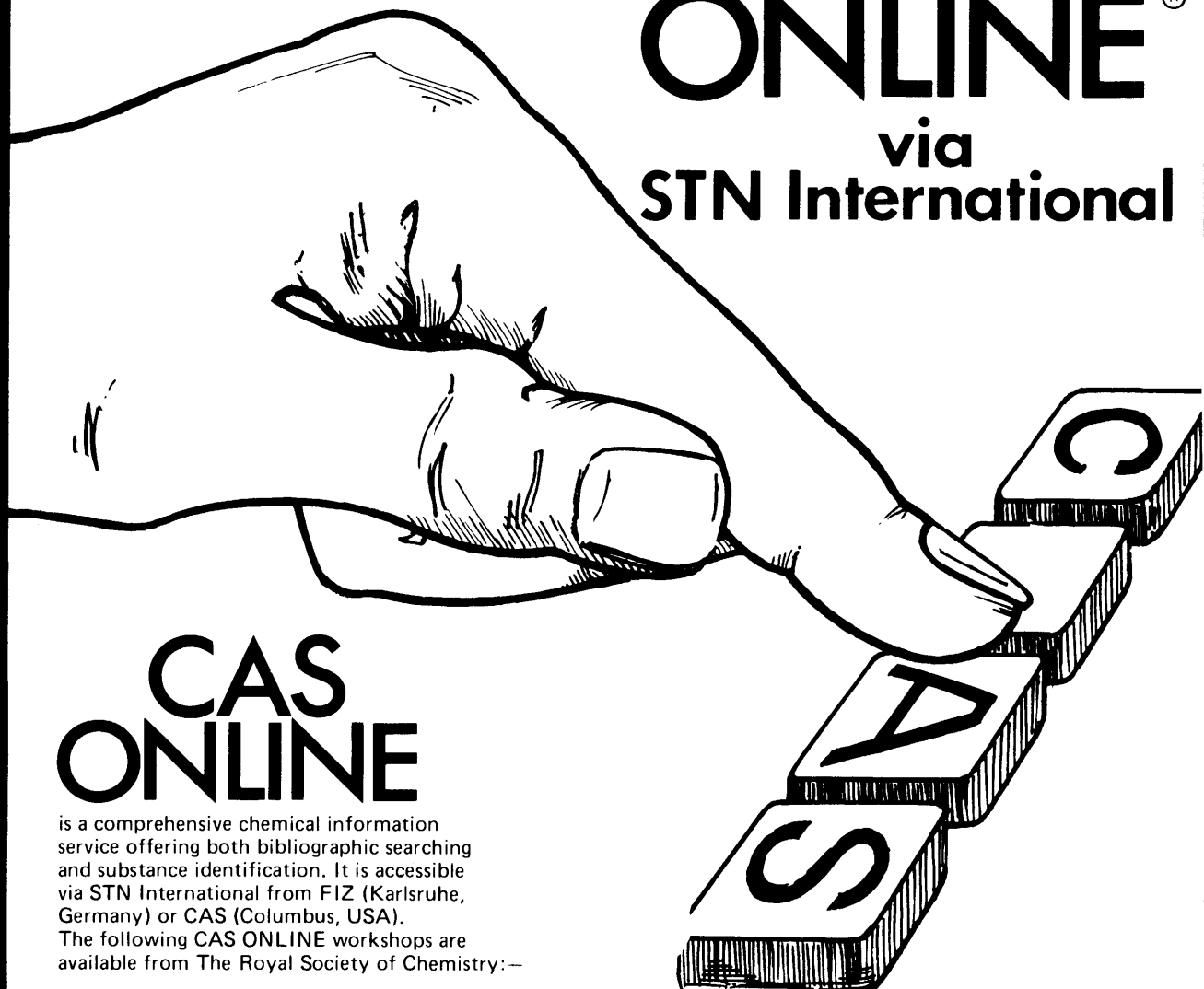


# Hands on..... CAS ONLINE<sup>®</sup> via STN International



## CAS ONLINE

is a comprehensive chemical information service offering both bibliographic searching and substance identification. It is accessible via STN International from FIZ (Karlsruhe, Germany) or CAS (Columbus, USA).

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... designed especially for chemists, engineers, and other scientists who have little or no experience in online searching. Topics covered include: what basic tools are needed to specify your search requirements, what information can be searched using those tools, and how to evaluate the results of your search. Hands-on practice is included.

### **The CA File—Basic Level—**

... covers the basics needed to search the bibliographic and index information in the CA File on CAS ONLINE. The course is designed for librarians and other information searchers who have experience in online searching but are new at searching the CA File on CAS ONLINE. Topics covered include command language, searchable and displayable fields, and the basic techniques needed to use the CA File effectively. Hands-on practice is included.

### **Search Strategy in the CA File—**

... designed for the searcher who has experience in searching the CA File on CAS ONLINE and/or has attended an introductory CA File Workshop. The course will focus on search strategy, data base content, CAS's indexing policies, and the use of search aids. Knowledge of the command language is required.

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... covers substance identification in the Registry File, providing access to over 6.5 million substances. You will learn to search by structure or substructure diagram, or by chemical names. Answers include structure diagrams, Registry Numbers, synonyms, CA Index Names, and molecular formulas, as well as the ten most recent CA citations for each Registry Number. Hands-on practice is included.

For further details, contact:—

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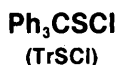
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# New Protecting Reagents

## The Tritylsulfenyl Moiety For New Synthetic Applications

Recently B.P. Branchaud<sup>1</sup> described some most interesting synthetic applications of **tritylsulfenyl chloride** (triphenylmethanesulfonyl chloride, TrSCl) and **tritylsulfenamide** (triphenylmethanesulfenamide, TrSNH<sub>2</sub>). Somewhat surprisingly, they are crystalline, stable reagents.



TrSCl reacts with amines to yield the corresponding tritylsulfenamides in which the nitrogen is non-basic and stable to aqueous alkali and acid. Yet the TrS group is easily cleaved under a variety of mild conditions, making it a potentially important nitrogen-protecting group. Its syn-

thetic utility is illustrated in the elegant synthesis of the bicyclic amine,  $\delta$ -coniceine.

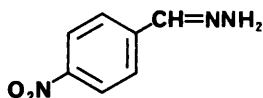
Carbonyl compounds react with TrSNH<sub>2</sub> to form tritylsulfenimines and thus enable the mild reductive amination of carbonyls, with the added feature of introducing a protected form of nitrogen.

### Reference:

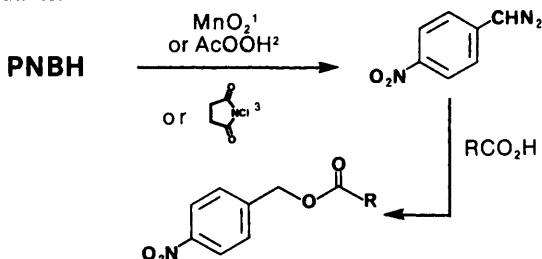
1) Branchaud, B.P. *J. Org. Chem.* **1983**, *48*, 3531, 3538.

- 27,696-0** Triphenylmethanesulfonyl chloride, 99%  
25g \$19.80; 100g \$74.00
- 27,701-0** Triphenylmethanesulfenamide, 97%  
1g \$7.20; 5g \$24.05

## 4-Nitrobenzaldehyde Hydrazone (PNBH) Precursor to 4-Nitrophenyldiazomethane



The use of 4-nitrobenzyl esters as protecting derivatives for carboxylic acids is well established. 4-Nitrobenzyl esters are often crystalline, stable derivatives, which are readily cleaved by mild, reductive methods. They are easily prepared under neutral conditions by treatment of the free acids with 4-nitrophenyldiazomethane, formed by oxidation of **4-nitrobenzaldehyde hydrazone** with a variety of oxidants:<sup>1-3</sup>



These esters are readily cleaved by various methods, including acid hydrolysis,<sup>4</sup> reduction with zinc and acid,<sup>5-7</sup> hydrogenolysis,<sup>8-10</sup> electrolysis,<sup>11</sup> and other means of chemical reduction.<sup>12,13</sup>

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- 28,118-2** 4-Nitrobenzaldehyde hydrazone, 98%  
5g \$11.85; 25g \$39.55



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