

## Better understanding users in a research setting.

Abstract: There are a wide variety of ways for librarians and information specialists to develop an understanding of their users and their information needs. This poster session will review some of the tools available to subject specialists in a research institute setting. Some uncommonly used approaches will be described, including:

1. Reviewing recent research publications for ISI corrections on a continuing basis.
2. Attending classes - setting up a web page for assigned journal references.
3. Analyzing cited references in research publications for books not held.
4. Preparing custom new book lists.
5. Comparing search results from different indexing/abstracting services

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<http://library.caltech.edu/collections/chemistry.htm>

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### 1.Reviewing research publications in Web of Science for corrections.

I have been reviewing the Web of Science records, for articles authored by faculty members in Caltech's Division of Chemistry and Chemical Engineering, for several years. Since the quality control of the input process depends on human comparison of the original article and a scanned/OCR record, significant errors are possible. In the records below, the erroneous record elements are designated with an \*\*. Each error is reported to the ISI Help Desk, with a copy to the affected author. ISI is now able to make corrections immediately to the WoS database.

Oxygen-mediated regulation ...

... \*\*We YW ... \*\*Wold A

J. CELL. PHYSIOL. 2001

Authors should read Wei YW & Wold B

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Development and application ...

Toste FD ... \*\*

ABSTRACTS OF PAPERS ...

223: 160-ORGN Part 2 APR 7 2002

2nd author's name omitted. Please add: Trost BM

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Steidel CC, Giavalisco M, Pettini M, et al.  
Spectroscopic confirmation of a population ...  
\*\*ASTROPHYS J  
462 (1): L17-& Part 2 MAY 1 1996

This article is cited 350 times in NASA ADS database, but only 146 times in WoS with Astrophys J as the abbreviated journal title. WoS has an additional 248 cites with ApJ as the abbreviated journal title.

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TOTAL SYNTHESIS OF (+)-K252A ...  
WOO\*\* JL, STOLTZ BM, DIETRICH HJ  
J AMERICAN CHEMICAL SOCIETY  
117: (41) 10413-10414 OCT 18 1995

First author's last name is: WOOD

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QM(DPT)\*\* and MD studies ...  
Hua X\*\* ..., Che J\*\*  
NANOTECHNOLOGY  
11: (2) 85-88 JUN 2000

The title should read QM(DFT)

Author names should read: HUA XL CHE JW  
(Chinese forenames are segmented according  
to pronunciation, e.g. Xinlei=XL & Jianwei=JW)

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**\*\*Spinophilin ... Ca<sub>2</sub> سخي 蝮阱 dependent protein**

JOURNAL OF NEUROCHEMISTRY  
90 (2): 317-324 JUL 2004

Ca<sub>2</sub> and the Arabic(?) and Chinese(?) characters should read:  
Ca<sub>2</sub>+ /calmodulin-

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500,000 vehicle emissions readings ...  
Stedman DH, Bishop GA, Agee LD, Williams MJ  
ABSTRACTS OF PAPERS ...  
225: 88 Part 1 MAR 2003

All the address' following the first were taken from the next abstract (#89).

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Amido ... (CuCu1)-Cu-1\*\* ... (CuCu1.5)-Cu-1.5 \*\*  
Harkins SB, Peters JC  
J AMERICAN CHEMICAL SOCIETY  
126 (9): 2885-2893 MAR 10 2004

(CuCu1)-Cu-1 should read: Cu(1)Cu(1)  
(CuCu1.5)-Cu-1.5 should read: Cu(1.5)Cu(1.5)

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Sampling methods used for the collection ...  
... Bae MS, Quinn P, Bate T\*\*, Eatough DJ ...  
ATMOSPHERIC ENVIRONMENT  
37 (11): 1435-1449 APR 2003

The third author's name should read: Bates T

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**2. Attending classes ...Web Page for Ch242 Chemical Synthesis**

Several years ago, I audited Ch242 (Caltech's graduate level organic chemical synthesis class). In cooperation with the instructor, who was new to Caltech, I established a web page for the class:

<http://library.caltech.edu/collections/chemistry.htm#CH242A>

which includes links to the following resources.

Beilstein Gmelin Journal Abbreviations

Databases-Synthetic Techniques, Natural Products

Journal Article References for Ch242 (2004) \*\*

Aldol Reaction (journal references)

Journal Links

pKa Values (H<sub>2</sub>O, DMSO)

pKa Values (DMSO)

Structure Searching (Beilstein/CCD/SFS) \*\*\*\*

Tips For Reading Chemical Literature

The Journal Article References for Ch242 were transcribed from class notes each week and added to the web page with links to the full text of the article (if available), or a photocopy of the article was placed on reserve. For example:

References for 11/29/04 - 12/03/04

1a. Total synthesis of (.+-.)-methyl homosecodaphniphyllate.

A remarkable new tetracyclization reaction

Roger B. Ruggeri, Marvin M. Hansen, Clayton H. Heathcock;

[J. Am. Chem. Soc.; 1988; 110\(26\); 8734-8736](#)

1b. The Enchanting Alkaloids of Yuzuriha.

Heathcock, Clayton H.;

Angew. Chem., Int. Ed. Engl., 1992, 31(6), 665-681.

MIL-8 Ch 242 Reserve (photocopy)

2. Catalytic Asymmetric Diels-Alder Reactions.

Yujiro Hayashi

in: Cycloaddition reactions in organic synthesis /

edited by Shu Kobayashi and Karl Anker Jorgensen.

Wiley-VCH, 2002. Pages 1-55.

MIL-8 Ch 242 Reserve (reserve book)

The 'Structure Searching (Beilstein/CCD/SFS)' handout was prepared for a one hour class offered each year and attended by graduate students and post-docs. It is primarily a tutorial on searching MDL Crossfire with brief reviews and comparisons with the Combined Chemical Dictionary and SciFinder Scholar. This contents include:

STRUCTURE SEARCHING QUICK REVIEW -- 2005

MDL CrossFire V6	2
Getting Started	3
Drawing Chemical Structures	4-5
Pre-defined Generic / User defined Groups & Atom Lists	6
Templates	7
Searching & Displaying ...	8-9
Reaction Searching & Search Tips	9
Custom Displays & Printing	10
Autonom & Data (name/property) Searching	11
Beilstein Notes	12
Gmelin Notes	13
Beilstein & Gmelin's Relationship to SciFinder Scholar	13
Crossfire Documentation	14
Combined Chemical Dictionary	15-17
Dictionary of Organic Chemistry	
Dictionary of Inorganic and Organometallic Chemistry	
Dictionary of Natural Products	
Dictionary of Analytical Reagents	
Dictionary of Drugs	
Text Searching	16
Structure Searching	17
SciFinder Scholar (Chemical Abstracts)	18-20
Databases	18-19
Search Tips	19
SFS Solutions (Web based help files)	20
Beilstein/Gmelin vs CCD vs SciFinder Scholar	21

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### 3. Analyzing cited references for new books ...

Reference lists from recent articles are perused for possible additions to the library's book collection. Since Caltech's research is very selective, the library collects only for current research programs. The arrival of new faculty members generally highlights the need to purchase a number of books not previously held.

CHEN XJ PHYS REV B 2004 69 104518  
 CHEN XJ PHYS REV B 2001 64 212501

CHEN XJ PHYSICA C 2 1997 282 797  
\*\*COOPER SL PHYS PROPERTIES HIGH 1994 4

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HISANO N J BIOMED MATER RES 1998 40 115  
\*\*HUGLIN MB LIGHT SCATTERING POL 1972  
INOUE S J BIOL CHEM 2000 275 40517

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WALSH CA PHYS REV B 1982 26 4166  
WALSH CA PHYS REV LETT 1981 47 1500  
\*\*WEISS GH ASPECTS APPL RANDOM 1994

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#### 4. Custom New Book Lists

Each month, I prepare a custom 'new book list' from the master list posted to the Caltech Libraries web site. I delete non-essential information to produce an easily readable review of the month's new books and special journal issues. We have been routinely analyzing journals issues for conference proceedings and special topics for about 20 years. I also provide a delivery service for any requested items. For example:

Robinson, James W.  
Undergraduate instrumental analysis.  
Marcel Dekker, c2005.  
QD79.I5 R6 2005.

Sierra, Miguel A.  
Dead ends and detours :  
Wiley-VCH, c2004.  
QD262 .S485 2004.

Polymer synthesis.  
Springer, c2004.  
Advances in polymer science ; 171.  
QD281.P6 F6 no.171.

Modern aldol reactions.  
Wiley-VCH, c2004.  
QD305.A6 .M64 2004.

Analytical biotechnology.  
Current opinion in biotechnology ; v. 16, no. 1.  
JOURNAL ISSUE.

Applied proteomics collection.  
Nature reviews. Drug discovery ;  
March 2005, suppl.  
JOURNAL ISSUE.

Configurational energy landscapes ...  
clusters, fluids and biomolecules :  
papers of a discussion meeting, 2005.  
Phil. trans. Mathematical ... ; v. 363, no. 1827.  
JOURNAL ISSUE.

Proteomics and genomics.  
Current opinion in chemical biology ; v. 9, no. 1.  
JOURNAL ISSUE.

f-element spectroscopy and coordination chemistry.  
Journal of solid state chemistry ; v. 178, no. 2.  
JOURNAL ISSUE.

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## 5. Analyzing Einstein's Annalen articles in Wos, INSPEC, and SciFinder

I recently noticed that one of Albert Einstein's articles was missing from ISI's new 'Century of Science' (Web of Science, 1900-1944). Further analysis revealed that Einstein's articles (in Annalen der Physik) were not consistently indexed by the major indexing/abstracting services. For example, the listings below display the title of the original article in Annalen der Physik, followed by brief entries from CAplus, Web of Science/INSPEC.

Folgerungen aus den Capillaritätserscheinungen [AdP 4, 513 (1901)] A. Einstein

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CAplus

Conclusions from capillarity phenomena. Einstein, Albert. Annalen der Physik  
(Weinheim, Germany) (1901), 4 513-523.

Deductions from capillary phenomena. Einstein, A.. Annalen der Physik  
(Weinheim, Germany) (1901), 4 513. From: J. Phys. Chem. 6(1) 83, 1902.

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Web of Science

Einstein A Conclusions from the capillarity occurrences ANNALEN DER PHYSIK 4 (3):  
513-523 MAR 1901

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INSPEC

Deductions from capillary phenomena Einstein, A. Annalen der Physik, v 4(3), March  
1901, 513-523

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Eine Theorie der Grundlagen der Thermodynamik [AdP 11, 170 (1903)] A. Einstein

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CAplus

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Web of Science

Einstein A A theory on the basics of thermodynamics ANNALEN DER PHYSIK 11 (5):  
170-187 APR 1903

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INSPEC

Foundations of thermodynamics Einstein, A. Annalen der Physik, v 11(1), April  
1903,170-187

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Zur allgemeinen molekularen Theorie der Wärme [AdP 14, 354 (1904)] A. Einstein

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CAplus

General molecular theory of heat. Einstein, A.. Bern, Switz. Annalen der Physik  
(Weinheim, Germany) (1904), 14 354-362.

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WoS

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INSPEC

xxx

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Die Plancksche Theorie der Strahlung und die Theorie der spezifischen Wärme [AdP  
22, 180 (1907)] A. Einstein

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SciFinder

Einstein, A.. Planck's theory of radiation and the specific heat theory. Annalen der  
Physik (Weinheim, Germany) (1907), 22 180-190.

Einstein, A.. Planck's Theory of Radiation and the Theory of Specific Heats. Annalen der Physik (Weinheim, Germany) (1907), 22 180-90.

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Web of Science

Einstein A The Planck theory of radiation and the theory of specific heat ANNALEN DER PHYSIK 22 (1): 180-190 DEC 1907

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INSPEC

Planck's theory of radiation and the theory of specific heat Einstein, A. Annalen der Physik, v 22, n 1, 28 Dec. 1906, p 180-190