

**Integrating Chemical Information  
Instruction into the Undergraduate  
Chemistry Curriculum**

**SOUNDS DULL!**

BCCE

August 1, 2006

BOB LANDOLT

TEXAS WESLEYAN UNIVERSITY

**ONLINE ACCESS**  
**IS THE ANSWER**

***BUT***  
***WHAT ARE THE***  
***QUESTIONS?***

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# **‘INFORMATICS’ PROBLEMS FOR PUI CHEMISTRY**

**SOARING COSTS!**

**FEW SCIENCE LIBRARIANS!**

**ACS CPT: (CA and Journals, hard copy or online)**

**“...must be a part of the collection.”**

**ELECTRONIC SEARCHING REQUIRES  
SPECIAL EXPERTISE (?)**

# •ACS Library Guidelines

•<http://www.chemistry.org/portal/a/c/s/1/acdisplay.html?DOC=education\cpt\library.html>

- CA full abstracts access required!
- CA online? Students must have good, timely access.
- Minimum of 14 current journals subscriptions
- Online journals acceptable if full material routinely is accessible to students.
- Computer access by students must not be unduly limited by cost or impractical access times.

## CAS Reg. # and Substances Count

<http://www.cas.org/cgi-bin/regreport.pl>

**Date: Tue Jan 11, 2005**

- **25,175,858** substances
- **53,100,595** sequences
- **CAS RN 811411-12-8** is the most recent CAS Registry Number

# ~EIGHTEEN MONTHS LATER:

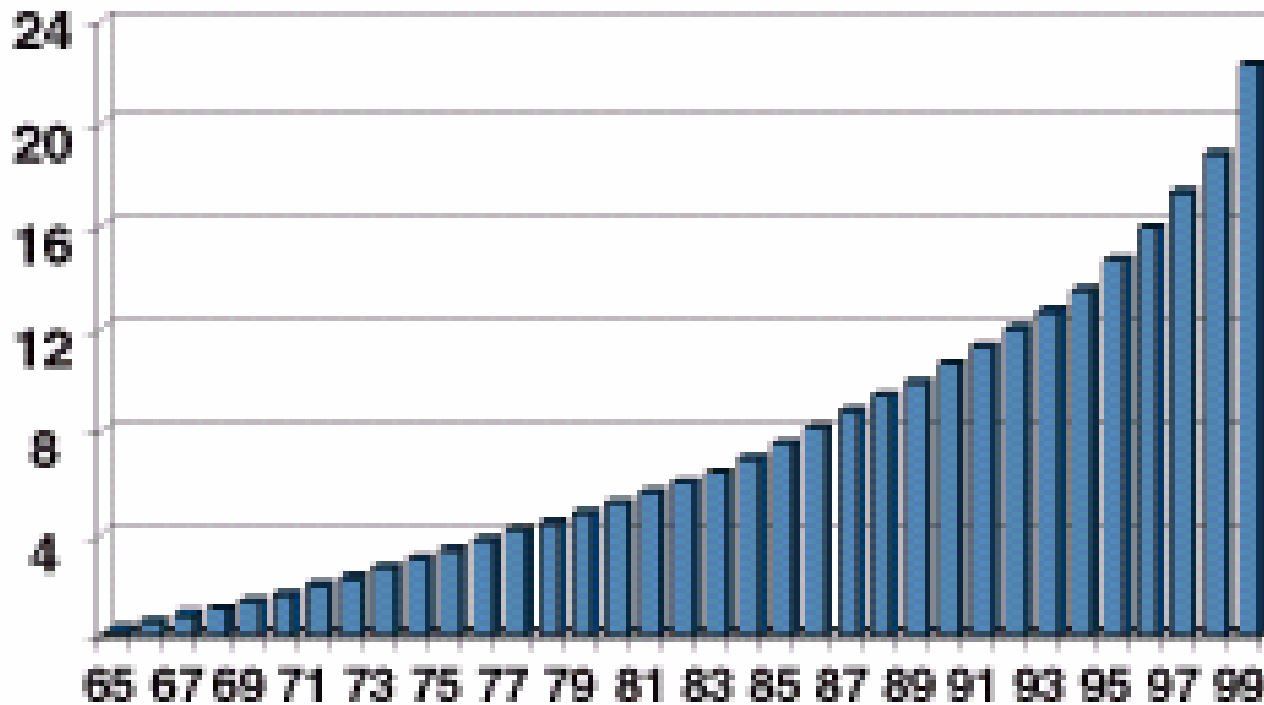
<b>Date</b>	<b>Wed Jul 19 13:09:04 EDT 2006</b>
<b>Count</b>	<b>28,885,178</b> organic and inorganic substances, <b><u>~3.6 million more</u></b>
	<b>57,673,004</b> sequences, <b><u>~6.5 million</u></b>
<b>CAS RN</b>	<b>894495-18-2</b> is the most recent CAS Registry Number

# ONE WEEK LATER:

<b>Date</b>	<b>Wed Jul 26 16:35:25 EDT 2006</b>
<b>Count</b>	<b>29,063,528</b> organic and inorganic substances, <b><u>~180 K more</u></b>
	<b>57,695,526</b> sequences, <b><u>~22K</u></b>
<b>CAS RN</b>	<b>896507-27-0</b> is the most recent CAS Registry Number

# How Many Since **You** Graduated!

Millions



**Number of Substances  
in the Registry Database 1965-1999**

**UCAIR**<sup>(a)</sup>

**U**NDERGRADUATE

**C**OOPERATIVE

**A**CCCESS

To

**I**NFORMATION **R**ESOURCES

(a) <http://department.txwes.edu/che/rlandolt/ucair2003.html>

# WONDERFUL TIME FOR SMALL SCHOOLS!

SIZE AND LOCATION NEUTRALIZED

AS LIMITING FACTORS:

THE INTERNET

ONLINE JOURNALS

CONSORTIA

# UCAIR OBJECTIVES

Provide FACULTY with fundamental sophistication in Chemical Informatics.

Teach STUDENTS to determine if information exists, how to retrieve it and assess its quality.

Enable DECISION-MAKERS to see how institutional resources may be used efficiently.

# UCAIR IN A NUTSHELL!

(‘E’=ELECTRONIC; PUI= PRIMARILY UNDERGRADUATE INSTITUTIONS)

**1993 4 TEXAS PUIs-CHEMICAL INFORMATICS LITERACY**

**1998 30 TEXAS PUIs- CHEMICAL ABSTRACTS ‘E’ ACCESS**

**2000 24 U.S PUIs- ACS JOURNALS ‘E’ ACCESS**

**2003 10 PUIs-ACS JOURNALS ARCHIVES ‘E’ ACCESS**

# Chemistry Resources Use Data Searching CA

**Command Language:**

**“Standard  
Transmission”**

**User Friendly Software:**

**“Automatic  
Transmission”**

**Web-based STN Easy:**

**“Taking a Taxi”**

**SciFinder Scholar:**

**“Chauffer-Driven  
Limo”**



# Starting Point!

Answer Page

Search Page

- Easy Search
- Advanced Search**
- CAS Number Search
- Patent Lookup
- Defined Searches

Review Saved Items

- + Help
- Session Cost
- Price List
- Preferences
- Search History
- + Cust. Support
- Comments
- Log Off

1. **Select Your Category** Current category is: Chemistry References

2. Enter your search terms below and/or **Recall** saved search terms

Word(s) ocean or sea or marine Browse Index  
AND Word(s) pollut? Browse Index

Add a Search Term ▼

3. **Search** Searching in Chemistry References  
\$2.00

**DROP-DOWN  
MENUS SELECT  
BY WORD,  
CAS#, DATE,  
ETC.**



**Mon Mar 22 23:29:24 2004 EST**

**Your total cost for this session is: \$40.25**

**Please print this for your records.**

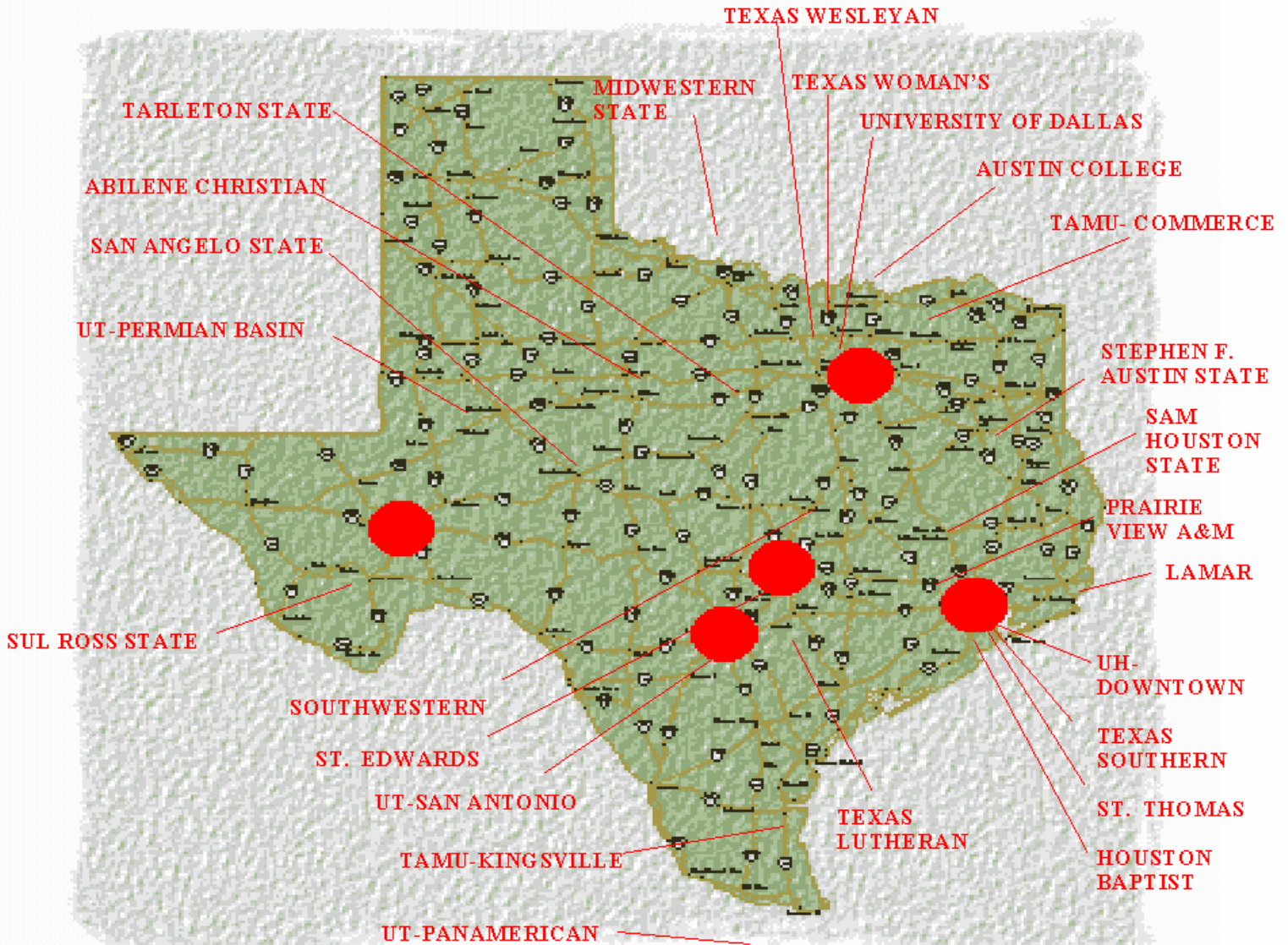
**WITH ACADEMIC  
DISCOUNT (10-20%),  
COST < \$5-10**

To ensure the privacy of your account information, close your browser now.

- Back to [STN Easy](#)
- Go to the [CAS Home Page](#)
- Go to the [FIZ Karlsruhe Home Page](#)
- Go to the [JST Home Page](#)
- Go to [Chemistry.org](#)

**STUDENTS SHOULD INCLUDE COST  
FACTORS AS PART OF THEIR REPORT!**

# UCAIR 'ON THE ROAD'



### ACS Journals Search

[Search C&EN](#)

#### Citation Finder

Specify a Citation **or** a Digital Object Identifier.  
[More about DOI](#)

Citation

Select a Journal

Vol  First Page

Digital Object Identifier

or

**RESEARCHER'S  
DREAM!**

#### Full-Text Search

##### Basic Search

Search by Author, Title, or other key word or phrase. Or narrow your search using the options below.  
[More about Key Word Search](#)

Author

And

Title

And

Anywhere in Article

##### Specify Journal

Choose "All Journals" or select one or more journals.  
[More about Selecting Multiple Items](#)

- All Journals
- Accounts of Chemical Research
- ACS Chemical Biology
- Analytical Chemistry
- Analytical Chemistry A-Pages
- I&EC Analytical Edition
- Biochemistry
- Bioconjugate Chemistry
- Biomacromolecules
- Biotechnology Progress

##### Timeframe/Date Range

Narrow results by choosing a Timeframe **or** Date Range.  
[More about Timeframe](#)

Timeframe

- ASAP Articles
- Current Issue - 1996
- Legacy Archives 1879-1995
- All

Date Range

From: January  /    
To: January  /

or

##### Display Options

Sort Results By  Relevance

Results Per Page  10 Results

**RECENT**

**JOURNALS**

**AT YOUR  
FINGERTIPS**

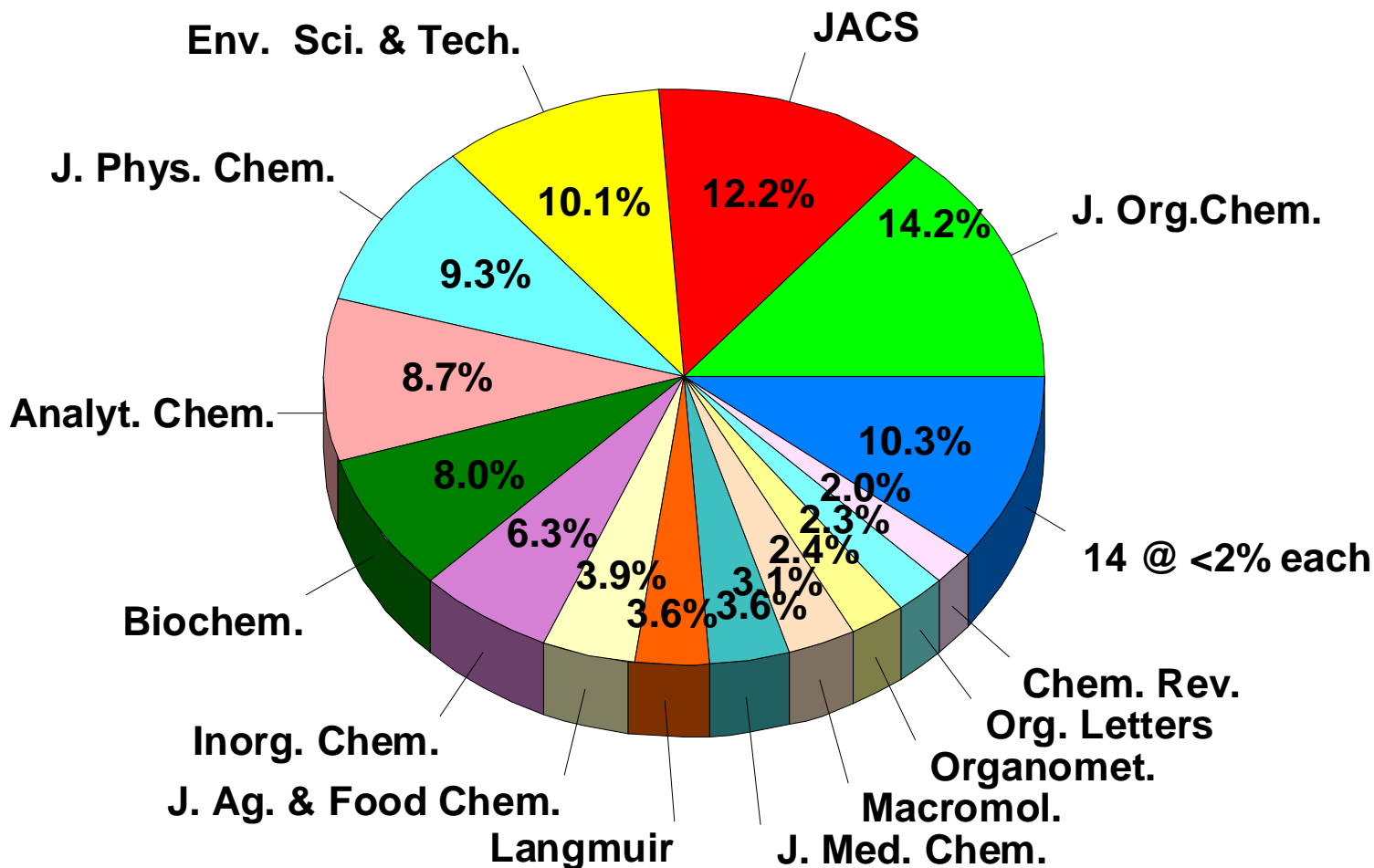
**OLDER**

# PUIs USING ACS WEB EDITIONS

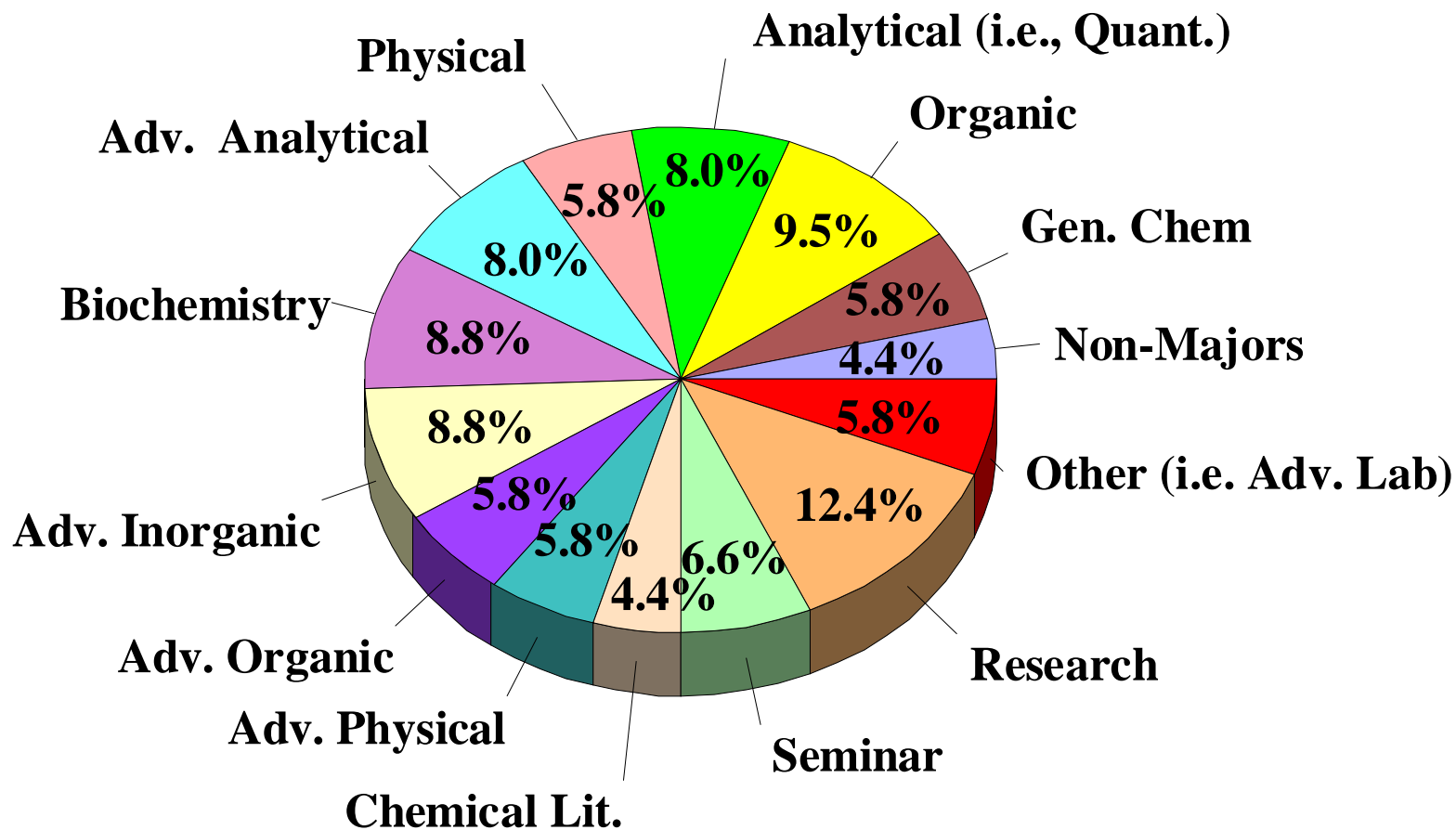


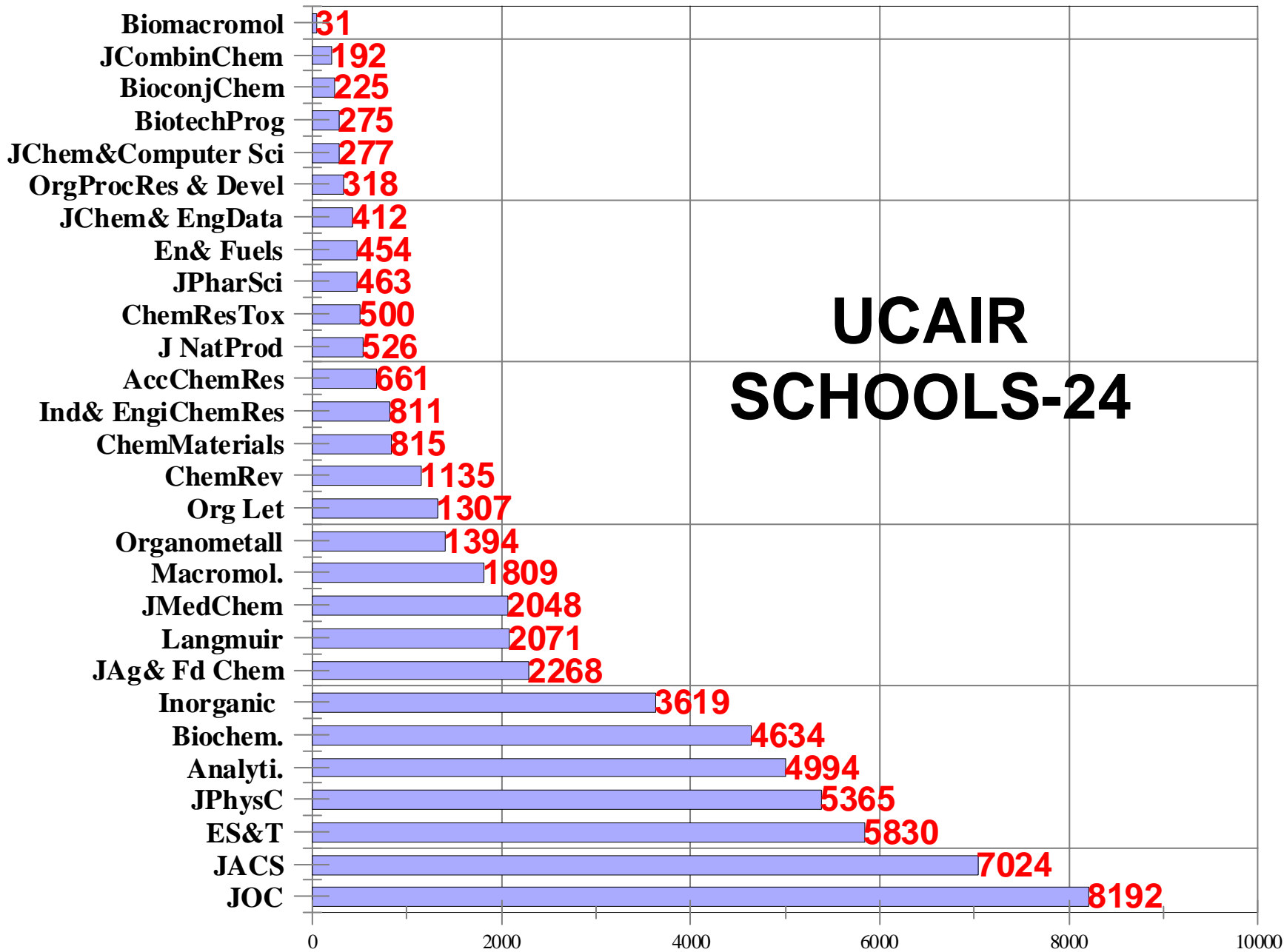
# AT 24 SCHOOLS FOR 18 MONTHS

## Journals Use Profile (57,650)



# USE IN COURSES





# OLDER ARTICLES



ACS Legacy Archives

23 journals. 971 volumes. 11,117 issues. 464,233 articles.



<http://pubs.acs.org/archives/promo/index.html>

**PDF files of all 464,233 articles**

**Full-text searching via character-  
recognition software**

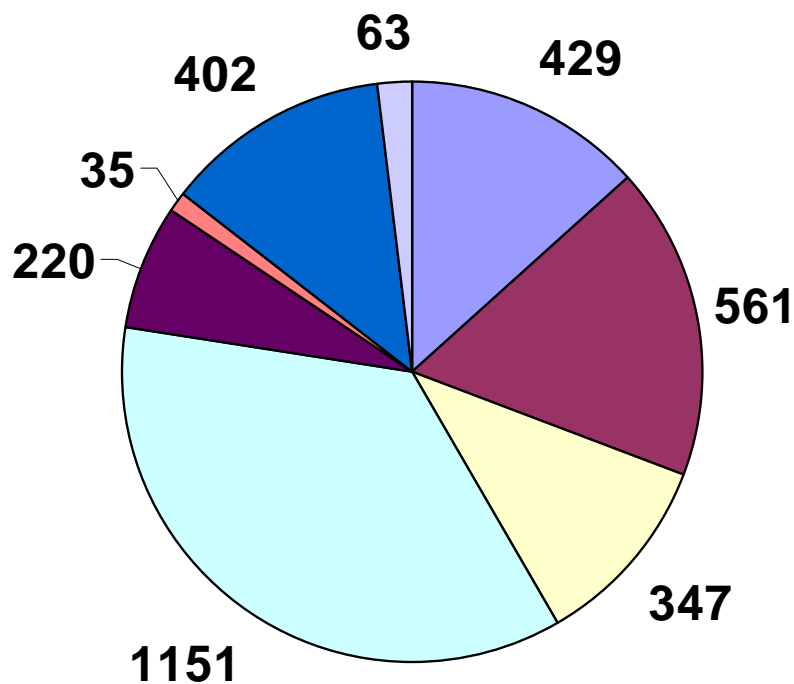
**Search by citation, author, article name,  
key word, journal title, subject, timeframe**

# UCAIR ACS Journal Archives Users

<u>Institutions</u>	<u>Location</u>	<u>Faculty Liaison</u>	<u>Library Liaison</u>
Gallaudet	(DC)	Michael L. Moore	Patrick Oberholtzer
Juniata	(PA)	*	John Mumford
Linfield	(OR)	Elizabeth Atkinson	Carol McCulley
McMurry	(TX)	David Klassen	*
Pacific Lutheran	(WA)	Craig Fryhle	Patricia Kirkwood.
Seattle	(WA)	Susan Jackels	John Popko
Stonehill	(MA)	Leon Tilley	Joe Middleton
TX Wesleyan	(TX)	Bob Landolt	Andy Baker
U. S. Colorado	(CO)	Mel Druelinger	Sandy Hudock
Wayne State	(NB)	A. Raza Khan	*

# ACS Archive Use, 8 Schools

18% of Total Archives and Currant  
Average=401



# **ACKNOWLEDGMENTS**

**ACS**

**PUBLICATIONS DIVISION**

**CA/STN INTERNATIONAL**

**THE WELCH FOUNDATION**

**CAMILLE AND HENRI DREYFUS  
FOUNDATION**

**RESEARCH CORPORATION**