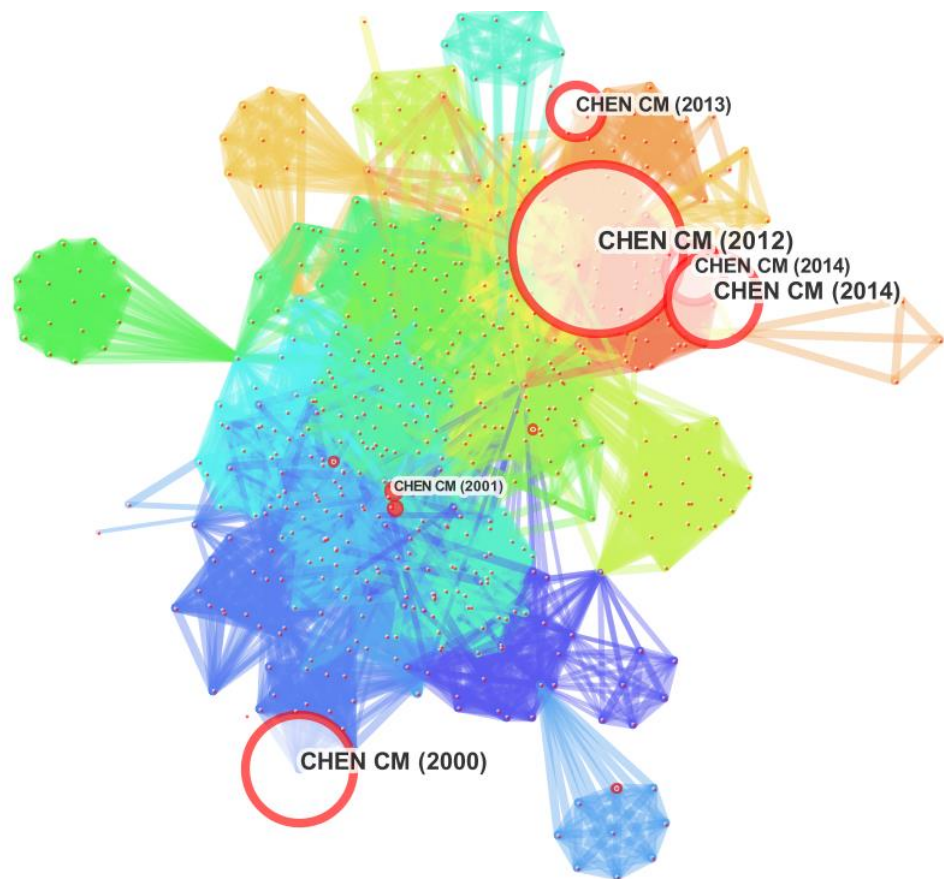


# CiteSpace对WoS文献使用的分析



李杰<sup>1</sup>, 陈超美<sup>2</sup>

1. 首都经济贸易大学-安全与环境工程学院

2. Drexel University- College of Computing and Informatics

2015年10月15日

小提示

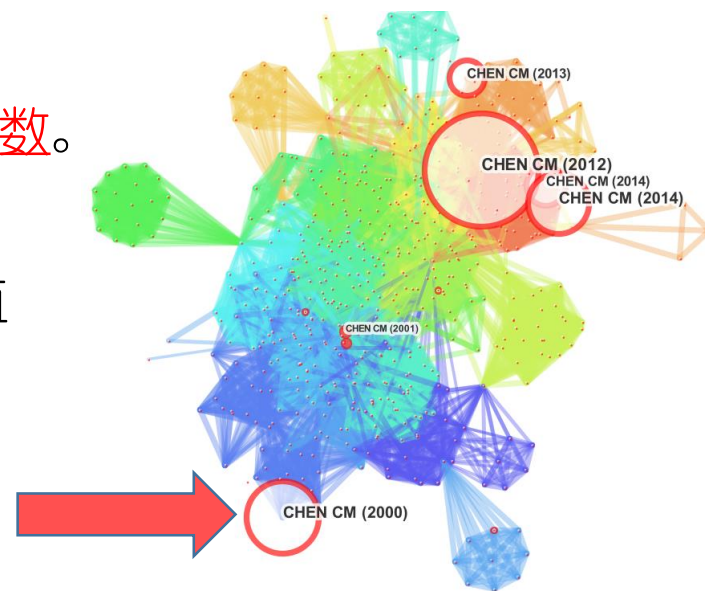
CiteSpace版本至少为: 4.0.R2.64-bit.  
public.10.14.2015  
使用最新的Web of Science下载得到的数据

配套教程: 李杰, 陈超美著. CiteSpace科技文本挖掘及可视化[M]. 首都经济贸易大学出版社. 2016.

作者博客: 李杰博客: <http://blog.sciencenet.cn/u/jerrycueb>; 陈超美博客: <http://blog.sciencenet.cn/u/ChaomeiChen>

# 写在前面

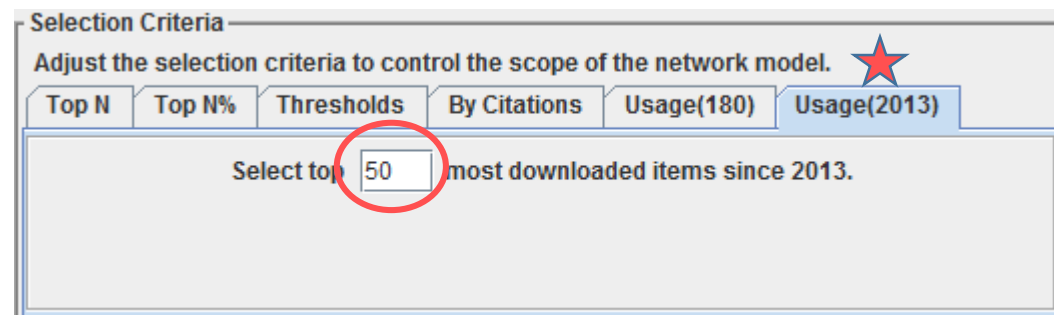
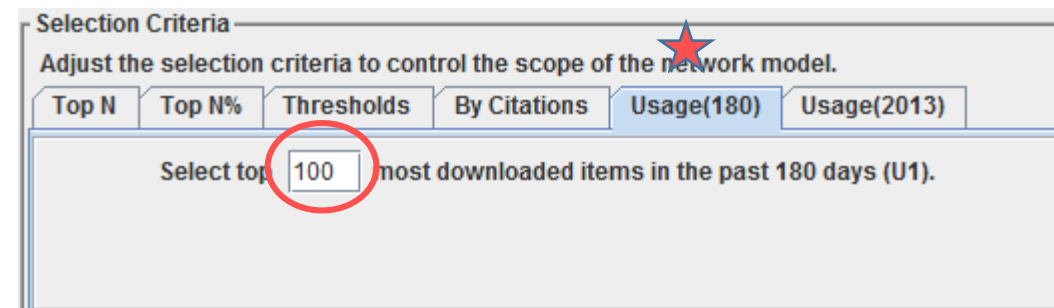
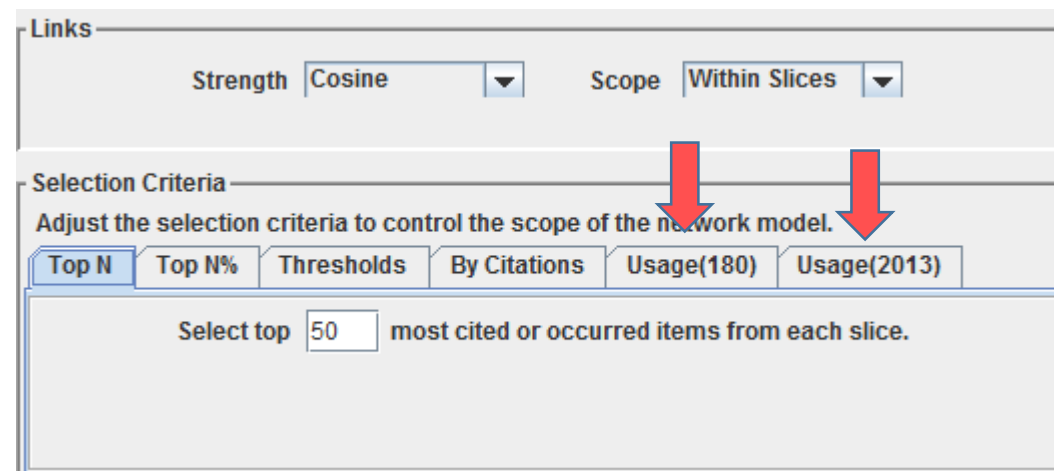
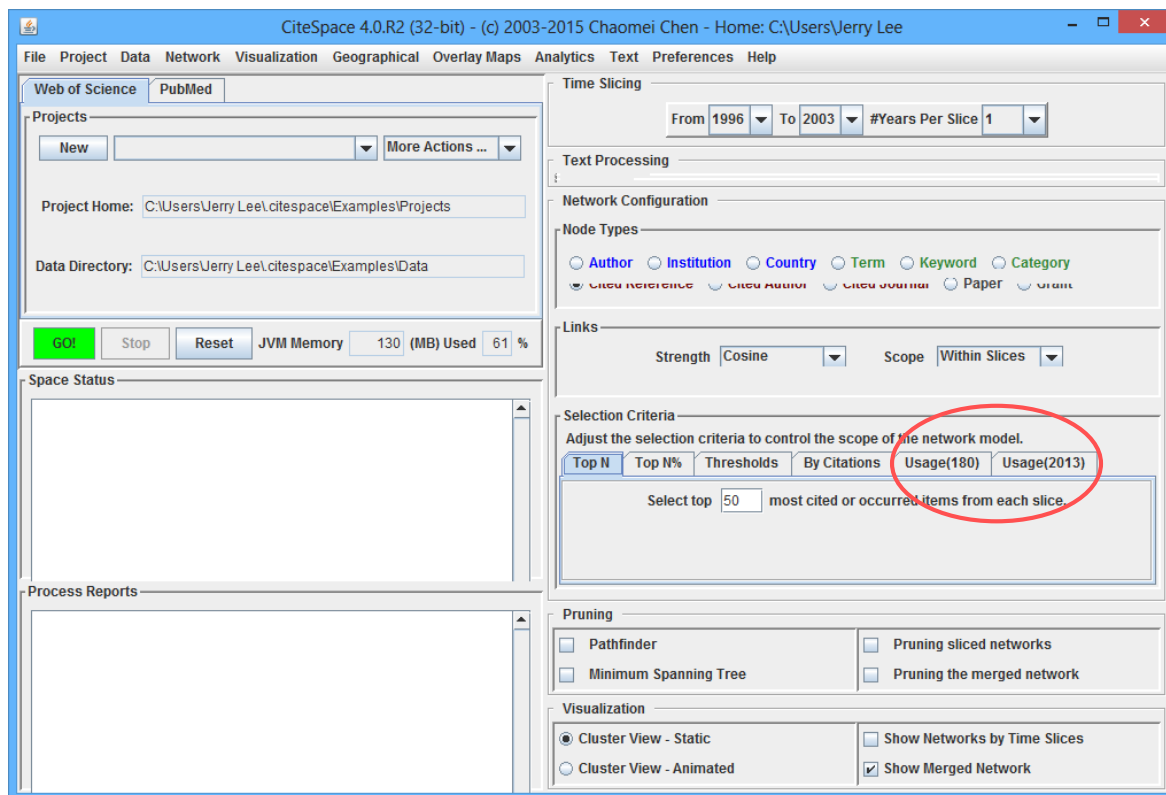
- Web of Science的记录格式最近增加了几个新字段，包括U1和U2。  
详见：[http://images.webofknowledge.com/WOKRS519B3/help/WOK/hp\\_usage\\_score.html](http://images.webofknowledge.com/WOKRS519B3/help/WOK/hp_usage_score.html)
- Last 180 days. This is the count of the number of times the full text of a record has been accessed or a record has been saved in the last 180 days. This count can move up or down as the end date of the fixed period advances.
- Since 2013. This is the count of the number of times the full text of a record has been accessed or a record has been saved since February 1, 2013. This count can increase or remain static over time.
- U1: 近180天内，全文的访问次数，或保存该记录的次数。
- U2: 2013年2月1日至今的全文的访问次数，或保存该记录的次数。
- CiteSpace 4.0.R2可以在共被引网络中以白底红圈显示这两组数值



界面发生的变化，红圈为新增加的功能。该功能可以作为新的数据初步分析时筛选之用。

U1: 近180天内，全文的访问次数，或保存该记录的次数。

U2: 2013年2月1日至今的全文的访问次数，或保存该记录的次数。



Search Web of Science™ Core Collection

Basic Search

safety science

Publication Name

Search

+ Add Another Field | Reset Form | Select from Index

TIMESPAN

All years

From 1900 to 2014

MORE SETTINGS

Web of Science Core Collection: Citation Index Expanded (SCI-EXPANDED)

Science Citation Index Expanded (SCI-EXPANDED)

Social Sciences Citation Index (SSCI)

Conference Proceedings Citation Index (CPCI)

这里以获取Safety Science期刊上截止2014年的数据为例。  
检索得到的实际时间为1991-2014

数据获取步骤与早期的Web of Science 步骤一样。  
这里标记处数据库所更新的位置。

Web of Science™ InCites™ Journal Citation Reports® Essential Science Indicators™ EndNote™

Sign In Help English

WEB OF SCIENCE™ THOMSON REUTERS™

Search My Tools Search History Marked List

Results: 2,223  
(from Web of Science Core Collection)

You searched for: PUBLICATION NAME: (safety science) ...More

Create Alert

Sort by: Publication Date -- newest to oldest

Select Page

Save to EndNote online

Add to Marked List

1. Layout effects of mobile exit ticket-inspectors on pedestrian evacuation

Refine Results

Search within results

Web of Science Core Collection

OPERATIONS RESEARCH MANAGEMENT SCIENCE

Sort by: Publication Date -- newest to oldest

Times Cited -- lowest to highest

Usage Count -- Last 180 days

Usage Count -- Since 2013

Relevance

First Author -- A to Z

First Author -- Z to A

Source Title -- A to Z

Source Title -- Z to A

Conference Title -- A to Z

1. Lisheng; et al.  
Published: DEC 2014

View Abstract

sk network mapping and

数据下载时间2015年10月16日

Create Citation Report

Times Cited: 0  
(from Web of Science Core Collection)

Usage Count

Last 180 Days: 13

Since 2013: 50

Collection)

Usage Count

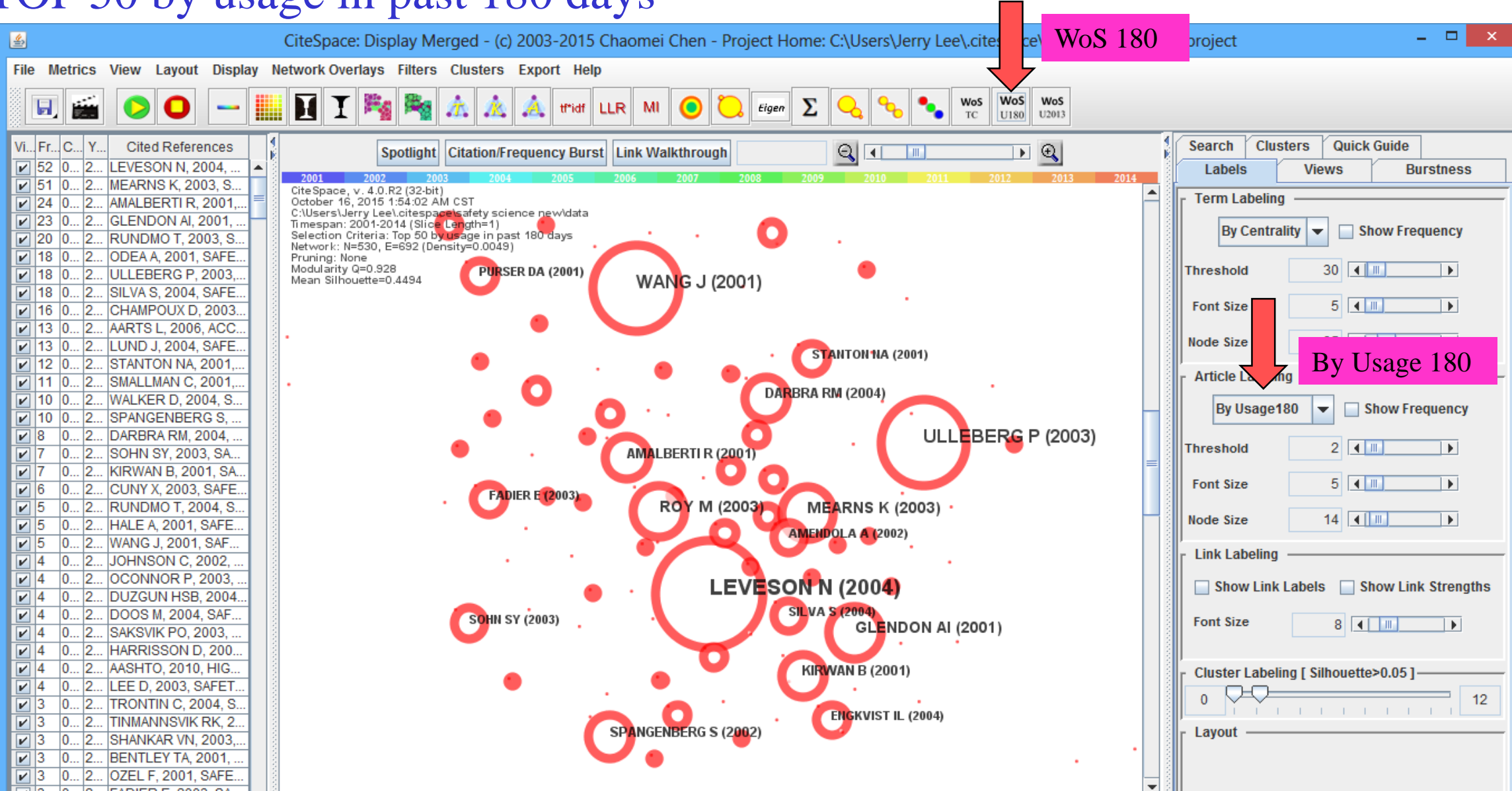
Last 180 Days: 13

Since 2013: 50

Collection)

基于期刊Safety Science的分析结果

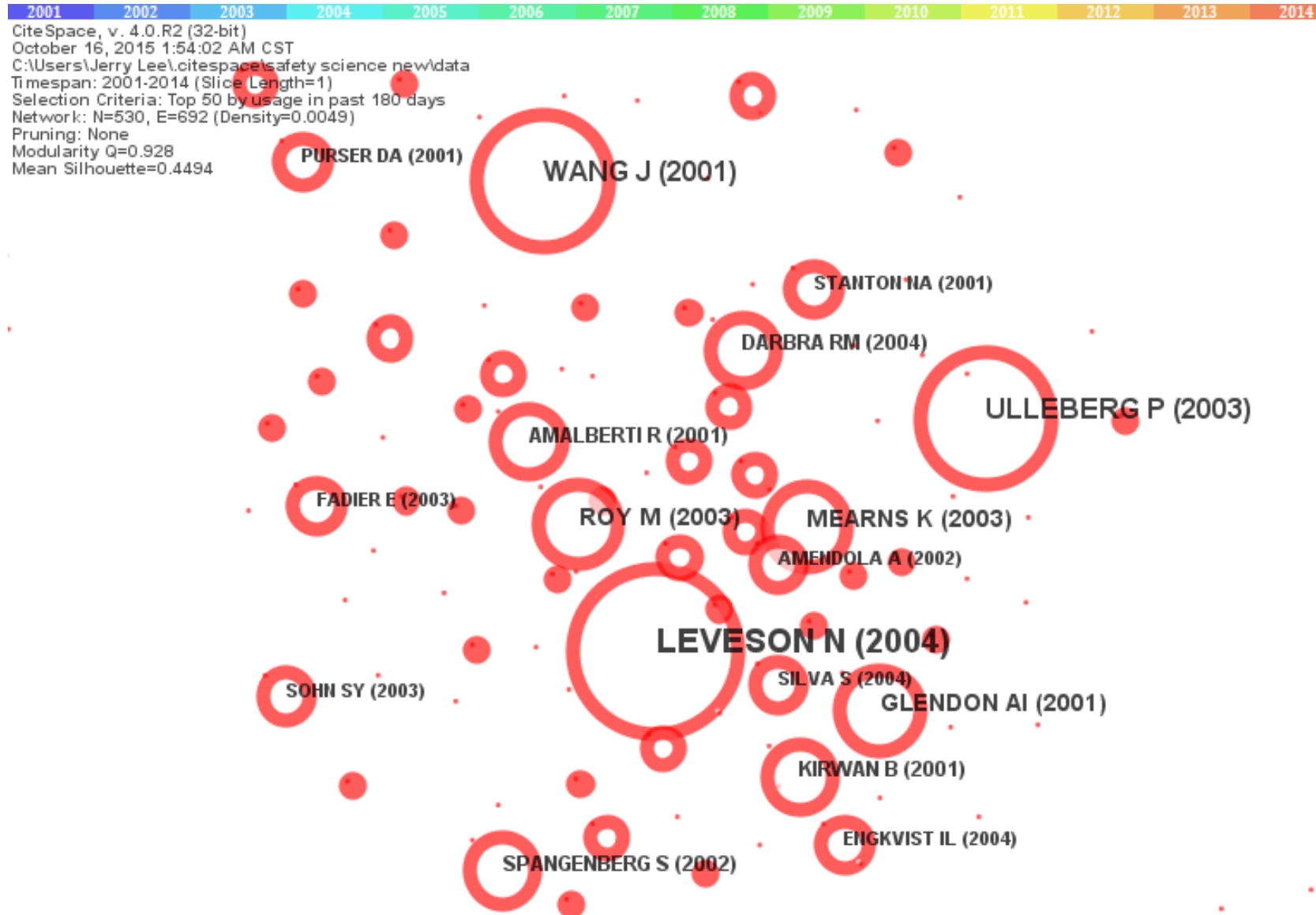
TOP 50 by usage in past 180 days



这里把文献网络的连线透明度设置为0



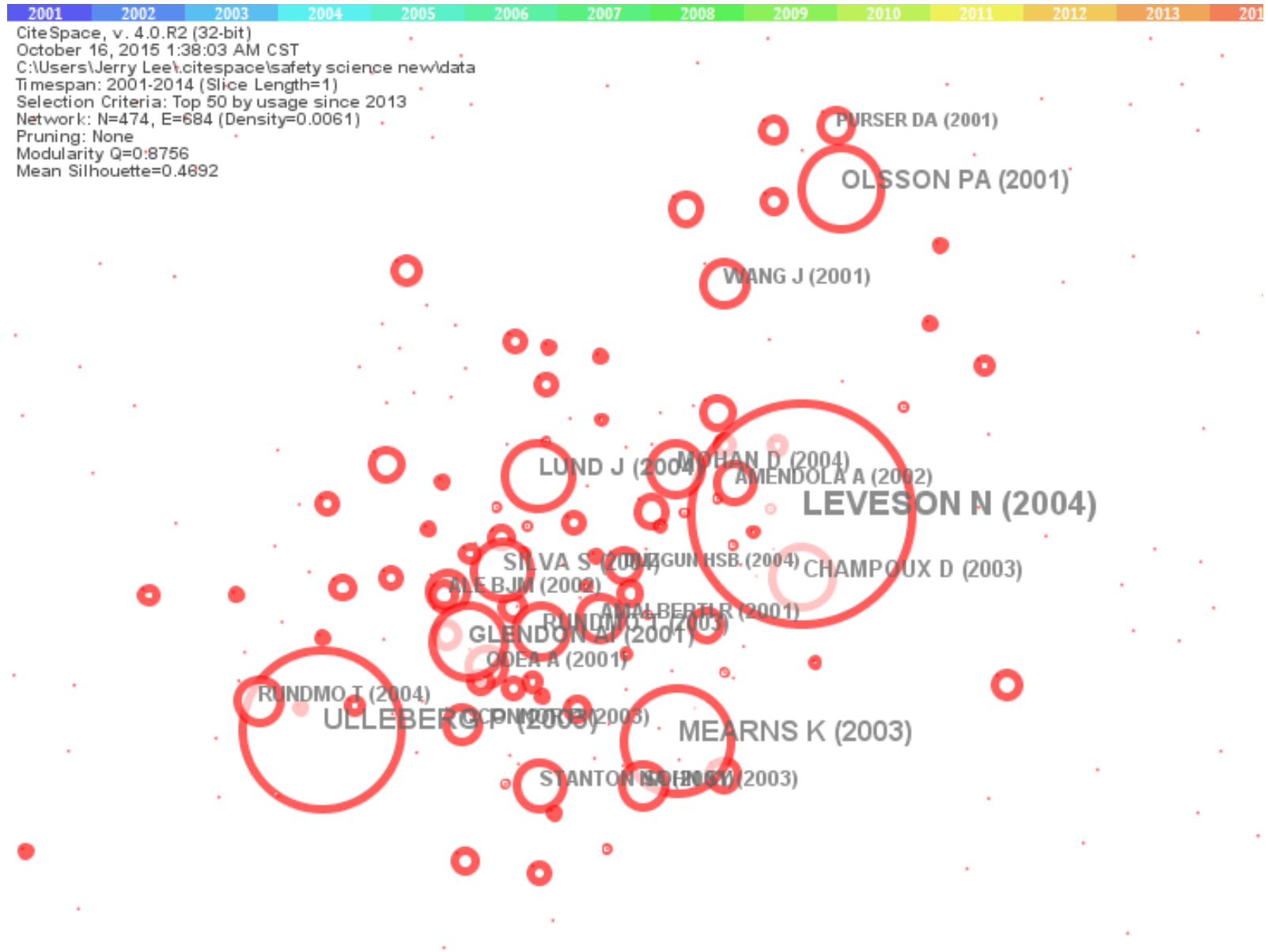
# TOP 50 by usage in past 180 days



The screenshot displays the CiteSpace software interface, which is used for analyzing network data. The top menu bar includes options like File, Metrics, View, Layout, Display, Network, Overlays, Filters, Clusters, Export, and Help. The toolbar contains various icons for file operations and network analysis. The left panel lists cited references, including works by LEVESON N, MEARNS K, AMALBERTI R, GLENDON AI, RUNDMO T, ODEA A, ULLEBERG P, SILVA S, SVEDUNG I, CHAMPOUX D, AARTS L, LUND J, STANTON NA, SMALLMAN C, WALKER D, SPANGENBERG S, CHANG WR, ALE BJM, DARBRA RM, SOHN SY, KIRWAN B, CUNY X, LARSSON TJ, VAN DER SCHAAF T, GAO CS, RUNDMO T, POLET P, HALE A, WANG J, HASAN R, HOJ NP, JOHNSON C, OCONNOR P, DUZGUN HSB, and DOOS M. The central area shows a network visualization with nodes representing authors and edges representing their relationships. Nodes are labeled with author names and years, such as LEVESON N (2004), MEARNS K (2003), and RUNDMO T (2004). The right-hand panel contains settings for Term Labeling, Article Labeling, Link Labeling, and Cluster Labeling. A red arrow points to the 'WoS U2013' button in the toolbar, and another red arrow points to the 'By Usage2013' dropdown menu in the 'Term Labeling' section.



# TOP 50 by usage since 2013



# 基于作者的分析结果

这里的案例以陈超美教授的论文为例

## Chen, Chaomei

[Get A Badge](#)[ResearcherID Labs](#)

ResearcherID: A-1252-2007

URL: <http://www.researcherid.com/rid/A-1252-2007>

Subject: Computer Science; Information Science &amp; Library Science

Keywords: information visualization; mapping scientific frontiers; visual analytics

ORCID: <http://orcid.org/0000-0001-8584-1041>My Institutions [\(more details\)](#)

Primary Institution: Drexel University

Sub-org/Dept: College of Information Science and Technology

Role: Faculty

## My Publications

My Publications (99)

[View Publications](#)[Citation Metrics](#)

ResearcherID labs

[Create A Badge](#)[Collaboration Network](#)[Citing Articles Network](#)

## My Publications: View

This list contains papers that I have authored.

99 publication(s)

Page 1 of 10 [Go](#)

Sort by

1. Title: Orphan drugs and rare diseases: a scientometric review (2000-2014)  
Author(s): Chen, Chaomei; Dubin, Rachael; Kim, Meen, Chul  
Source: **Expert Opinion on Orphan Drugs** Volume: 2 Issue: 7 Pages: 709-724 Published: JUL 2014  
Times Cited: 1  
DOI: [10.1517/21678707.2014.920251](https://doi.org/10.1517/21678707.2014.920251)

## Search

ORCID

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and Researchers

FOR RESEARCHERS

FOR ORGANIZATIONS

[SIGN IN](#)[REGISTER FOR AN ORCID ID](#)[LEARN MORE](#)

## Chaomei Chen

## ORCID ID

[orcid.org/0000-0001-8584-1041](http://orcid.org/0000-0001-8584-1041)

Websites

[Homepage](#)

## ▼ Employment (1)

Drexel University: Philadelphia, Pennsylvania,  
2001-10 to present

Professor

Source: Chaomei Chen

为了准确地得到陈超美教授的论文，这里我们使用其唯一的学术身份证来获取。

作者

Chen, Chaomei

ResearcherID

A-1252-2007

ORCID 号

<http://orcid.org/0000-0001-8584-1041>

Basic Search

A-1252-2007

陈超美教授的ResearcherID

Author Identifiers

Search

[+ Add Another Field](#) | [Reset Form](#)

## TIMESPAN

☐ All years☒ From 1990 to 2015

## MORE SETTINGS

## Web of Science Core Collection: Citation Indexes

- ☒ Science Citation Index Expanded (SCI-EXPANDED) --2004-present
- ☒ Social Sciences Citation Index (SSCI) --2004-present
- ☒ Conference Proceedings Citation Index- Science (CPCI-S) --1990-present
- ☒ Conference Proceedings Citation Index- Social Science & Humanities (CPCI-SH)

小提示

使用的数据库信息如上！  
各个高校购买是有差异的，  
请注意！

Web of Science™ InCites™ Journal Citation Reports® Essential Science Indicators SM EndNote™ Sign In English

WEB OF SCIENCE™ THOMSON REUTERS™

Search My Tools Search History Marked List

Results: 70  
(from Web of Science Core Collection)

You searched for: AUTHOR IDENTIFIERS: (A-1252-2007)  
Timespan: 1990-2015.  
Indexes: SCI-EXPANDED, SSCI, CPCI-S, CPCI-SH.  
[...Less](#)

Create Alert

Refine Results

Search within results for...

Web of Science Categories

- ☐ COMPUTER SCIENCE INFORMATION SYSTEMS (36)
- ☐ INFORMATION SCIENCE

Sort by: Usage Count -- Last 180 days

Select Page Save to EndNote online Add to Marked List

- CiteSpace II: Detecting and visualizing emerging trends and transient patterns in scientific literature**  
By: Chen, CM  
JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY Volume: 57  
Issue: 3 Pages: 359-377 Published: FEB 1 2006  
[Full Text from Publisher](#) [View Abstract](#)
- Emerging trends in regenerative medicine: a scientometric analysis in CiteSpace**  
By: Chen, Chaomei; Hu, Zhigang; Liu, Shengbo; et al.  
EXPERT OPINION ON BIOLOGICAL THERAPY Volume: 12 Issue: 5 Pages: 593-608 Published: MAY 2012  
[Full Text from Publisher](#) [View Abstract](#)
- The Structure and Dynamics of Cocitation Clusters: A Multiple-Perspective Cocitation Analysis**  
By: Chen, Chaomei; Ibekwe-SanJuan, Fidelia; Hou, Jianhua  
JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY Volume: 61  
Issue: 7 Pages: 1386-1409 Published: JUL 2010  
[Full Text from Publisher](#) [View Abstract](#)

Times Cited: 253  
(from Web of Science Core Collection)

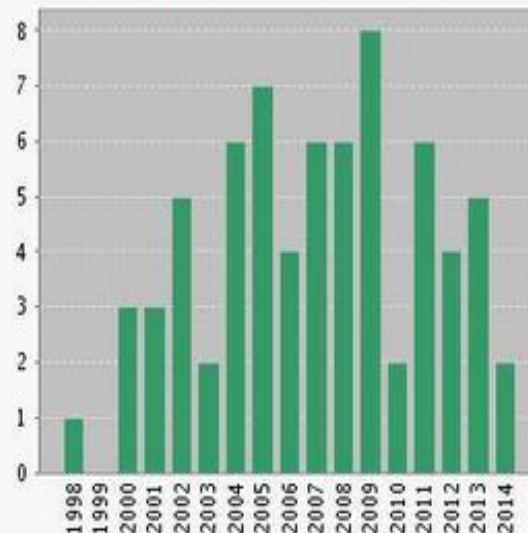
Usage Count ^  
Last 180 Days: 88  
Since 2013: 338  
(from Web of Science Core Collection)

Times Cited: 58  
(from Web of Science Core Collection)  
Last 180 Days: 22

Use the checkboxes below to view the records. You can choose to view those selected records, o

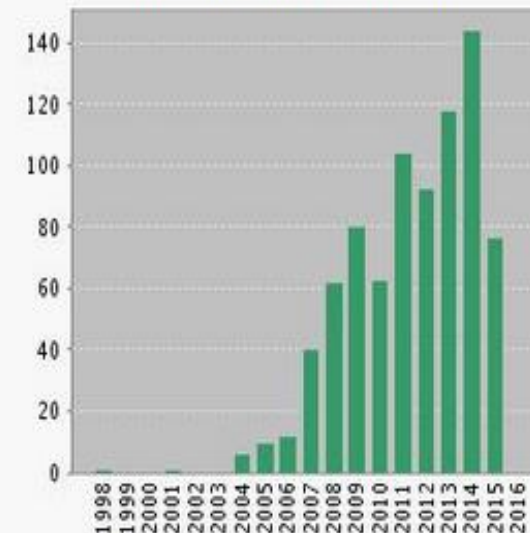
<input checked="" type="checkbox"/> View Records	Field: Publication Years	Record Count	% of 70	Bar Chart
<input checked="" type="checkbox"/> Exclude Records				
<input type="checkbox"/>	2009	8	11.429 %	<div></div>
<input type="checkbox"/>	2005	7	10.000 %	<div></div>
<input type="checkbox"/>	2004	6	8.571 %	<div></div>
<input type="checkbox"/>	2007	6	8.571 %	<div></div>
<input type="checkbox"/>	2008	6	8.571 %	<div></div>
<input type="checkbox"/>	2011	6	8.571 %	<div></div>
<input type="checkbox"/>	2002	5	7.143 %	<div></div>
<input type="checkbox"/>	2013	5	7.143 %	<div></div>
<input type="checkbox"/>	2006	4	5.714 %	<div></div>
<input type="checkbox"/>	2012	4	5.714 %	<div></div>
<input type="checkbox"/>	2000	3	4.286 %	<div></div>
<input type="checkbox"/>	2001	3	4.286 %	<div></div>
<input type="checkbox"/>	2003	2	2.857 %	<div></div>
<input type="checkbox"/>	2010	2	2.857 %	<div></div>
<input type="checkbox"/>	2014	2	2.857 %	<div></div>
<input type="checkbox"/>	1998	1	1.429 %	<div></div>
<input checked="" type="checkbox"/> View Records	Field: Publication Years	Record Count	% of 70	Bar Chart
<input checked="" type="checkbox"/> Exclude Records				

Published Items in Each Year



The latest 20 years are displayed.

Citations in Each Year



The latest 20 years are displayed.

Use the checkboxes to remove individual items from this Citation Report			93	118	144	77	0	811	45.06
	or restrict to items published between <input type="text" value="1990"/> <input type="text" value="▼"/> and <input type="text" value="2015"/> <input type="text" value="▼"/> <input type="button" value="Go"/>								
<input type="checkbox"/>	1.	<b>CiteSpace II: Detecting and visualizing emerging trends and transient patterns in scientific literature</b> By: Chen, CM JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY Volume: 57 Issue: 3 Pages: 359-377 Published: FEB 1 2006	27	36	41	19	0	253	25.30
<input type="checkbox"/>	2.	<b>Searching for intellectual turning points: Progressive knowledge domain visualization</b> By: Chen, CM Conference: Colloquium on Mapping Knowledge Domains Location: Natl Acad Sci & Engrn, Arnold & Mable Beckman Ctr, Irvine, CA Date: MAY 09-11, 2003 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA Volume: 101 Supplement: 1 Pages: 5303-5310 Published: APR 6 2004	16	11	26	5	0	131	10.92
<input type="checkbox"/>	3.	<b>The Structure and Dynamics of Cocitation Clusters: A Multiple-Perspective Cocitation Analysis</b> By: Chen, Chaomei; Ibekwe-SanJuan, Fidelia; Hou, Jianhua JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY Volume: 61 Issue: 7 Pages: 1386-1409 Published: JUL 2010	11	12	15	7	0	58	9.67

参数设置情况！

CiteSpace 4.0.R2 (32-bit) - (c) 2003-2015 Chaomei Chen - Home: C:\Users\Jerry Lee

File Project Data Network Visualization Geographical Overlay Maps Analytics Text Preferences Help

Web of Science PubMed

Projects

New Chen CM More Actions ...

Project Home: C:\Users\Jerry Lee\citespace\Chen CM\project

Data Directory: C:\Users\Jerry Lee\citespace\Chen CM\data

GO! Stop Reset JVM Memory 162 (MB) Used 42 %

Space Status

2004-2004	usage	180	50	98	50	452 / 452
2005-2005	usage	180	50	113	50	399 / 399
2006-2006	usage	180	50	127	50	521 / 521
2007-2007	usage	180	50	93	50	388 / 388
2008-2008	usage	180	50	73	50	263 / 263
2009-2009	usage	180	50	181	50	554 / 554
2010-2010	usage	180	50	85	50	966 / 966
2011-2011	usage	180	50	147	50	243 / 243
2012-2012	usage	180	50	141	50	539 / 539

Process Reports

Records in the dataset: 66  
Records within the chosen range: 65

Valid references: 1176 100.0000%  
Invalid references: 0 0.0000%

Parsing Time: 0.817 seconds  
Total Run time: 7.093 seconds

Time Slicing

From 2001 To 2014 #Years Per Slice 1

Text Processing

Network Configuration

Node Types

☐ Author ☐ Institution ☐ Country ☐ Term ☐ Keyword ☐ Category  
☒ Cited Reference ☐ Cited Author ☐ Cited Journal ☐ Paper ☐ Grant

Links

Strength Cosine Scope Within Slices

Selection Criteria

Adjust the selection criteria to control the scope of the network model.

Top N Top N% Thresholds By Citations Usage(180) Usage(2013)

Select top 50 most downloaded items in the past 180 days (U1).

Pruning

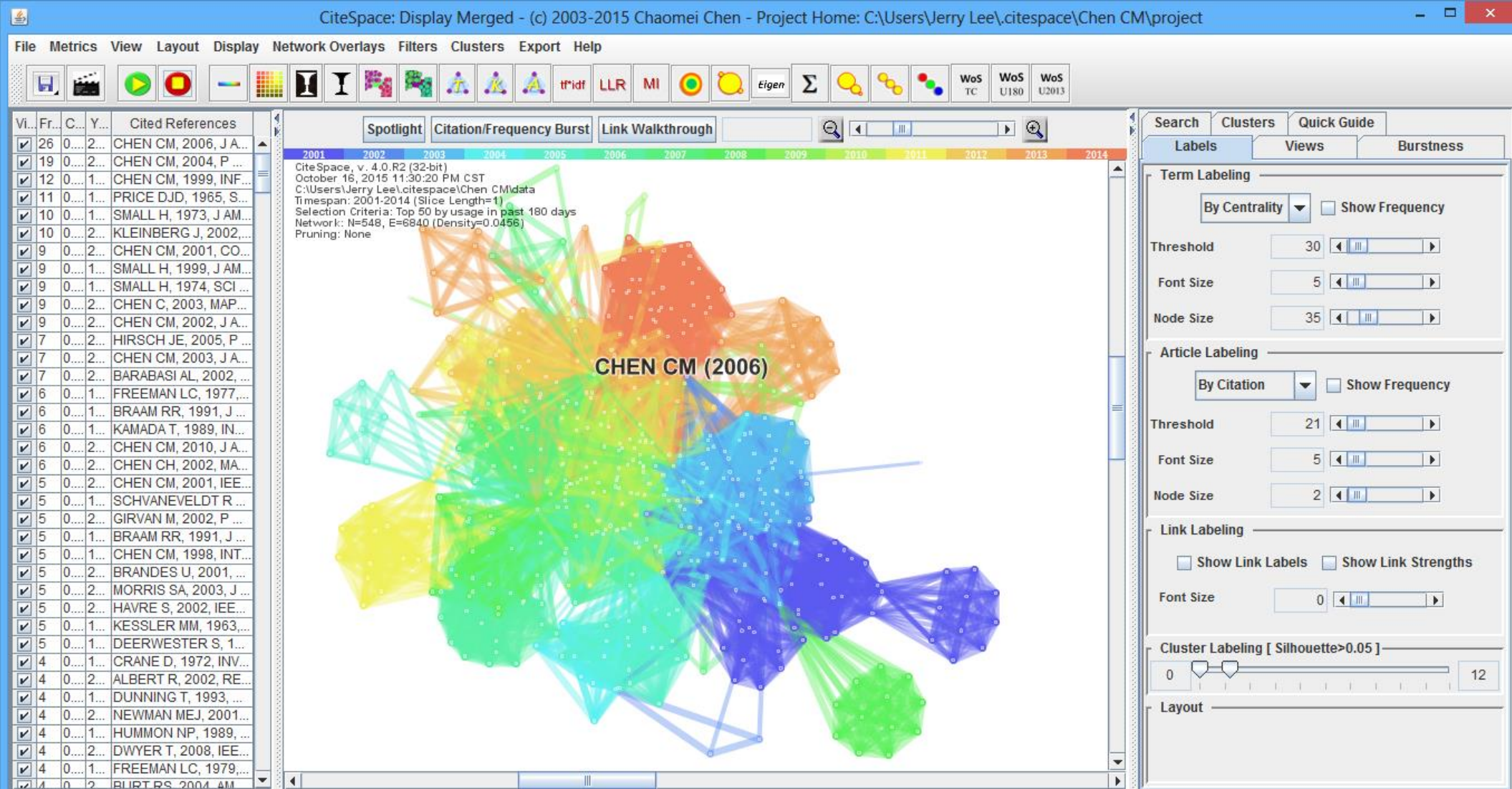
☐ Pathfinder ☐ Pruning sliced networks  
☐ Minimum Spanning Tree ☐ Pruning the merged network

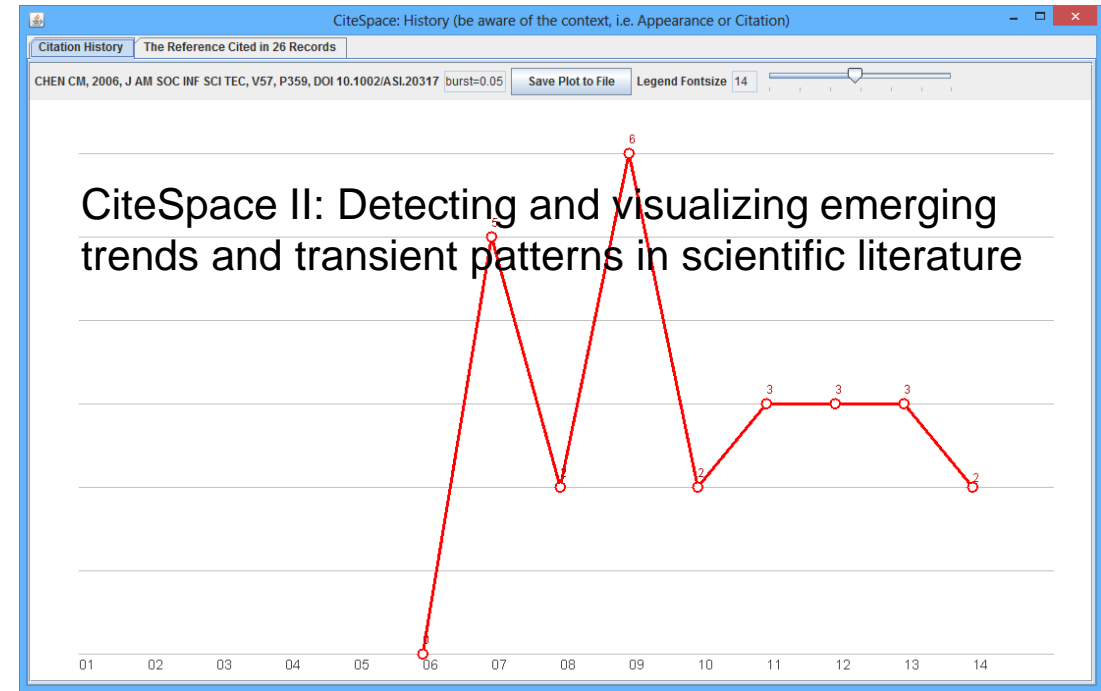
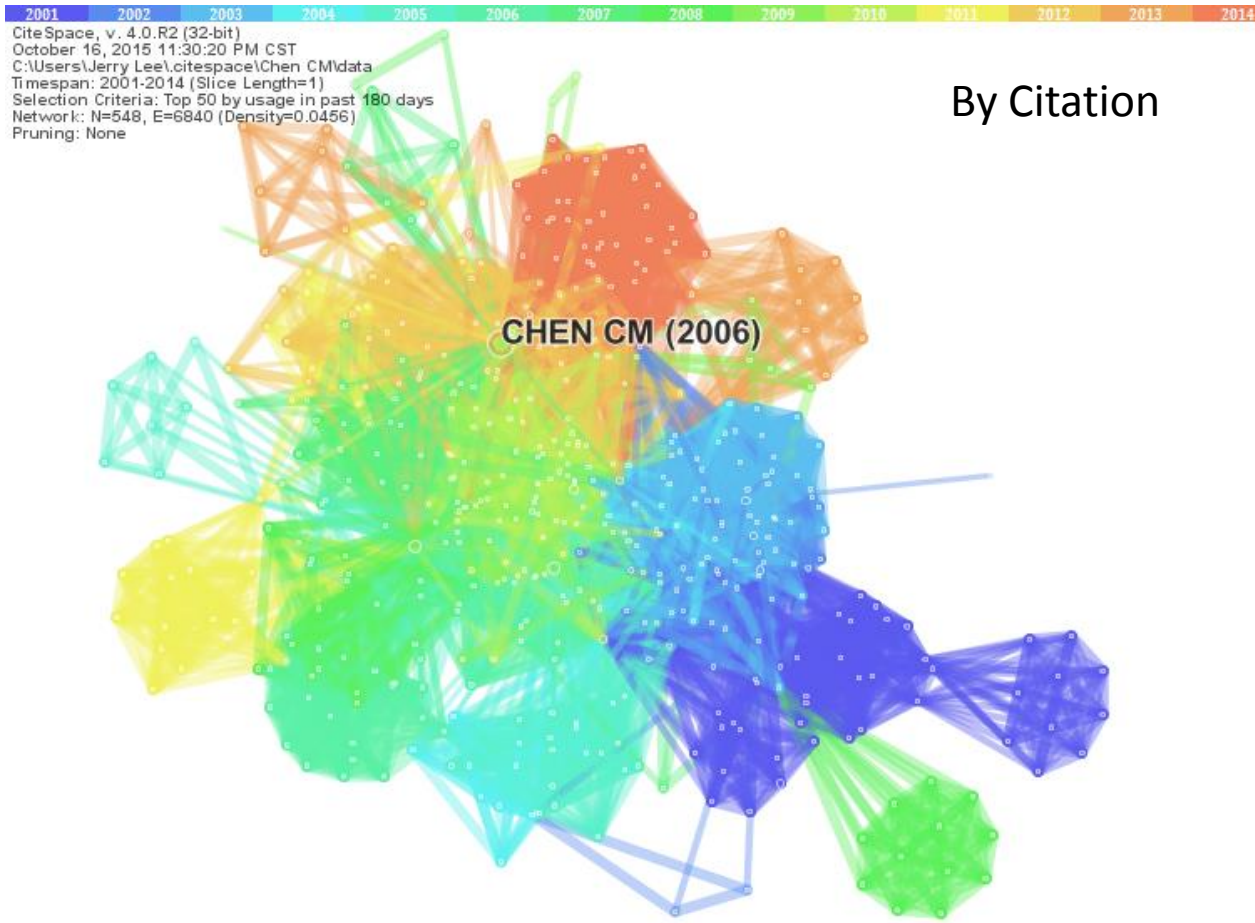
Visualization

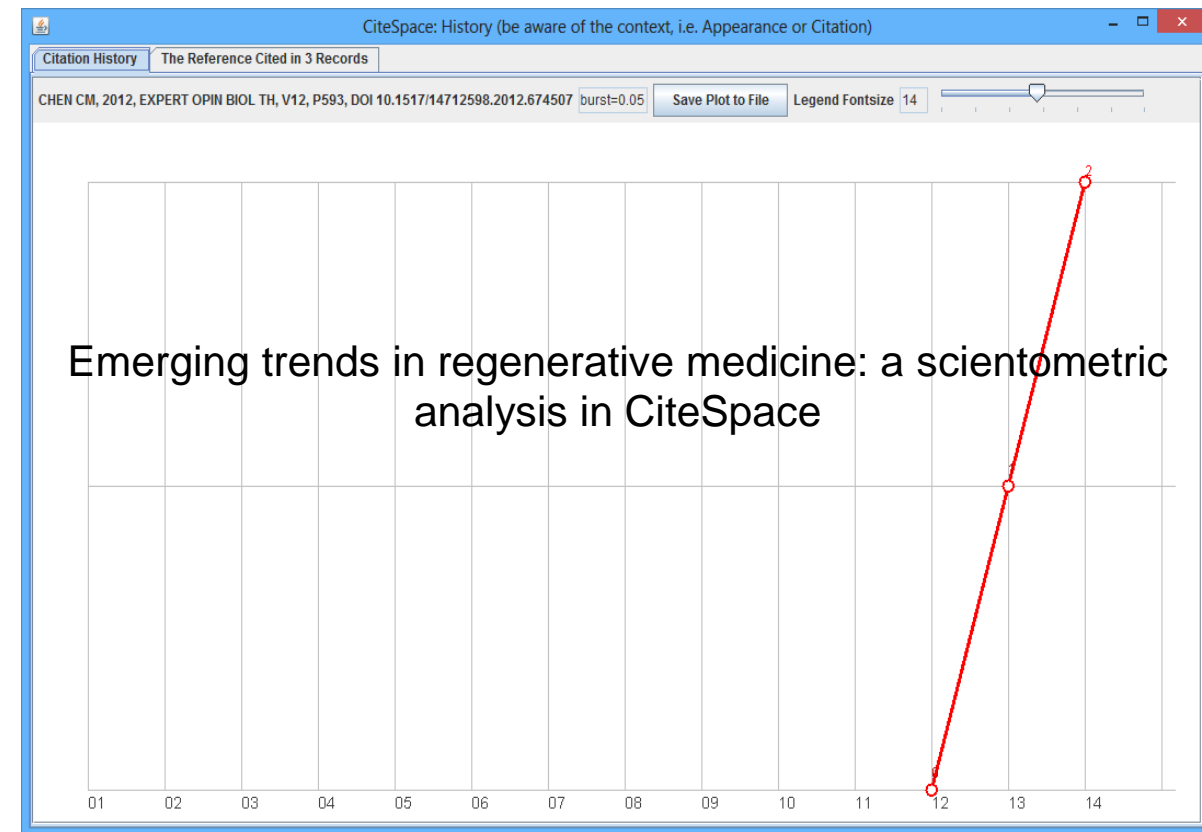
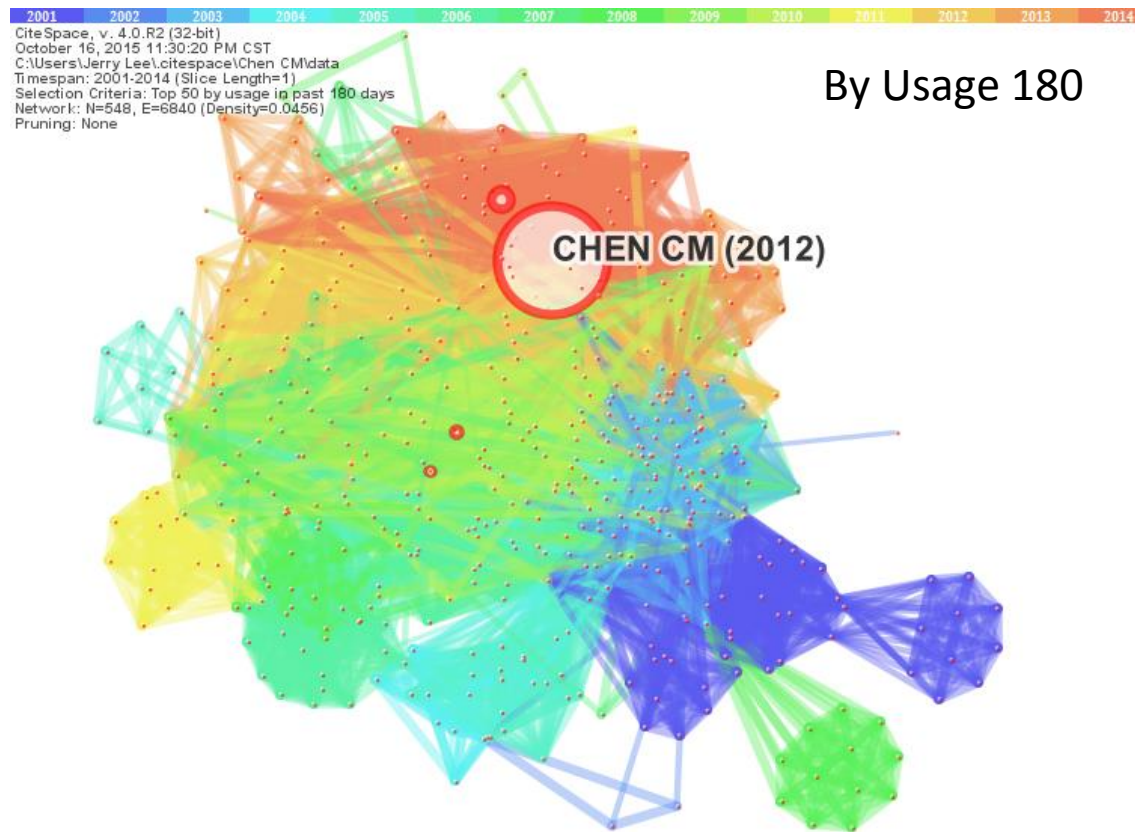
☒ Cluster View - Static ☐ Show Networks by Time Slices  
☐ Cluster View - Animated ☒ Show Merged Network



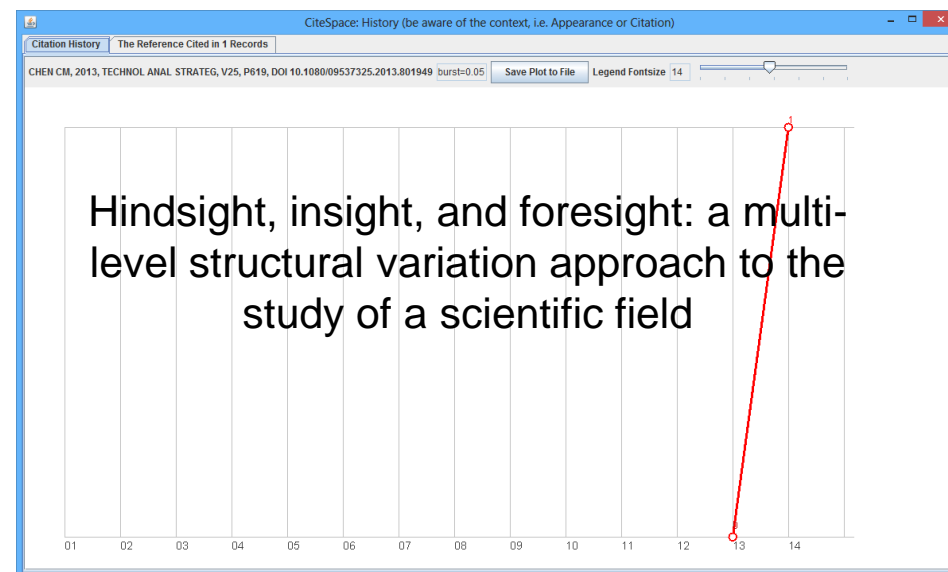
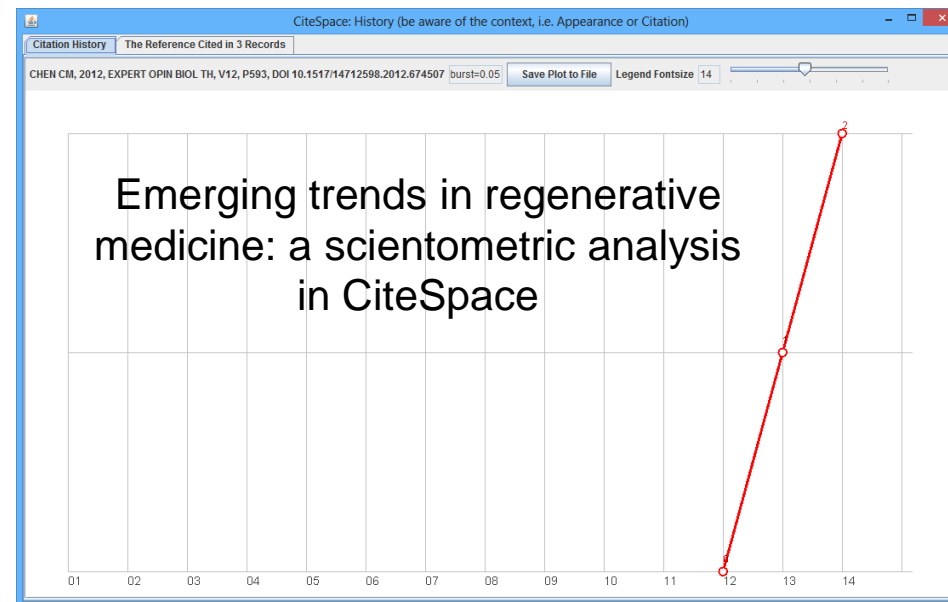
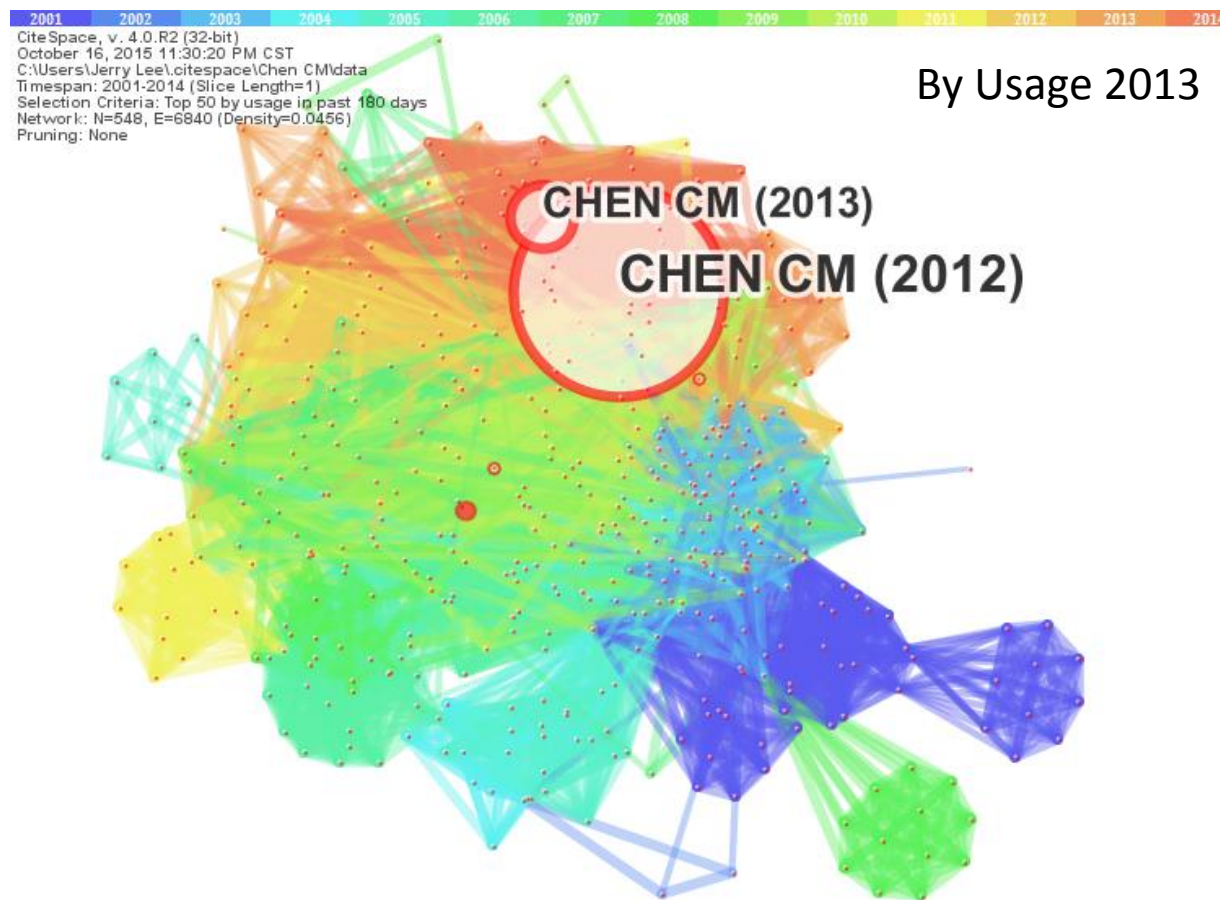
运行结果！



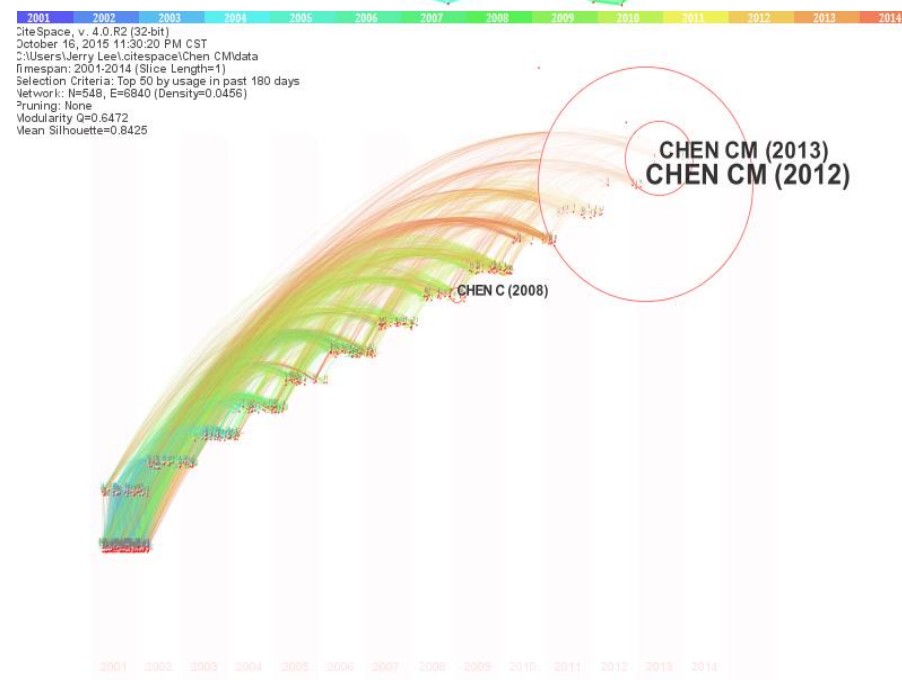
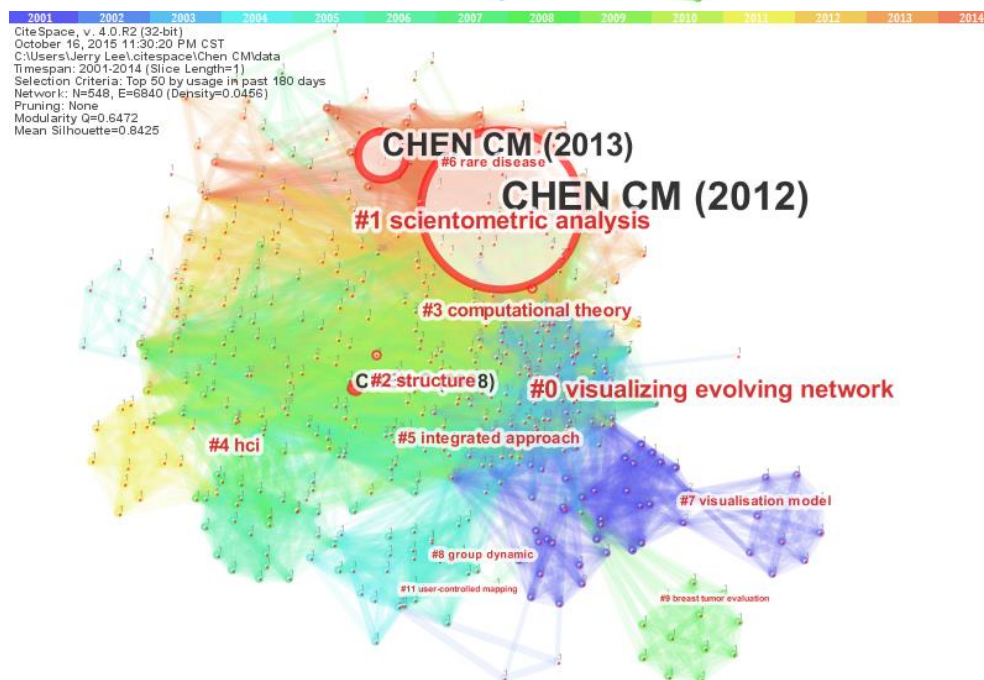
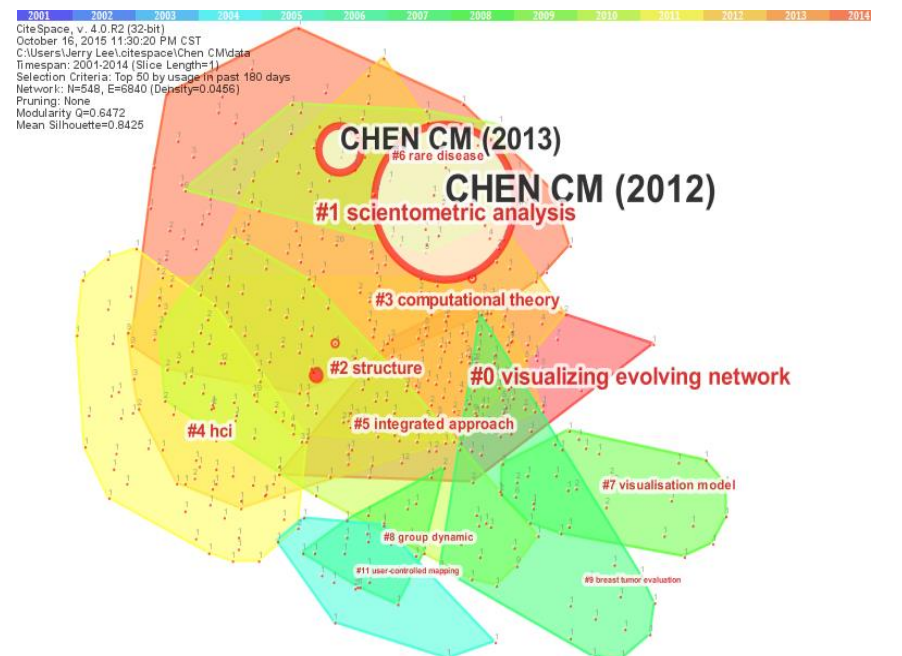
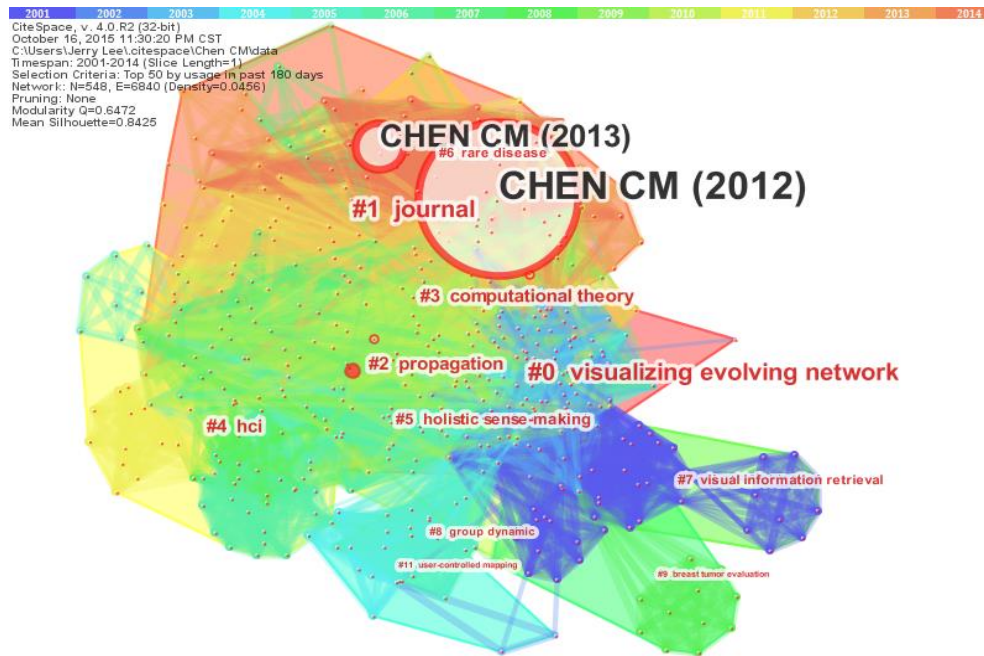








网络的聚类分析及其他展示！



**Selection Criteria**

Adjust the selection criteria to control the scope of the network model.

**Top N** **Top N%** **Thresholds** **By Citations** **Usage(180)** **Usage(2013)**

Select top  most downloaded items in the past 180 days (U1).

上面是基于Usage180来筛选数据，也可以通过Usage2013来筛选。下面给出通过Usage2013筛选数据，得到的结果见下页。

**Selection Criteria**

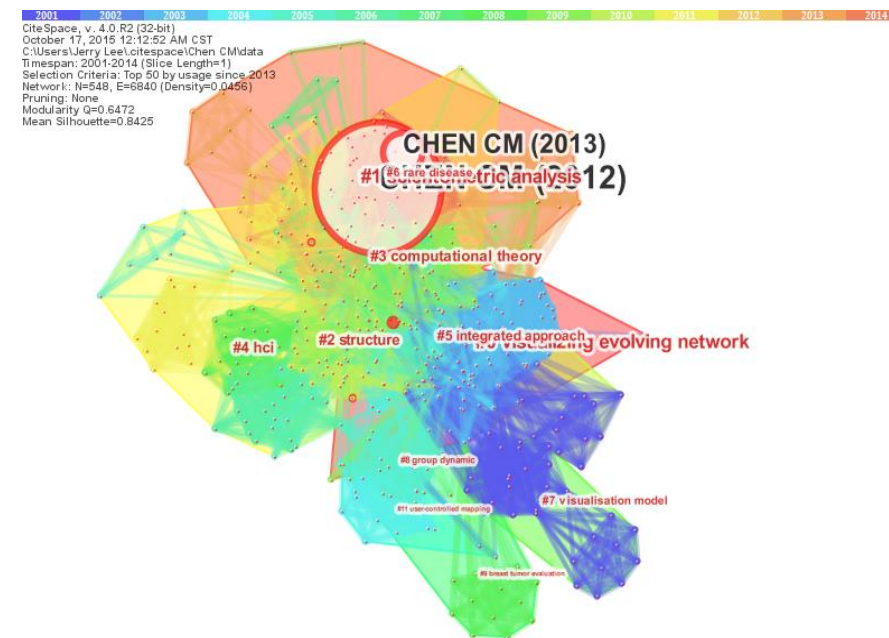
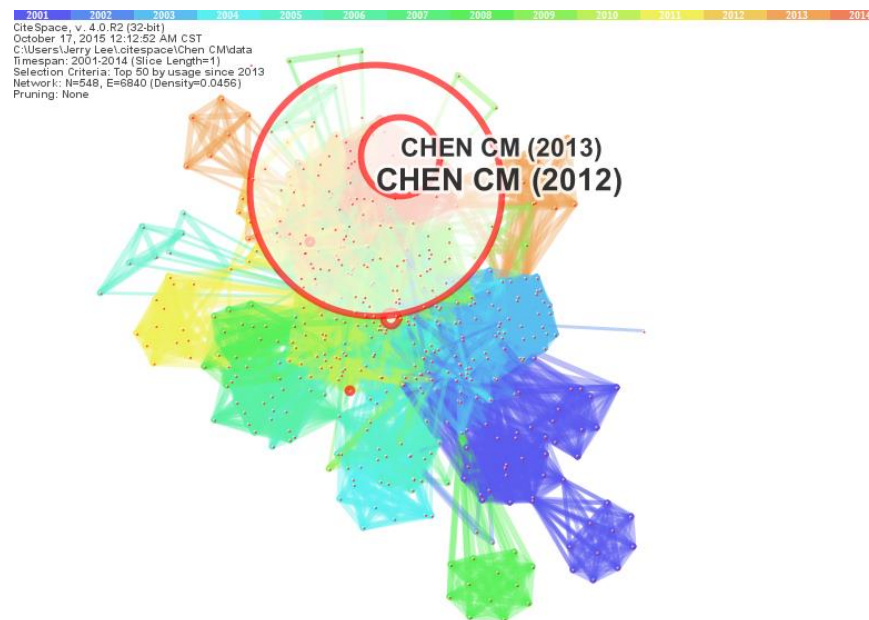
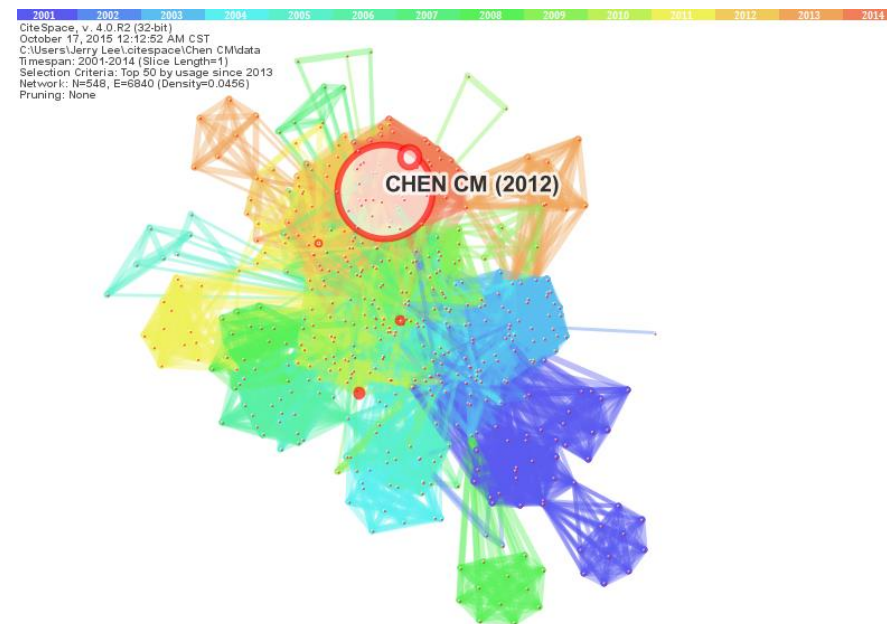
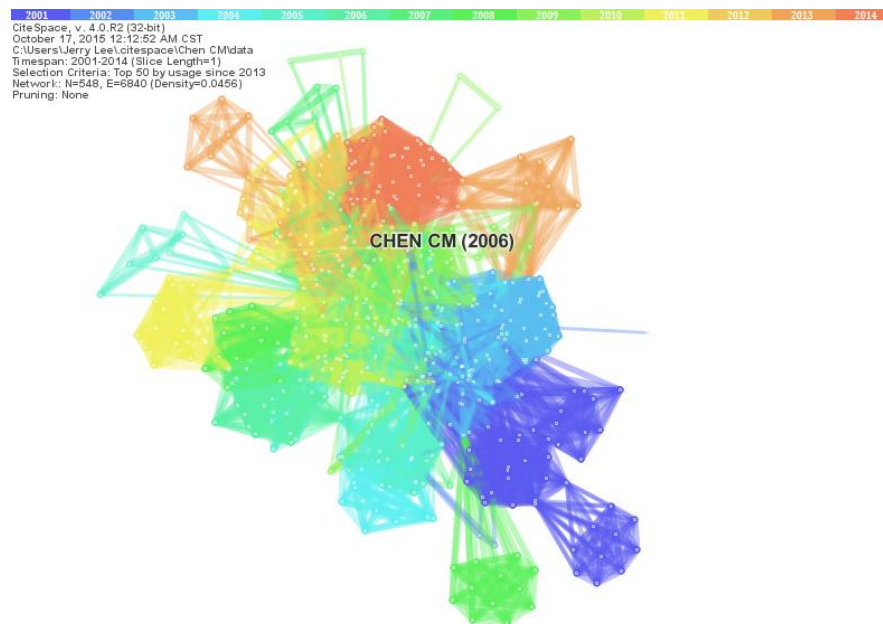
Adjust the selection criteria to control the scope of the network model.

**Top N** **Top N%** **Thresholds** **By Citations** **Usage(180)** **Usage(2013)**

Select top  most downloaded items since 2013.

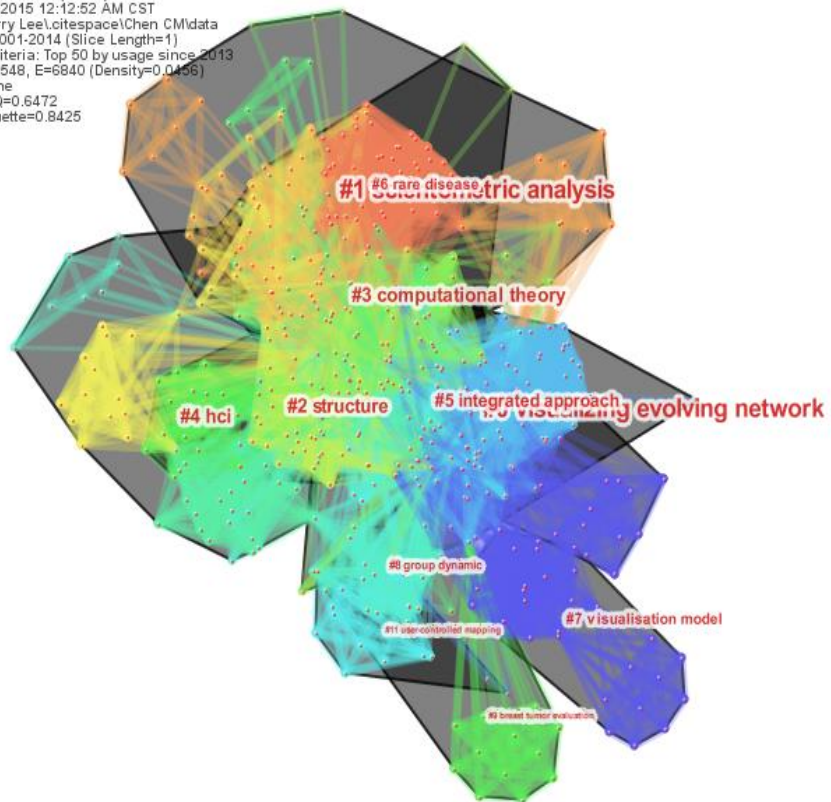


通过Usage2013筛选数据，得到的结果



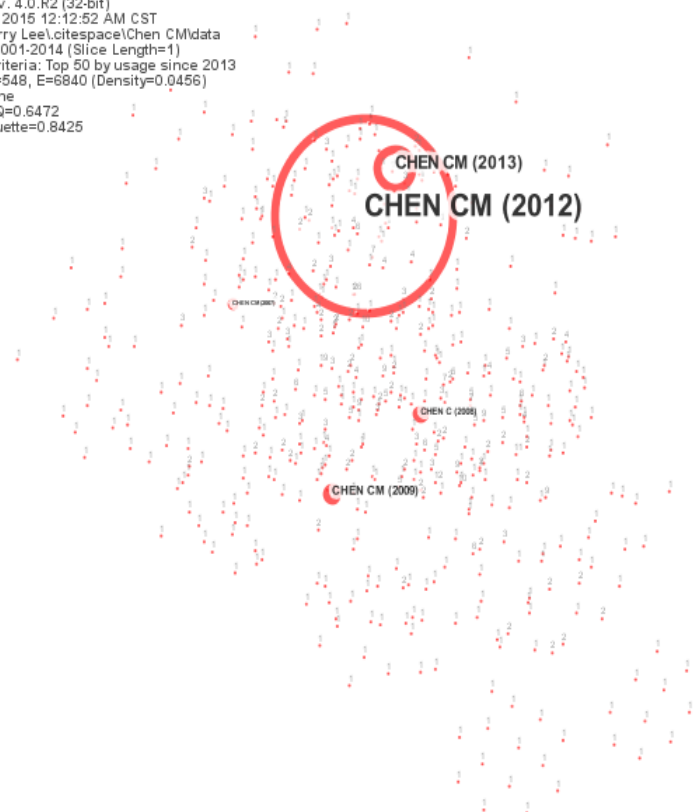
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

CiteSpace, v. 4.0.R2 (32-bit)  
 October 17, 2015 12:12:52 AM CST  
 C:\Users\Jerry Lee\citespace\Chen CM\data  
 Timespan: 2001-2014 (Slice Length=1)  
 Selection Criteria: Top 50 by usage since 2013  
 Network: N=548, E=6840 (Density=0.0456)  
 Pruning: None  
 Modularity Q=0.6472  
 Mean Silhouette=0.8425



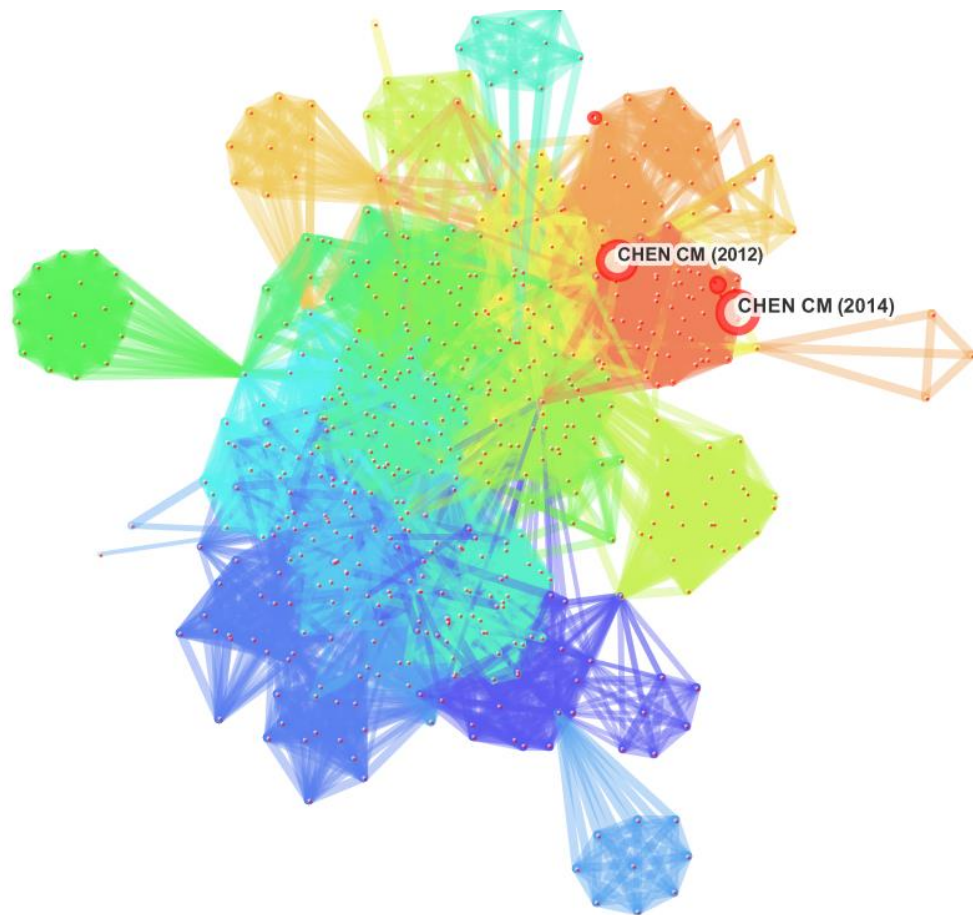
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

CiteSpace, v. 4.0.R2 (32-bit)  
 October 17, 2015 12:12:52 AM CST  
 C:\Users\Jerry Lee\citespace\Chen CM\data  
 Timespan: 2001-2014 (Slice Length=1)  
 Selection Criteria: Top 50 by usage since 2013  
 Network: N=548, E=6840 (Density=0.0456)  
 Pruning: None  
 Modularity Q=0.6472  
 Mean Silhouette=0.8425

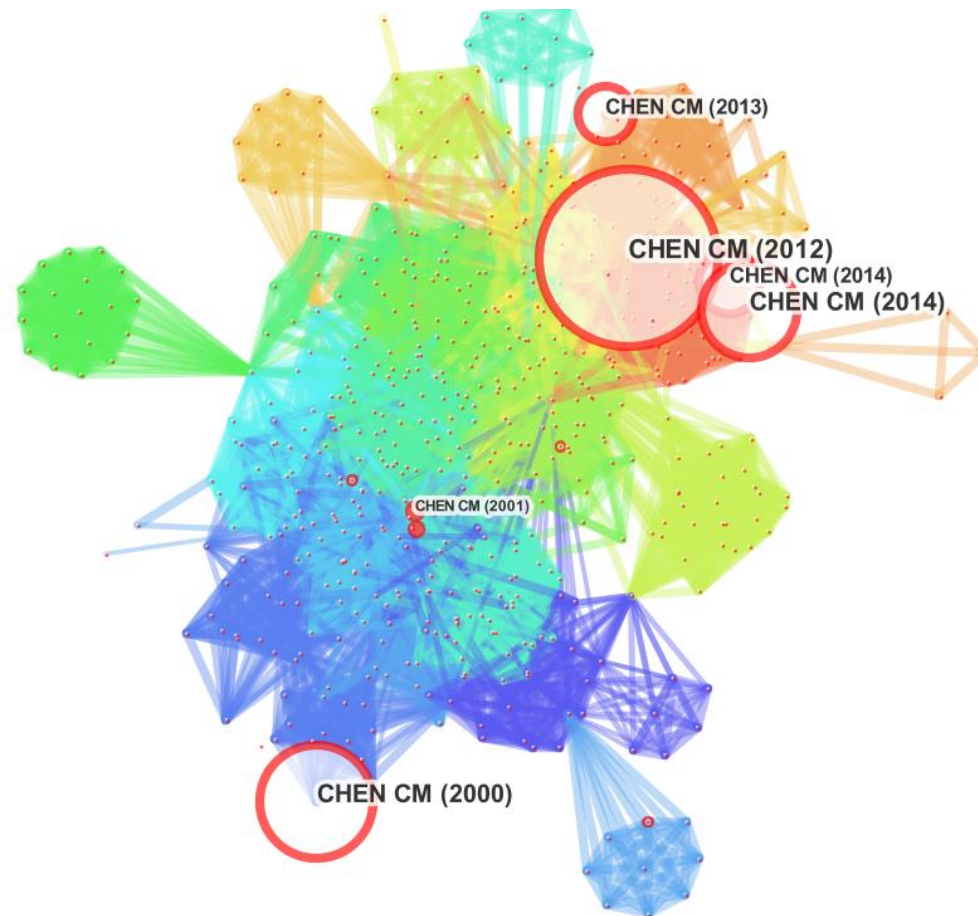


# 其他案例

TOP 50 by usage in past 180 days



TOP 50 by usage since 2013



## 下一版本的更新展望

U1和U2字段为我们了解节点的时间信息提供了便利。当前版本仅仅支持文献共被引网络的分析，今后或可在文献耦合、关键词共现等网络中尝试。



# 参考文献

## 该功能参考资料

1. CiteSpace 4.0.R2 增加Web of Science新添的下载数据 <http://blog.sciencenet.cn/blog-496649-928288.html>
2. CiteSpace101界面 <https://sites.google.com/site/citespace101/first-example/4-0/4-0-web-of-science>

## 更多Citespace学习资料：

1. Chen, C. (2014) The CiteSpace Manual. <https://leanpub.com/howtousecitespace>
2. 李杰, 陈超美. 如何使用CiteSpace的一组示范及常见问题解答 <http://blog.sciencenet.cn/blog-496649-838067.html>
3. 李杰. CiteSpace中文指南. <http://blog.sciencenet.cn/blog-496649-886962.html>
4. 李杰, 陈超美. (2016) CiteSpace科技文本挖掘及可视化[M]. 首都经济贸易大学出版社.
5. 李杰,(2015)安全科学知识图谱导论[M].化学工业出版社.
6. 李杰等,(2014)安全科学技术信息检索基础[M].首都经济贸易大学出版社.
7. 陈悦, 陈超美等 (2014) 引文空间分析原理与应用[M].科学出版社.