

WEB OF SCIENCE – THE GOLD STANDAR FOR DISCOVERY AND RESEARCH EVALUATION

**Jeff Clovis** 



### **Agenda**

- Review Web of Science Coverage
- Using Web of Science for Metrics
- Journal Citation Reports



# What is the Web of Science? A long history of innovation



### Citation Indexes for Science

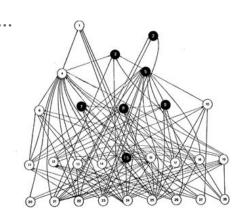
A New Dimension in Documentation through Association of Ideas

Science 122 (3159), p.108-11, July 1955

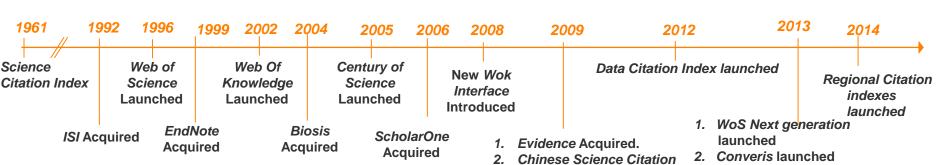
Database Launched.
3. InCites Launched.

Launched

Century of Social Sciences



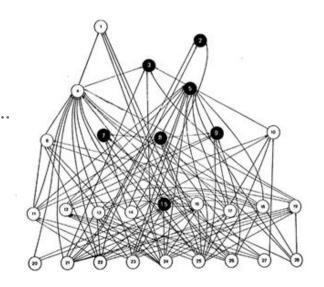


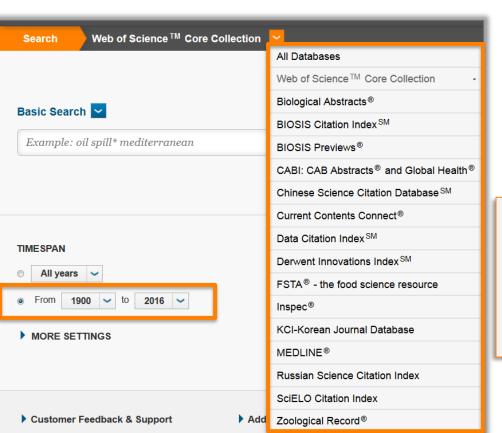




### The Web of Science Universe

Citations measure the number of times a paper has been cited as a surrogate for its scientific quality | utility | impact | merit





115 million Records

1+ Billion Citation links

28,800 Journals
75,000 Books (10K to be added) annually
8.6 Million Conference proceedings
54+ Million Patents
5+ Million Data studies and Data sets

### The Web of Science Core collection Development

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## JOURNAL SELECTION PROCESS

- The philosophy of the database is to offer content of the highest quality
- Selection is based on quality criteria established and developed for over 50 years
- Today, 16 FULL TIME editors fully dedicated are in charge of content selection and maintaining the quality and coherence of the database (150 Years of experience)
- +3,000 JOURNALS EVALUATED IN 2015
- 12% ACCEPTANCE RATE in 2016

INFORMATION PROVIDER, NOT PRIMARY PUBLISHER

UNIQUE

UNIQUE

- None of our editors are involved in journal edition or research publishing
- NEUTRALITY + OBJECTIVITY = SELECTION OF THE HIGHEST QUALITY



# The Web of Science Core Collection – SCIE, SSCI, A&HCI, CPCI, BKCI and ESCI)

- 64M+ records: The largest citation database (1 BILLION+ references, back to 1898)
- Multidisciplinary
- Independent and neutral selection of content
- 17,700+ Journals, 12000+ annual conferences, 80,000 (10.000 per year) Books
- Journals are Indexed Cover to Cover
- High quality/value metadata (100% cited references, 100% authors, 100% affiliations, 100% Funding Agencies (2008))
- The most trusted citation information source (used by all major research institutions, governments and international rankings)



### Web of Science Core Collection: Publication, Author, Topic, Journal, Funding Analysis

### What type of documents are we publishing?

Field: Document Types	Record Count	% of 10255
ARTICLE	7173	69.946 %
PROCEEDINGS PAPER	2282	22.253 %
MEETING ABSTRACT	817	7.967 %
REVIEW	155	1.511 %
NOTE	114	1.112 %
BOOK CHAPTER	111	1.082 %
EDITORIAL MATERIAL	77	0.751 %
LETTER	76	0.741 %
BOOK REVIEW	64	0.624 %
CORRECTION	17	0.166 %
NEWS ITEM	5	0.049 %
POETRY	4	0.039 %
BIOGRAPHICAL ITEM	3	0.029 %
CORRECTION ADDITION	1	0.010 %
DISCUSSION	1	0.010 %

### Which are the main research areas of our scientific focus?

Field: Web of Science Categories	Record Count	% of 10255
PHYSICS PARTICLES FIELDS	546	5.324 %
MATHEMATICS	526	5.129 %
CHEMISTRY PHYSICAL	502	4.895 %
CHEMISTRY MULTIDISCIPLINARY	496	4.837 %
MATERIALS SCIENCE MULTIDISCIPLINARY	485	4.729 %
PHYSICS APPLIED	482	4.700 %
CHEMISTRY ORGANIC	417	4.066 %
ASTRONOMY ASTROPHYSICS	402	3.920 %
PHYSICS MULTIDISCIPLINARY	388	3.784 %
PHYSICS NUCLEAR	375	3.657 %
MATHEMATICS APPLIED	350	3.413 %
NUCLEAR SCIENCE TECHNOLOGY	334	3.257 %
ECONOMICS	322	3.140 %
BIOCHEMISTRY MOLECULAR BIOLOGY	307	2.994 %
METALLURGY METALLURGICAL ENGINEERING	292	2.847 %
ENVIRONMENTAL SCIENCES	275	2.682 %
EDUCATION EDUCATIONAL RESEARCH	255	2.487 %
CHEMISTRY APPLIED	242	2.360 %
ENGINEERING CHEMICAL	242	2.360 %
GEOSCIENCES MULTIDISCIPLINARY	234	2.282 %

### Which countries are our top collaborators?

Field: Countries/Territories	Record Count	% of 10255
KAZAKHSTAN	10255	100.000 %
RUSSIA	1683	16.412 %
USA	1007	9.820 %
GERMANY	606	5.909 %
ENGLAND	485	4.729 %
JAPAN	392	3.823 %
ITALY	335	3.267 %
POLAND	316	3.081 %
UKRAINE	287	2.799 %
SPAIN	272	2.652 %
CANADA	259	2.526 %
ISRAEL	225	2.194 %
FRANCE	218	2.126 %
NETHERLANDS	216	2.106 %
SOUTH KOREA	213	2.077 %
SCOTLAND	200	1.950 %
PEOPLES R CHINA	199	1.941 %
BELGIUM	187	1.824 %
INDIA	166	1.619 %
GREECE	164	1.599 %

### In which journals or conferences we publish the most?

111001:		
PROCEDIA SOCIAL AND BEHAVIORAL SCIENCES	254	2.477 %
RUSSIAN JOURNAL OF APPLIED CHEMISTRY	186	1.814 %
CHEMISTRY OF NATURAL COMPOUNDS	170	1.658 %
RUSSIAN JOURNAL OF GENERAL CHEMISTRY	132	1.287 %
AIP CONFERENCE PROCEEDINGS	130	1.268 %
FASEB JOURNAL	119	1.160 %
ZHURNAL OBSHCHEI KHIMII	111	1.082 %
PHYSICS OF ATOMIC NUCLEI	103	1.004 %
VITH RYSKULOV READINGS SOCIO ECONOMIC MODERNIZATION OF KAZAKHSTAN UNDER CONDITIONS OF GLOBAL FINANCIAL INSTABILITY	90	0.878 %
DIFFERENTIAL EQUATIONS	88	0.858 %
INTERNATIONAL MULTIDISCIPLINARY SCIENTIFIC GEOCONFERENCE SGEM	88	0.858 %
JOURNAL OF BIOTECHNOLOGY	78	0.761 %
IZVESTIYA AKADEMII NAUK SERIYA FIZICHESKAYA	77	0.751 %
EUROPEAN PHYSICAL JOURNAL C	74	0.722 %
PHYSICS LETTERS B	73	0.712 %
KHIMIYA PRIRODNYKH SOEDINENII	65	0.634 %
PETROLEUM CHEMISTRY	59	0.575 %
PROCEEDINGS OF SPIE	59	0.575 %
ZOOLOGICHESKY ZHURNAL	58	0.566 %
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY	57	0.556 %

### Which are the institutions we co-author the most?

Field: Organizations-Enhanced	Record Count
AL FARABI KAZAKH NATIONAL UNIVERSITY	1574
NATIONAL ACADEMY SCIENCES KAZAKHSTAN	1039
LN GUMILYOV EURASIAN NATIONAL UNIVERSITY	697
RUSSIAN ACADEMY OF SCIENCES	685
NAZARBAYEV UNIVERSITY	502
LOMONOSOV MOSCOW STATE UNIVERSITY	314
KAZAKHSTAN NATIONAL NUCLEAR CENTER	239
DV SOKOLSKY INSTITUTE OF FUEL CATALYSIS ELECTROCHEMISTRY	225
KAZAKH NATIONAL TECHNICAL UNIVERSITY	187
UNIVERSITY OF LONDON	184
UNITED STATES DEPARTMENT OF ENERGY DOE	183
KAZAKH BRITISH TECHNICAL UNIVERSITY	182
ISTITUTO NAZIONALE DI FISICA NUCLEARE	178
MINIST EDUC SCI KAZAKHSTAN	178
IMPERIAL COLLEGE LONDON	173
ASTANA MEDICAL UNIVERSITY	169
UNIVERSITY COLLEGE LONDON	169
INSTITUTE OF IONOSPHERE	168
EA BUKETOV KARAGANDA STATE UNIVERSITY	167
UNIVERSITY OF OXFORD	166

### Which major funding agencies fund our research projects?

Field: Funding Agencies	Record Count
MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN	174
RUSSIAN FOUNDATION FOR BASIC RESEARCH	113
MINISTRY OF EDUCATION AND SCIENCE OF KAZAKHSTAN	50
NATIONAL NATURAL SCIENCE FOUNDATION OF CHINA	37
NATIONAL SCIENCE FOUNDATION	32
NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL OF CANADA NSERC	28
NSF	24
MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION	23
RFBR	23
SCIENCE COMMITTEE OF THE MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN	23
GERMAN FEDERAL MINISTRY FOR EDUCATION AND RESEARCH BMBF	21
ISRAEL SCIENCE FOUNDATION	20
US NATIONAL SCIENCE FOUNDATION	20
RUSSIAN MINISTRY OF EDUCATION AND SCIENCE	19
ALEXANDER VON HUMBOLDT FOUNDATION	18
DEUTSCHE FORSCHUNGSGEMEINSCHAFT DFG	18
ITALIAN NATIONAL INSTITUTE FOR NUCLEAR PHYSICS INFN	18
JAPANESE MINISTRY OF EDUCATION CULTURE SPORTS SCIENCE AND TECHNOLOGY MEXT	18
NIH	18
POLISH MINISTRY OF SCIENCE AND HIGHER EDUCATION	18
NETHERLANDS FOUNDATION FOR RESEARCH ON MATTER FOM	17
US DEPARTMENT OF ENERGY	17
VOLKSWAGEN FOUNDATION	17



#### 466 records. PUBLICATION NAME: (REVISTA MEXICANA DE INGENIERIA QUIMICA)

Rank the records by this field:	Set display options:	Sort by:
Authors  Book Series Titles  Conference Titles  Countries/Territories	Show the top 10 ▼ Results.  Minimum record count (threshold): 2	<ul><li>Record count</li><li>Selected field</li></ul>

HERNANDEZ-SANCHEZ H	16	3.433 %
BELLO-PEREZ LA	14	3.004 %
GUTIERREZ-LOPEZ GF	14	3.004 %
ALAMILLA-BELTRAN L	10	2.146 %
RODRIGUEZ-HUEZO ME	10	2.146 %
PEREZ-ALONSO C	9	1.931 %
RITO-PALOMARES M	9	1.931 %
VERNON-CARTER EJ	9	1.931 %
ALVAREZ-RAMIREZ J	8	1.717 %
CHANONA-PEREZ JJ	8	1.717 %

	Field: Countries/Territories	Record Count	
	MEXICO	418	
	COLOMBIA	19	
	SPAIN	16	
	USA	14	
	CHILE	9	
	FRANCE	7	
	CUBA	6	
	ARGENTINA	5	
	ENGLAND	4	
	BELGIUM	2	
	BRAZIL	2	
-	BULGARIA	2	
' '	INDIA	2	
	MAI AYSIA	2	

UNIV AUTONOMA METROPOLITANA IZTAPALAPA	82
INST POLITECH NACL	59
UNIV NACL AUTONOMA MEXICO	35
IPN	25
UNIV AUTONOMA METROPOLITANA	21
INST MEXICANO PETR	17
TECNOL ESTUDIOS SUPER ECATEPEC	16
UNIV AUTONOMA ESTADO MEXICO	15
UNIV GUADALAJARA	15
UNIV AUTONOMA ESTADO HIDALGO	14
UNIV MICHOACANA	14
UNIV VERACRUZANA	14
TECNOL MONTERREY	12
UNIV AUTONOMA ESTADO MORELOS	12
UNIV GUANAJUATO	11
UNIV AUTONOMA SAN LUIS POTOSI	10
UNIV SONORA	10
INST TECNOL CELAYA	9
UNIV IBEROAMER	9
INST TECNOL ORIZABA	8
UNIV AUTONOMA CHAPINGO	8
UNIV AUTONOMA COAHUILA	8
INST TECNOL MORELIA	7
INST TECNOL ZACATEPEC	7
UNIV NACL COLOMBIA	7

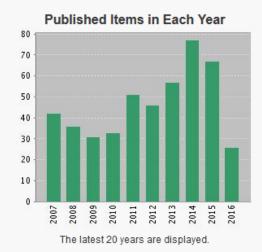
### **Citation Report**

#### Citation Report: 466

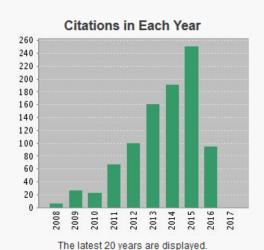
(from Web of Science Core Collection)

You searched for: PUBLICATION NAME: (REVISTA MEXICANA DE INGENIERIA QUIMICA) ...More

This report reflects citations to source items indexed within Web of Science Core Collection. Perform a Cited Reference Search to include citations to items not indexed within Web of Science Core Collection.



By: Carrillo-Navas, H.; Gonzalez-Rodea, D. A.; Cruz-Olivares, J.; et al.



Sum of the Times Cited [?]: 928

Sum of Times Cited without self-citations [?]: 435

Citing Articles [?]: 618

Citing Articles without self-citations [?]: 393

Average Citations per Item [?]: 1.99

h-index [?]: 9

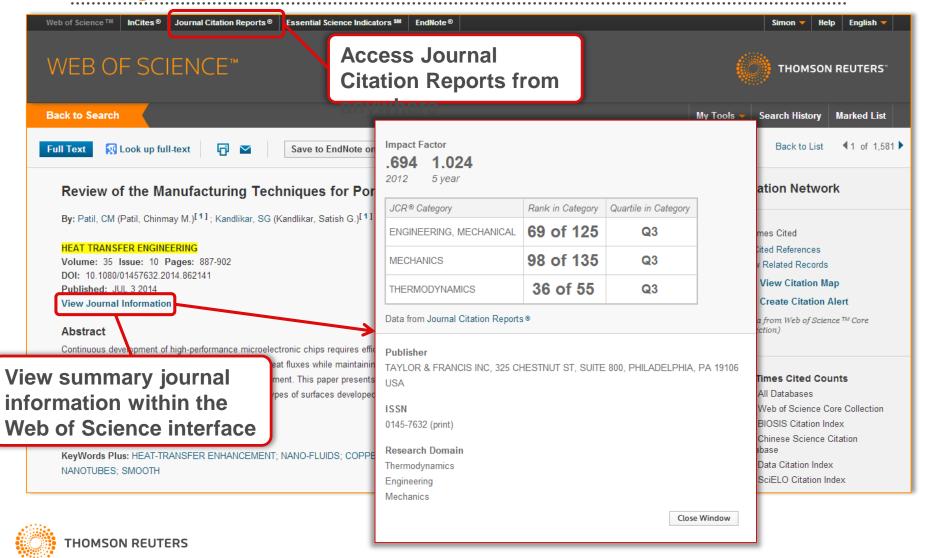
Results found: 466

Use the checkboxes to remove individual items from this Citation Report
or restrict to items published between 1900 v and 2017 v Go
MORPHOMETRIC CHARACTERIZATION OF SPRAY-DRIED MICROCAPSULES BEFORE AND AFTER alpha- TOCOPHEROL EXTRACTION
By: Quintanilla-Carvajal, M. X.; Meraz-Torres, L. S.; Alamilla-Beltran, L.; et al. REVISTA MEXICANA DE INGENIERIA QUIMICA Volume: 10 Issue: 2 Pages: 301-312 Published: AUG 2011
2. STORAGE STABILITY AND PHYSICOCHEMICAL PROPERTIES OF PASSION FRUIT JUICE MICROCAPSULES BY SPRAY-DRYING

REVISTA MEXICANA DE INGENIERIA QUIMICA Volume: 10 Issue: 3 Pages: 421-430 Published: DEC 2011

2013	2014	2015	2016	2017	Total	Average Citations per Year
162	192	251	96	0	928	103.11
2	3	3	3	0	16	2.67
4	5	3	2	0	14	2.33

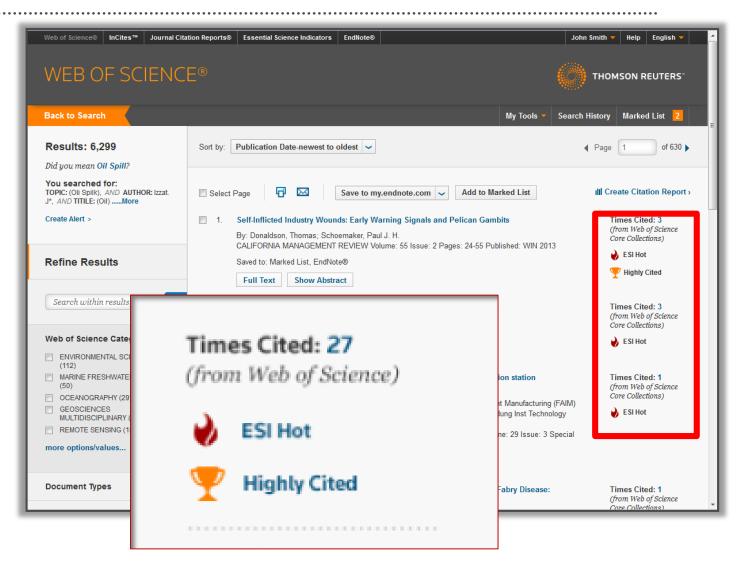
# InCites Journal Citation Reports integrated with Web of Science



# Web of Science Core Collection ESI integration

# Integrated metrics and indicators

New "Hot"
 and "Highly
 Cited"
 paper
 indicators
 integrated
 from
 Essential
 Science
 Indicators





### The Journal Citation Reports: an Introduction

### "Primary Users" of the JCR

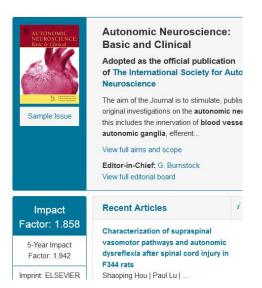
- Librarians to assist in the decision-making. around journal collection development and maintenance practices.
- Authors to help with decisions on manuscript submission, identify most influential publications within various disciplines.
- University Administrators to gauge the impact of journals in which faculty are publishing.
- Journal Publishers to monitor the influence and standing of their journals and compare to competing journals.
- Journal Editors assist in the tracking the influence of editorial policies over time.
- engage and develop the study of citation metrics.





4.930 Editor-in-Chief: Claude F. » Editors & EAB » About the Journal » Author Index » Recommend This Journal

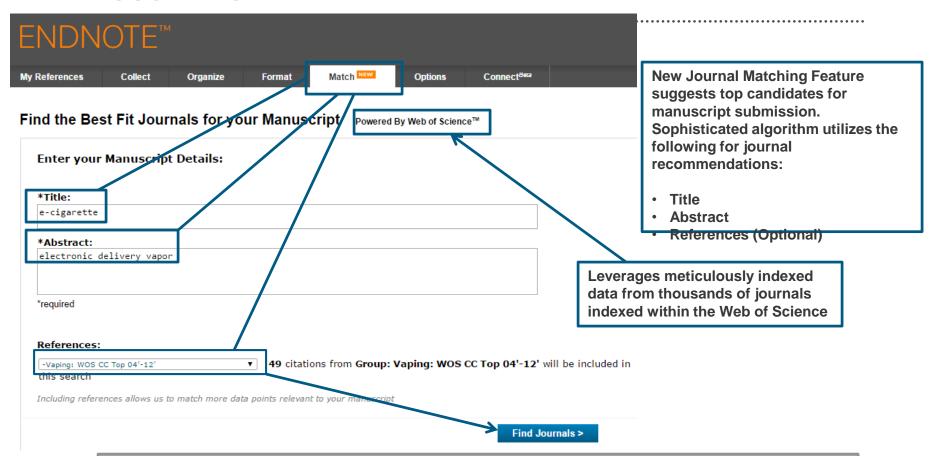
» Biochemical Technology





### **ENDNOTE® ONLINE**

MANUSCRIPT MATCHER – LOCATE BEST JOURNALS FOR MANUSCRIPTS



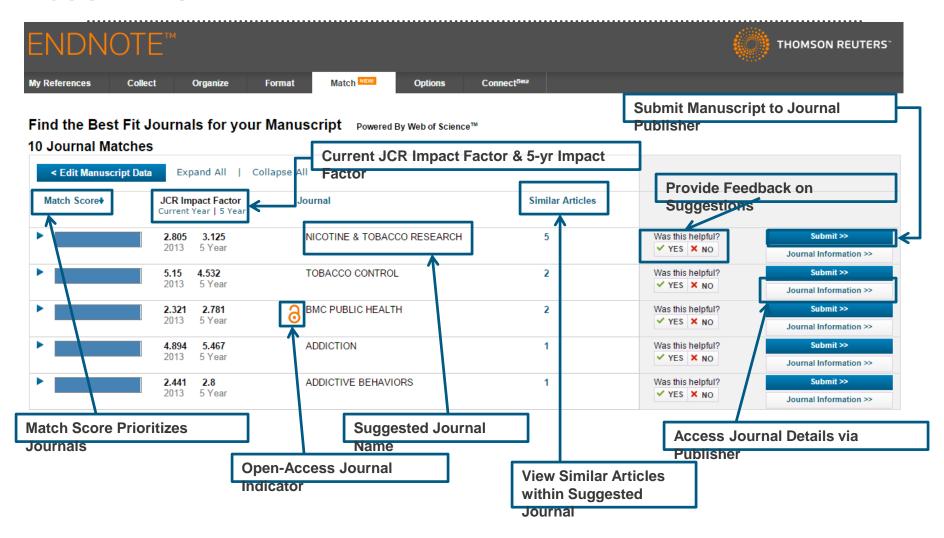
### **MANUSCRIPT MATCHER PRODUCT DETAILS:**

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### **The Journal Citation Reports: the Metrics**

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**Impact Factor** 

**Eigenfactor Metrics** 

Cited and Citing Relationships



5-Year Impact Factor

**Immediacy Index** 

**Cited Half-Life** 

Self-Citation Rates



## The Journal Citation Reports: an Introduction

### Types of Information Presented

- Journal Citation Metrics and Information
  - Impact Factor, Total Citations, Immediacy Index, Self-Citations, etc.
- Journal Citation Relationships
  - Cited and Citing Journals
  - Related Journals
- Publication Information
  - Publisher, Source Data, Subject Category Info, etc.



### The Journal Citation Reports: an Introduction

### The Journal Impact Factor

### Impact Factor is...

- A valuable indicator of journal influence.
- Comparative for journals within but not between subject areas.

### Impact Factor is Not...

A measurement of the quality of an individual's, department's, or institution's research output.



### **The Journal Citation Reports: Impact Factor**

The Impact Factor is very easily understood, it's calculation is really just simple division, and the details of the calculation itself – for every journal – is presented in the JCR.

#### Journal Impact Factor 10

Cites in 2011 to items published in: 2010 = 224 Number of items published in: 2010 = 1182009 = 269 2009 = 114

Sum: 493 Sum: 232

Calculation: <u>Cites to recent items</u> 493 = **2.125**Number of recent items 232

#### 5-Year Journal Impact Factor 1)

Cites in  $\{2011\}$  to items published in: 2010 = 224 Number of items published in: 2010 = 118

 2009 = 269
 2009 = 114

 2008 = 304
 2008 = 114

 2007 = 283
 2007 = 109

 2006 = 231
 2006 = 88

Sum: 543

Sum: 1311

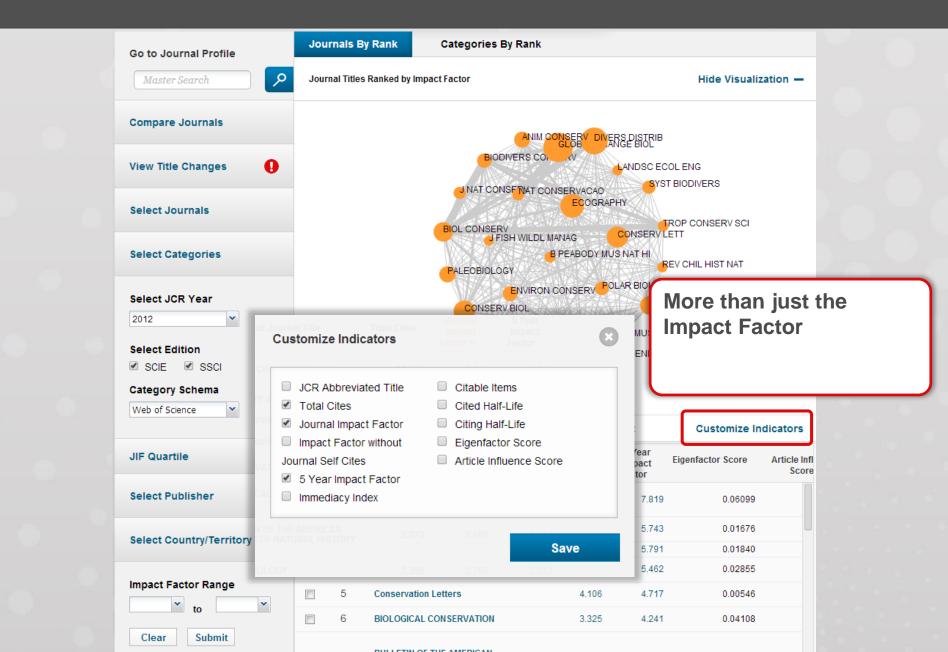
Calculation: <u>Cites to recent items</u> 1311=2.414

Number of recent items 543



### InCites<sup>™</sup> Journal Citation Reports<sup>®</sup>





### Revista Mexicana de Ingenieria Quimica

ISSN: 1665-2738

UNIV AUTONOMA METROPOLITANA-IZTAPALAPA

C/O DR JAIME VERNON-CARTER, SAN RAFAEL ATLIXCO NO 186, COL VICENTINA, DELEGACION IZTAPALAPA, MEXICO 09340,

MEXICO

**MEXICO** 

Go to Journal Table of Contents Go to Ulrich's

#### **Titles**

ISO: Rev. Mex. Ing. Quim.
JCR Abbrev: REV MEX ING QUIM

#### Categories

CHEMISTRY, APPLIED - SCIE; ENGINEERING, CHEMICAL - SCIE;

#### Languages

SPANISH

3 Issues/Year;

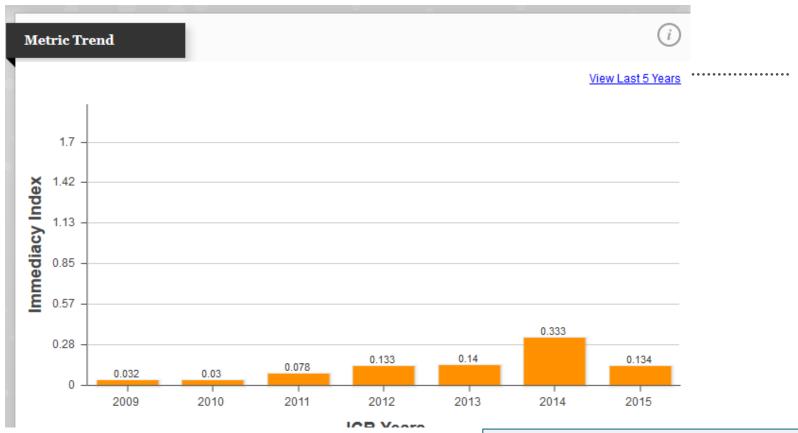


Open Access from 2002

Key In	dicators												
Year <b>▼</b>	Total Cites Graph	Journal Impact Factor Graph	Impact Factor Without Journal Self Cites	5 Year Impact Factor Graph	Immediacy Index Graph	Citable Items Graph	Cited Half-Life Graph	Citing Half-Life Graph	Eigenfactor Score Graph	Article Influence Score Graph	% Articles in Citable Items Graph	Normalized Eigenfactor Graph	_
			<u>Graph</u>										
2015	295	0.924	0.204	0.812	0.134	67	3.7	8.8	0.00027	0.067	100.00	0.03015	31.993
2014	236	0.569	0.098	0.682	0.333	75	3.6	8.2	0.00023	0.067	97.33	0.02568	19.931
2013	202	0.948	0.302	0.759	0.140	57	3.1	8.7	0.00024	0.075	98.25	0.02673	35.254
2012	132	0.560	0.309	0.516	0.133	45	3.6	8.9	0.00027	0.081	97.78	Not A	23.933
2011	98	0.578	0.203	Not A	0.078	51	Not A	8.4	0.00019	Not A	100.00	Not A	23.933
2010	50	0.242	0.196	Not A	0.030	33	Not A	8.7	0.00015	Not A	100.00	Not A	11.839
2009	70	0.325	0.116	Not A	0.032	31	Not A	8.4	0.00017	Not A	100.00	Not A	15.430



### The Journal Citation Reports: Immediacy Index



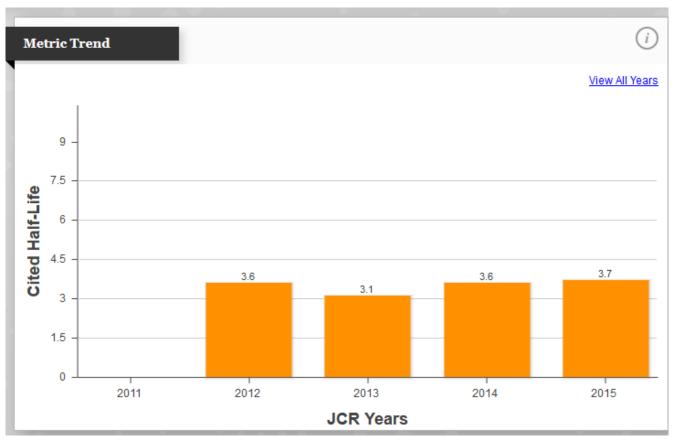
The Immediacy Index is an indication how quickly articles in a journal are cited.



The journal Immediacy
Index indicates how quickly
articles in a journal are
cited. The aggregate
Immediacy Index indicates
how quickly articles in a
subject category are cited.

### The Journal Citation Reports: Cited Half Life

The cited half-life calculation finds the number of publication years from the current JCR year that account for 50% of citations received by the journal. Median age of the articles that were cited in the JCR year. Half of a journal's cited articles were published more recently than the cited half-life.

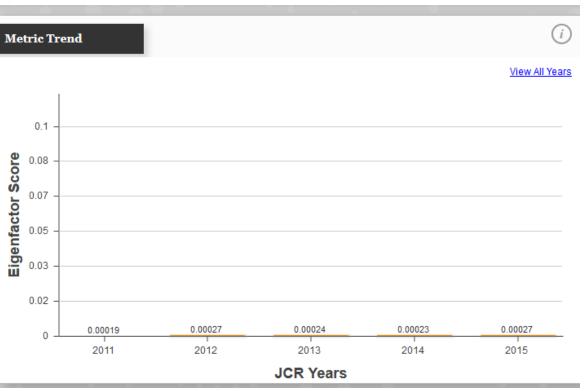




### The Journal Citation Reports: Eigenfactor Score

The Eigenfactor Score of Journal X is defined as the percentage of the total weighted citations that Journal X receives from all source journals within the JCR.

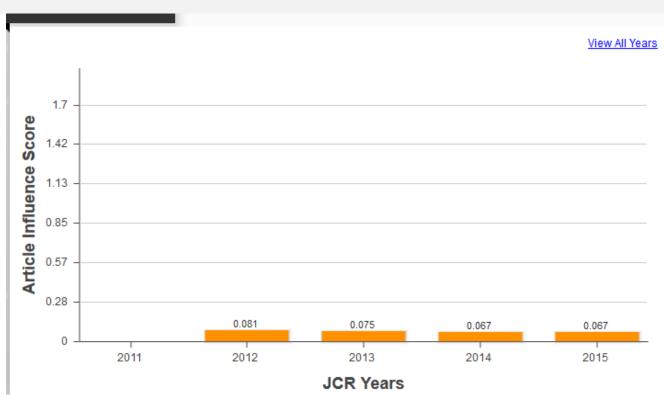
The *Eigenfactor* Score calculation is based on the number of times articles from the journal published in the past five years have been cited in the JCR year, but it also considers which journals have contributed these citations so that highly cited journals will influence the network more than lesser cited journals. Therefore a single citation from a highly-cited journal may be more valuable than multiple citations from lesser-cited journals. References from one article in a journal to another article from the same journal are removed. Representative of a journal's overall contribution to the whole of scholarly journal influence.





### The Journal Citation Reports: Article Influence

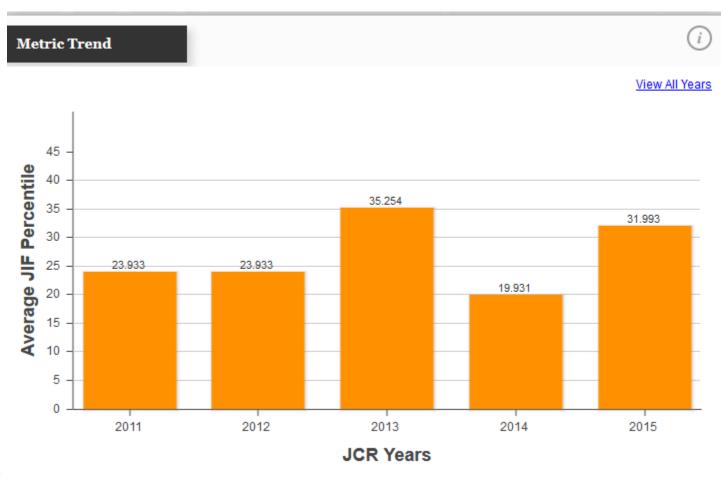
A journal's *Article Influence* score presents an average for article-level influence. The calculation of Article Influence Score does in fact incorporate Eigenfactor Score. *Article Influence* scores are normalized so that the average article in the entire Thomson Journal Citation Reports (JCR) database has an article influence of 1.00. Therefore – a journal with an Article Influence score or 18.00 has eighteen times the influence of the "average" journal in the JCR. They do add additional perspective on the overall influence of a journal.





## The Journal Citation Reports: Journal Impact Factor Percentile

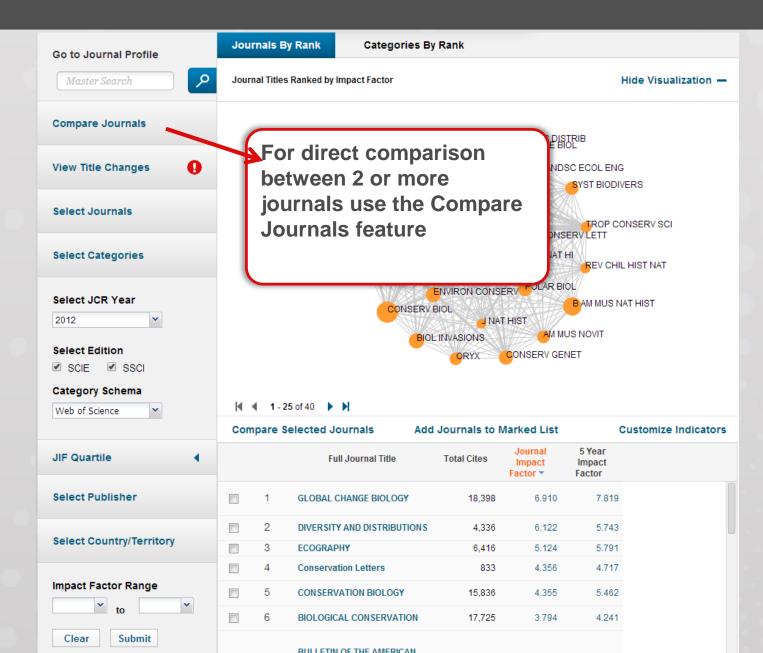
The Journal Impact Factor Percentile transforms the rank in category by Journal Impact Factor into a percentile value, allowing more meaningful cross-category comparison.





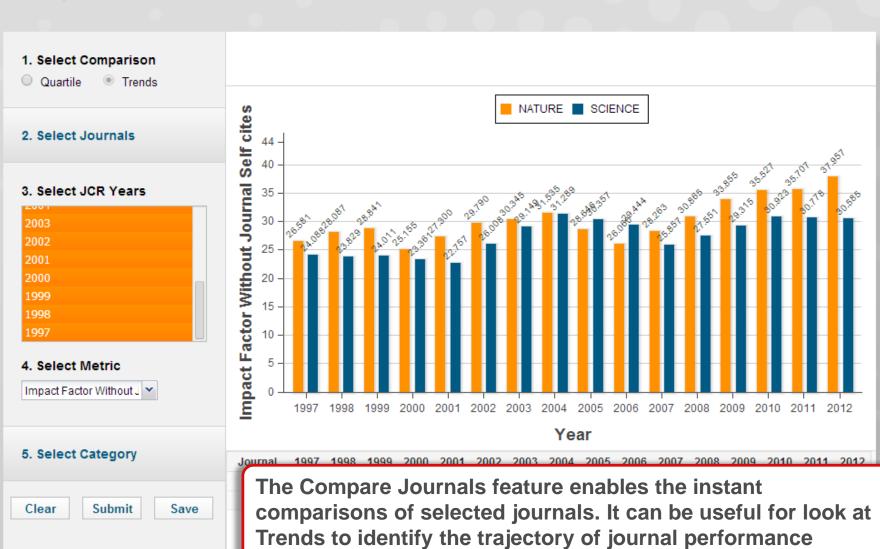
### InCites<sup>™</sup> Journal Citation Reports<sup>®</sup>







### **Compare Journals**



### Journal Impact Factor Percentile and Quartile— In Category

### JCR Impact Factor

JCR	CHEMISTRY, APP	LIED		ENGINEERING, CHEMICAL				
Year ▼	Rank	Quartile	JIF Percentile	Rank	Quartile	JIF Percentile		
2015	50/71	Q3	30.282	90/135	Q3	33.704		
2014	59/72	Q4	18.750	107/135	Q4	21.111		
2013	50/71	Q3	30.282	80/133	Q3	40.226		
2012	57/71	Q4	20.423	97/133	Q3	27.444		
2011	57/71	Q4	20.423	97/133	Q3	27.444		
2010	63/70	Q4	10.714	118/135	Q4	12.963		
2009	57/64	Q4	11.719	104/128	Q4	19.141		



### **The Journal Citation Reports: an Introduction Part 2**

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**Impact Factor** 

**Eigenfactor Metrics** 

Cited and Citing Relationships



5-Year Impact Factor

**Immediacy Index** 

**Cited Half-Life** 

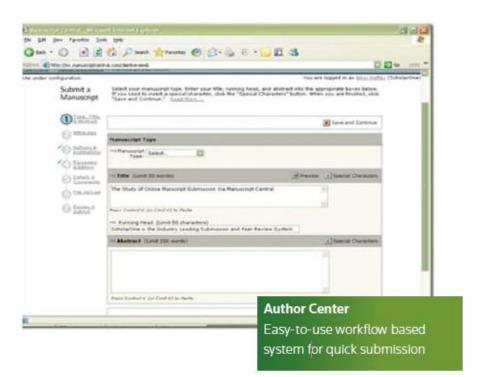
Self-Citation Rates



# ScholarOne Manuscripts - Manage the Publishing Process

ScholarOne Manuscripts is the leading system for web-based manuscript submission, peer review, and tracking.

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### ScholarOne Reviewer Locator

- Seamless process to help you find highly qualified subject experts to peer review your journal's submissions. Reviewer Locator works by comparing new manuscript submissions against Web of Science™ content to generate a list of experts
- ATLAS, our proprietary engine, parses and extracts research manuscript metadata such as author names, title, abstract, keywords, and journal of publication from the Web of Science. as potential reviewers.
- The ultimate goal of Reviewer Locator is to help editors find qualified reviewers more efficiently. This objective was at the front of our minds when designing how Review Locator would integrate with ScholarOne Manuscripts.
- Reviewer requests are generated automatically upon submission for each manuscript with an abstract. When the paper reaches reviewer selection, results are immediately available for the editor.
- Reviewer results are cleanly integrated into the existing "Select Reviewers" tab.
- Reviewer Locator can be configured to return up to 30 potential reviewers.
- Results appear in order of relevance as determined by the ATLAS search.



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### **THANK YOU! Q&A**



